THE IMPACT OF TECHNOLOGY ON ORGANIZATIONAL

CHANGE IN PUBLIC LIBRARIES: A QUALITATIVE STUDY

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A Dissertation

Presented to

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Of the Requirement of the Degree

Doctor of Philosophy

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by

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The undersigned, appointed by the Dean of the Graduate School, have examined the

Dissertation entitled

THE IMPACT OF TECHNOLOGY ON ORGANIZATIONAL

CHANGE IN PUBLIC LIBRARIES: A QUALITATIVE STUDY

Presented by Diane L. Velasquez

A candidate for the degree of Doctor of Philosophy

And hereby certify that in their opinion it is worthy of acceptance.

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Professor Linda Esser

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Professor Douglas Raber

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Professor Barton Wechsler

Dedication

This dissertation is dedicated to my husband, Rich, without whose support this would never have been possible.

Acknowledgements

As with any journey, there is a beginning, middle, and an end. This particular journey has been interesting, fraught with tiredness, and, at times, made me wonder why I was so sure I wanted a doctorate. At the end of the day, I know it was the right choice for me. I have always believed deciding to pursue a Ph.D. has to do with persistence and I have found this to be especially true.

First I need to acknowledge the Public Library Directors who agreed to allow their libraries to be involved in my research project. Many of them were not sure what they were signing up for but they were good sports and allowed me to come into their libraries and impose upon them with questions, talk to some of their staff, and look at and copy more pages of documents than any person would want to admit. I thank all the participants who agreed to be interviewed for taking the time to answer my questions. Their stories definitely shed light on a subject that has not been well researched in our field. In the course of writing this dissertation I quickly realized I could not use every story. Therefore, I did my best to honor the stories I have heard and can share. As my committee member, Linda Esser, kept telling me, "I want a one volume dissertation not one in a three volume set."

A special thank you goes to Dr. Linda Esser who was the qualitative expert on my dissertation committee. She answered thousands (at least it seemed that way to me) of questions, emails, frantic phone calls, procedural questions, showed me her dissertation, her working documents, and generally encouraged me. At times she carved time from her busy schedule for weekly or twice weekly meetings that would last four to five hours at a sitting. Those who know the story of my dissertation know I intended to do a mixed

There are two people who were my major support system for getting done. When things were getting me down and I needed to vent they were there. In one person's case via long distance the last year but she was there whenever I needed to talk. The first person was Lisa Hussey, one of my best friends, who also went through the program with me and finished a year before me. She knew exactly what I was dealing with and it was helpful to discuss "stuff" and vent with her.

My most important support person was my husband, Rich. Rich has always been extremely supportive in any endeavor I determined I wanted to achieve. In many ways these last four years has been particularly difficult as we had a geographic separation for two years while he stayed in Tucson and I was in Missouri working on coursework. He moved to Missouri in my third year in the program and has been with me ever since. After being together 27 years, it is the measure of the love we have for each other that he put up with the separation, moving me and then him to Missouri, the data collection phase, helping to transcribe the interviews, the writing and editing of the dissertation, conferences, job interviews, getting ready to move *again* for my new job in the Chicago area, and the crazy hours graduate students tend to have.

Thanks everyone. . .

Diane

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ABSTRACT

This dissertation investigated the impact of technology on organization change in public libraries. Over the past 12 to 15 years, public access computers have been introduced into public libraries of all sizes. Once these public access computers were connected to the Internet, the computers attracted patrons who had not previously used the public library services. The main themes were technology with facilities and services, city government, and people. The main research questions were 1) How has public library culture changed since the introduction of computers for patron use? 2) What adjustments were necessary to deal with the influx of computers and other technology in public libraries? 3) Have public access computers changed the way the libraries are organized and how they are staffed?

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1

Introduction

> We've seen a whole different clientele in the library since we added computers. We have those that don't have computers at home but yet want to do email, Internet, and all that kind of stuff. I think that we see more people that are coming and going faster. You don't see people browsing the shelves as much as they used to. We have a lot less reference questions I think because people are thinking they're going to find the answer on the Internet before they ask us a question. [1]
>
> Arabella Clement
> Kestrel Public Library

Public libraries have changed the way they provide resources to the patrons they serve. A significant driving force for this change has been computers and communication technologies.

This research explores the following questions that surround the introduction of computers into public libraries:

1. What drove the introduction of public access computers into public libraries?

2. How has public library culture changed since the introduction of computers for patron use?

3. What adjustments were necessary to deal with the influx of computers and other technology in public libraries?

4. Have public access computers changed the way public libraries are organized and how they are staffed?

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[1] All quotations are excerpted from the verbatim transcripts of the interviews with the participants. No alterations have been made to grammar, usage, or sentence structure which occurs in ordinary conversation. I have chosen to forego the use of [sic] in recounting the participants' narratives.

This qualitative study investigated the provision of public access computers for patron use, and its impact and influence upon organizational change in 14 Midwest public libraries. I conducted semi-structured interviews with 35 participants. Interview questions explored how the library organizations changed with the introduction of public access computers.

Researcher's Personal Viewpoint

In corporate America one learns quickly that change is the norm and those who do not adapt well to the environment and culture will be on the way out. I have limited practical experience in public libraries. I bring over 20 years of experience from corporate America and an MBA in management to my research. This research framework used a business view of public access computers and how the public library organizations have changed.

My interest in this topic emerged in my years in corporate America. When working in the corporate world, I was often placed in a liaison situation between the executive offices and the information technology (IT) department. I could speak the language of the IT department and translate that language to people in the office in lay terms. I had no interest in pursuing a career in IT; however, I did work on computer conversion teams where my department or employees would be responsible for a particular aspect of the conversion. For example, while at one company I was responsible for the sales database and anything done to the database had to have my approval before, during, and after the conversion to the new computer system.

My 20 years in the corporate America, the work world changed from one where manual processes held sway to one where computers and automated tasks took over. It

was also a place where a higher level of worker with different skill sets was required. I

wondered if in LIS these same changes had occurred. In the corporate world it changed

the perception of executives who felt that tasks could be completed more quickly because

of computers, which was not always true. Computers increased the level of complexity

of analysis as far as sales, marketing, and human resources, which were departments in

which I spent the majority of my years.

Overview of the Following Chapters

Chapter two of this study is a descriptive literature review related to

organizational change, public libraries, and technology. This review includes an

overview of the significant literature; ideas and concepts evident in the literature will be

employed selectively and intentionally in the subsequent chapters.

Chapter three is the overview of qualitative methodology related to semi-

structured interviews. The chapter looks at the participants, how they were chosen, and

some basic demographic information. It goes on to discuss the data collection and

analysis.

The organization of this dissertation is somewhat different than a quantitative

dissertation. In qualitative research one of the things I found quickly was that the stories

the participants told stayed with you. There are three findings and discussion chapters

that explore a particular theme related to the initial research questions. The three themes

are city government, facilities and services, and people. The chapters look at technology,

public libraries, and the particular themes.   The chapters are set up with an introduction,

the participants' stories related to the theme, and then a discussion pulling in the literature

review articles and any other relevant literature.

Chapter seven, the final chapter, summarizes and examines the research with a final discussion and evaluates if the research questions were answered. Included in the discussion are ideas for further research and any biases or limitations I had while either interviewing, analyzing the data, or writing the dissertation.

The appendices contain the form letters and other items I used in order to contact my participants including one permission letter from a publisher. Lastly, the bibliography with all literature that is cited in the dissertation is listed.

While I have actually written the dissertation in a year, I have been thinking and reading about it for three years. This journey is one I readily share with the audience and I hope it is enjoyable for the reader as it was for me.

Definition of Terms

The following terms are used throughout this study. Terms listed are defined as commonly used in library science or management.

501(c)(3) organization – A 501(c)(3) organization is an Internal Revenue Service (IRS) recognized charitable non-profit set up to allow for tax deductible donations by donors.

Automation – "The design and implementation of ever more sophisticated computer systems to accomplish tasks originally done by hand in libraries. Beginning in the 1960s with the development of the machine-readable catalog record (MARC), the process of automation has expanded to include the core functions of acquisitions, cataloging and authority control, serials control, circulation and inventory, and interlibrary loan and document delivery" (Reitz, 2006).

Board of Trustees/Library Board – The Board of Trustees or Library Board is a group of citizens in the community who have either been appointed by the mayor and City Council or elected to oversee the library and its direction.   The Director of the library typically reports to a Board of Trustees, Library Board, or City Manager and/or Mayor.

Circulation – "The process of checking books and other materials in and out of a library" (Reitz, 2006).

Communication technology – Communication technology refers to the tools the public library uses to access the Internet. In today's environment, Internet access can be through either copper wire, fiber optics, or through carrier systems like a T1 line or Integrated Services Digital Network (ISDN). This technology can also include dial up, cable broadband, digital subscriber lines (DSL), and fiber optic cables.

Community Foundations – "Community foundations are public charities that are non-profit, tax-exempt, publicly supported, grant-making organizations. They develop broad support from many unrelated donors with a wide range of charitable interests in a specific community" (de la Peña McCook, 2004, p. 130).

Computers – For the purposes of this study, computers are the hardware and the software that patrons use to access the Internet, commercial databases (EBSCO, etc.), online public access catalogs (OPACs), or software packages like Microsoft Word or Excel. In public libraries, access to the public access computers is a free service (but not always) and can have different mechanisms to control the use of them in the library.

Directors/Administrators – Directors are those executives charged with the responsibility for the day to day management of the library as well as the short and long range strategic planning.

Friends of the Library Group – "A nonprofit organization whose members share an interest in supporting a particular library or library system through fund raising and promotional activities" (Reitz, 2006).

Funding – Public libraries are funded through many mechanisms. The library can be funded directly out of the city or county's general fund, through bond issues (taxes), through direct taxes on property, special library districts, with grants obtained from outside sources, or any of the above in combination.

Information Technology (IT) – Cooper and Zmud (1990) define information technology (IT) "in a broad sense as it refers to any artifact whose underlying technological base is comprised of computer or communications hardware and software" (p. 123).

Infrastructure – "Infrastructure is a comprehensive term that encompasses all of the elements required to make electronic *content* and services available to the staff and public. Infrastructure includes the hardware, operating system software and workstation applications, networks, and telecommunications services that support the delivery of your technology-based service and electronic content" (Mayo, 2005, p. 5; emphasis in original).

Public libraries – "Public library *(FSCS definition)* is an entity that is established under state enabling laws or regulations to serve a community, district, or region, and that provides at least the following: 1) an organized collection of printed or other library

materials, or a combination thereof; 2) Paid staff; 3) An established schedule in which

services of the staff are available to the public; 4) The facilities necessary to support such

a collection, staff, and schedule; and 5) Is supported in whole or in part with public

funds" (Chute, et al., 2006; de la Peña McCook, 2004; emphasis in original).

Public good – The definition of a public good has its roots in the theory of

political economics. It is described as "a very special class of goods which cannot be

withheld from all and for which the marginal cost of an additional person consuming

them, once they have been produced, is zero" (Johnson, 2005).

Radio Frequency Identification (RFID) – "RFID commonly refers to both a

system of identifying unique individual items via radio signals and to the tags that are

attached to or embedded in those items" (Archer, 2007, p. 21).

Wireless (WiFi) – "A method of connecting to the Internet via electromagnetic

airwaves, rather than wire or cable. Telecommunication charges are eliminated, but an

Internet service provider is still required to gain access to the Internet. Wireless

technology enables the ISP to offer greater bandwidth without the expense of adding

cable to its own connection. However, in most wireless systems "line of sight" is

required, which means that the radio antenna installed at a library must have an

unobstructed path to the antenna maintained by the ISP" (Reitz, 2006).

Based upon the definitions listed above, a hierarchical flow chart has been created

to represent technology. This figure represents how the definitions should be considered

to flow into one another.

Figure 1: Technology Hierarchy.
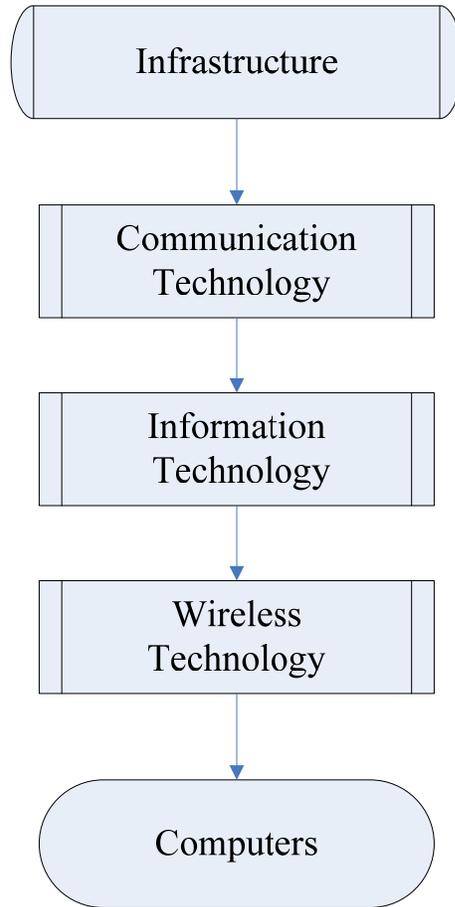
Chapter 2

Review of Relevant Literature

My vision of the library is that this is an institution, this is one of the last vestiges I think of democracy that we have left where you come, anyone can come, no entry fee . . . if you are a rich person you might be sitting right next to someone homeless actually in the library. We have gated communities now. People live . . . there is a rich side of town and the poor side of town. The rich stores and the poor stores. The library and the schools and the schools are fast not becoming this way are the place where it is your community living room. You can actually see who lives in your community by coming in to a library. One of the cool things about technology it has encouraged that mix because the library now is seen more as access to free information not so much as this rarified structure where only educated people come. So my vision just is to keep that central to let people have a chance to have access.

<div align="right">

Amber Bright
Director, Cardinal Public Library

</div>

Organizational Change

Kurt Lewin's work has had a profound impact on social psychology and on experiential learning, group dynamics, and action research (Smith, 2001; Lewin, 1952). Chris Argyris, Peter Senge, Edgar Schein, Warren Bennis, and Rosabeth Moss Kanter have been influenced by Lewin's theories and applied them in different ways to their own research

The authors (Argyris, 1993; Argyris & Schön, 1978, 1996) examine the process of single and double loop learning. Argyris has developed a theory that takes a dysfunctional organization and by application of the Model 2 theory turns it into an organization that learns and overcomes barriers to organizational change. Model 2, or double loop learning theory, is a strategy for building consensus among individuals in an organization. Double loop learning theory uses the process of interviews to figure out the dysfunctional behaviors and defensive routines that occur in the organization and assists

individuals to improve their effectiveness. This method is what Peter Senge (1990) built

upon for his book *The Fifth Discipline.*

In her book about corporate America and the Internet, Kanter (2001) analyzed the

digital culture that would be emerging in the 21st century. The author commented "life is

now defined by where we stand with respect to the Internet" (Kanter, 2001, p. 1). This

quote is true in the present as it was when Kanter wrote it. Kanter revisited innovation in

an article for the *Harvard Business Review* and looked at innovation in corporate

America from the 1970s to the present. The best lesson she discusses is that "companies

that cultivate leadership skills are more likely to net successful innovations" (Kanter,

2006, p. 82).

Edgar Schein's (2003) book, *Organizational Culture and Leadership* (3rd ed.),

looks at organizations from the standpoint of group members and culture. Additionally,

he suggests three different levels of culture that determine the degree to which

phenomenon is visible to an observer (Schein, 2003, p. 25). Since organizational

theorists do not agree on one meaning for culture (Bolman & Deal, 2003; Cameron &

Quinn, 1999; Schein, 1970, 1999a, 1999b, 2003), Schein's (2003) definition will be used

as a framework. Schein defines culture as:

> . . . a pattern of shared basic assumptions that was learned by a group as it
> solved its problems of external adaptation and internal integration, that has
> worked well enough to be considered valid and, therefore, to be taught to
> new member as the correct way to perceive, think, and feel in relation to
> those problems (p. 17).

Table 1: Levels of Culture[2]

Artifacts	Visible organizational structures and processes (hard to decipher)
Espoused Beliefs and Values	Strategies, goals, philosophies (espoused justifications)
Underlying Assumptions	Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate source of values and action)

According to Schein, artifacts are the first level of culture. Artifacts can be anything that one can see, hear, or feel when encountering a new group with an unfamiliar culture (Schein, 2003, p. 25). This can include technology, rituals, ceremonies, and visible products of the group. Artifacts, while easy to see, are often difficult to decipher.

The second level includes the espoused beliefs and values each member holds. Over time the group reflects original beliefs and values, as well as a sense of what ought to be, as distinct from what is (Schein, 2003, p. 28). Bottom line fundamental values that exist in a group, from how the group forms and validates its beliefs, strategies, goals, and philosophies are deeply rooted in the group. Volkan provides an extreme example of how this bond forms in an ethnic situation. Volkan (2004) describes how Slobodan Milosevic used an incident that occurred over 600 years ago to create an emotional bond that lead to the ethnic cleansing of another group. Based on shared cultural experiences, Milosevic played on the beliefs, goals, and philosophies common to the Serbian people.

Schein's third level suggests that in a social unit there are underlying assumptions. Schein (2003) says in a social unit, basic assumptions have become so

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[2] Schein, E. H. (2003). *Organizational culture and leadership* (3rd ed.). San Francisco: Jossey-Bass, p. 26. Used with permission.

ingrained that one finds little variation among group members (p. 31). These basic

premises tie to what Argyris calls theories-in-use – the implicit suppositions that actually

guide behavior, tell group members how to perceive, think, and feel (Argyris, 1993;

Argyris & Schön, 1978; 1996).

   Schein provides a framework when looking at an organizational environment that

is made up of people who are in groups. He explains group dynamics and how the

culture and environment of the group impacts the organization (Schein, 2003).

Leadership and Change

   Rainey (2003) states that leadership is the capacity of someone to direct and

energize people to achieve goals (p. 290). Leadership is critical in an environment where

change is a constant. Bennis (1999) comments, "most organizations have a tough time

finding the right people to lead in an environment of constant change" (p. 193). Cope

and Waddell (2001) studied leadership styles in e-commerce. Their findings support that

of Rainey and Bennis. According to Cope and Waddell (2001): "In an environment that

is constantly changing, the role of the leader has become vital" (p. 523).

   Bennis' 1999 book, *Managing People is like Herding Cats,* explains there is a

crisis in finding leaders. The author makes a distinction between managers and leaders.

Bennis paints a portrait of a leader. "First, they have a great deal of self-knowledge.

Second, they have a strongly defined sense of purpose. Third, leaders have the capacity to

generate and sustain trust. Fourth, leaders have a bias toward action" (Bennis, p. 163).

This portrait is based on a study undertaken with Bert Nanus in 1985 (Bennis & Nanus,

2003). Brooke Sheldon (1991) repeated the study, this time with library leaders, and

found similar traits. Sheldon interviewed 60 library leaders and found them to be

visionary. She also stated "Our leaders have also learned that focusing on two or three

relatively simple goals works better than attempting to follow a complicated agenda that

is open to many interpretations" (Sheldon, 1991, p. 81).

Technological Change in Libraries

Research related to technological change in all kinds of libraries is largely absent.

While a great deal of literature can be found about automation (cataloging, OPACs,

circulation, acquisitions, administrative duties, etc.) there is very little information

available with regard to how automation came about. It is as though computers suddenly

appeared in libraries and began to take over certain functions one at a time. Public access

computers, frequently mentioned in articles in *Library Journal,* appear to be considered

the norm in public libraries as early as 1976 ("Apples in Baltimore County; Coin

Operated System," 1982; "Atari Comes to Queens, NY," 1982; Bryant, 1985; "Coin-

Operated Computer Tried by NY Library," 1976; "Community Development $$ Buys

Computers for Lorain, OH," 1982; Emmens, 1982; "First Public Computers Put in

Oklahoma Library." 1982; "Forsyth Co., NC Installs Public Computers," 1982; Lloyd &

Wright, 1990; "Making $$ with an Apple," 1982; "Montgomery Co. (MD) Brings

Computers to the Disabled Population," 1983; "Portsmouth, NH Library Program:

Circulating Computers, Workshops," 1983; Quinn & Rogers, 1991; "A Rationale for Free

Use of Computers in Libraries," 1986; St. Lifer & Roger, 1994, 1995; "Summer Reading

Successful with Apples in California," 1985; "Two NY Libraries Provide Computer

Education," 1982; Zamora, 1981). Research reports that are primarily authored by Bertot

and McClure and their associates (1996, 1997, 2005, & 2006) mention public access

computers in comparison to numbers of computers available to the staff that are connected to the Internet.

It appears the Bill and Melinda Gates Foundation funding of computers and infrastructure in public libraries in 1997 accelerated the placement of public access computers in all types and sizes of libraries. Bertot and McClure found in their research that most libraries with public access computers served populations of 100,000 or more. In 1997, smaller libraries generally were assumed to be not quite ready to provide public access computers at the time of the reports (Bertot, McClure, & Zweizig, 1996; Bertot, McClure, & Jaeger, 2005).

The research about historical change in public libraries is very limited. There is one dissertation and one article that provided some insight into technological change in public libraries. The first was Patricia Willard's (1990) dissertation on the introduction of public access computers in Australian public libraries. The other was Susan Lee's (1993) article on research libraries and the technology change that was occurring. Both articles are dated but lay a basis of for the research that will be done in this study.

Willard's (1990) dissertation looked at the introduction of computers in Australian public libraries. The author investigated the rate of diffusion of technological innovation in public libraries. At the time the study was conducted (1984-1989) very few public libraries in Australia had introduced public access computers. Willard used a Delphi study to predict future adoption of computers by Australian public libraries. Willard concluded public access computers would continue to be a rare commodity. Participants on the Delphi panel consistently commented that funding would be insufficient to provide public access computers on a wide scale basis. They saw

computers limited to staff use and dedicated to tasks and processes like cataloging, acquisitions, etc. in a library. While Willard's study, completed in 1990, is informative, it is outdated and geographically limited.

Susan Lee's (1993) descriptive article presents theoretical constructs regarding organizational change in a research library using Warren Bennis' definition of organizational development as a "response to change." There was no research project discussed or methodology used in discussing the library but it appeared to be about a hypothetical situation at a library when an organizational change occurs. The author comments about technological changes in research libraries, discusses organizational development and comments that a basic problem is that "today's research libraries face changes occurring at rates exceeding the scope of natural assimilation processes, and lack sufficiently comprehensive methods for adjusting and adapting to the turbulence" (p. 129). Since the publication of Lee's article in 1993 made the argument that the rate of change exceeded the natural assimilation processes. The rate of change of technology has not abated and, in fact, a case could be made that it is even faster today.

Resistance to Technological Change

Cooper and Zmud (1990) broadly define information technology (IT) as "any artifact whose underlying technological base is comprised of computer or communications hardware and software" (p. 123). Cooper and Zmud's definition may seem expansive for 1990. It is, however, appropriate for today. According to Bertot, McClure, Jaeger, and Ryan (2006), computers without communication infrastructure add little or nothing to what are considered integral services for public access computers in public libraries.

Carayon and Karsh (2000) studied the sociotechnical issues that emerge when a change process is being undertaken by an organization. The authors comment:

> the process of technological change is important to consider because (1) it can be a source of stress in itself by, for instance, creating conditions of uncertainty and overload, and (2) it can influence the resultant design of the work system (p. 247).

While Carayon and Karsh explore imaging technology in a for profit corporation, many of the results of their research are applicable to a not for profit world, particularly resistance to change. When looking at public access computers in libraries and their impact on organizational change, the additional time librarians and staff must use to assist patrons creates uncertainty, and overloads systems if libraries' staffing and training are not adequate. In addition, when new computers, printers, software, etc. are introduced, this can change the way work is processed and create more uncertainty.

Dawson and Buchanan's (2005) discussion of organizational and technological change in corporations concludes "change has to be understood in terms of the multi-level interactions between substance, context, implementation process, and organization politics over time" (p. 851). This parallels with Carayon and Karsh's view that change can create stress on systems, staff, and even the clients of an organization.

Deiss (2004) describes technological innovations in terms of their effects on organizations. The author comments: "the tension between innovation and status quo is such that innovation is often seen as disruption" (p. 22). There is a perception among some individuals in organizations that newly introduced technology will be more trouble than it is worth. While other people in an organization embrace change, these individuals resist it.

Needham (2001) explores technology-related organizations and their ties to libraries. The author, a vice-president at OCLC, comments that librarians often resist technological change as well as the organizational leadership needed to introduce them. Needham states,

> One obstacle is the distrust of leadership that seems to manifest itself in librarians whenever someone asserts such a role. In several organizations . . . the attempt to provide leadership among librarians has been compared to herding cats. (p. 148).

Considering what Needham has suggested based upon anecdotal evidence, the following question emerges. Is there a distrust of leadership in public libraries, a deficiency in the education process in public libraries, or is the issue a combination of both?

Organizational Change in Libraries

Academic Libraries

Ostrow (1998) studied organizational culture and technology in academic libraries using qualitative methods. Soyeon Lee's (2000) dissertation study used observations, surveys, and interviews to look at an academic library that had a long-term director who dictated changes. Interview participants felt that they were not allowed to contribute any changes to the library culture and decisions were already made when they were announced (Lee, 2000). Varner (1996) used a competing values framework (CVF) survey based upon Cameron and Quinn's (1999) methods and participant interviews to examine the organizational culture.

Although Varner's (1996) study explored the implementation of a new computer system his study included an in depth analysis of the CVF surveys of the different work groups in the technology change. Varner continually discusses the need for CVF evaluation to occur before, during, and after any organizational change.

Ostrow's (1998) case study of the academic library utilized a combination of one-on-one semi-structured interviews, participant observations, and examined artifacts. During the time frame she was completing her study; the library was undergoing a technological and leadership change. Ostrow's findings (1998, p. 234-235) parallel Schein's view of three levels of culture that have been previously explained. In addition, Ostrow also used a three-perspective framework. The three-perspective framework is integration, differentiation, and fragmentation perspectives (Ostrow, 1998, p. 234). The integration perspective looked at the library from a more inclusive point-of-view by looking at it through an integration lens which ties to Schein; the differentiation perspective explored the existence of strong subcultures outside of and in opposition to the ingrained culture; and the fragmentation perspective focused on action, symbolic and ideological ambiguity (Ostrow, 1998).

The summer 2004 *Library Trends* published a themed issue with articles related to organizational development in libraries. While not all of the articles are research based, the articles discussed following this paragraph were instructive for this study.

Kaarst-Brown, Nicholson, G. von Dran, and Stanton (2004) viewed the organizational cultures in libraries through the lens of competing values framework (CVF) and its applicability to different types of libraries (academic, public, small institutional, and digital). Incorporating Schein's levels of culture, the authors focused on CVF which looks at four cultural archetypes: clan, adhocracy, market, and hierarchy (Cameron & Quinn, 1999). The authors constructed a theoretical lens in which to evaluate libraries. This is similar to Varner's (1999) study of an academic library used and he found it helpful analyzing the culture of the organization.

Shelley Phipps (2004) from the University of Arizona (UA) library presents organizational change in an institution from the standpoint of network system theory using Senge, Deming, and Scholtes as a framework. The author operationally defined the term "'system' . . . as the network of processes that provides the infrastructure or framework that supports the actual work of an organization" (p. 69). She reported her experiences at the during a 10 year period when technology was being integrated into the University of Arizona library. According to Phipps the UA library transitioned from a hierarchical, non-technical, inward focused organization to a team based, shared leadership model (p.72). The story of the UA library transformation is relevant to this research because it describes a system that completely changed how the organization does business. While Phipps' article focuses on the change it also describes setbacks and challenges that had to be overcome within the library.

Holloway (2004) examines organizational development through a series of interviews with academic library leaders. The limited results suggest that technology has been a "primary driver" in creating change in academic libraries (p. 8). Holloway relies on Charles Schwartz's (1997) edited book of case studies undertaken by practitioners in the field. These case studies investigated organizational development in the wake of technology in academic libraries (Schwartz, 1997). Schwartz's survey of the same practitioners indicates that technology is one of several drivers that have moved organizations to change.

Giesecke and McNeil (2004) discuss moving the University of Nebraska-Lincoln's library management from a single loop to a double loop-learning model. At the same time, the authors transitioned the library from a hierarchical management structure

to a team-based model similar to the one adopted at the University of Arizona. Giesecke and McNeil comment that adapting to the learning organization enabled the library staff to adapt to a changing environment.

Public Libraries

The literature on organizational change and public libraries is very limited. In addition to Willard's study done in 1990 discussed earlier in this paper, two additional studies provide insight into technology and change in public libraries.

Ishii (2004) studied the communication networks and their impact upon organizational change in public libraries. Using factor analysis Ishii investigated public libraries facing budget cuts and the degree to which employees trusted information through internal workgroup channels. The author's factors explained 74% of his findings and left 26% of the variance unexplained. Ishii (2004) comments, "this unexpected result was because the questionnaire asked about the perceived quality of information about the budget cuts, and for this topic, employees were more likely to trust official announcements from the organization" (p. 99).

Bernfeld (2004) adapted Phipps' TQM framework and applied it to a public library in Wyoming. The purpose of the modified TQM framework was to change the public library from hierarchical management organization to a team based structure to create a more productive and effective institution. Bernfeld described a circular organizational structure that was very different from the one described by Phipps at the University of Arizona. Phipps was situated in an academic library with over 200 employees while Bernfeld was in a public library with 20 employees resulting in overlapping circles of responsibilities.

Facilities and Libraries

The ability to renovate and adapt a building to handle technology is something library directors who lead and manage medium-sized public libraries will do. This role of the library director became very clear during the interviews that were done. In most cases the libraries had either adapted the building in some way or built a new facility. The adaptation can include expanding the facility or just find new ways to add electrical and telecommunication outlets. The majority of the buildings were built between 1900 and 2000. Buildings built prior to 1995 were not adequately planned with technology and computers in mind.

Technological challenges are part of the landscape when dealing with older buildings as was discovered at the Williamsburg Regional Library (Kurzeja & Charbeneau, 1999). The library needed to update the children's department and during the renovation came up with a temporary quarters housed in an old bookmobile (Kurzeja & Charbeneau, 1999, ¶6). Just getting power and telecommunications to the temporary location was something that needed the creative abilities of the staff but they managed. The staff survived the temporary life in the bookmobile parked in the middle of a retail shopping center parking lot and learned they were more flexible than they realized (Kurzeja & Charbenau, 1999).

Thomas' (2000) article discusses how to redefine library space in academic libraries to include both print and computers. Her advice is applicable to public libraries as well. The author declares

> Librarians sacrificed the esthetics of library spaces as staff turned
> previously unwired areas into computer rooms. Many retrofitted libraries
> from that period obscured formerly handsome buildings in a web of cables

and surface mounted conduits, replacing visually pleasing rows of bound
books on wooden shelves with computers and printers (p. 409).

Basically the libraries were retrofitting technology to fit into buildings that were not built

for technology. One of the best suggestions that Thomas makes is:

Wire new buildings and renovated spaces beyond what is currently
required. Think ahead to at least the next renovation. Provide alternatives
for bringing both power and data to tables through flat wire and wall
mounted cable channels. Design grids of wiring in the floor. Use
universal cable to carry voice, data, and local area networks (LAN) access.
Power, lighting, and telecommunications are three of the most important
elements to consider when planning a library space (p. 411).

Arizona public libraries have struggled with remaining relevant while adapting

their services for the Internet age. A recent article in *The Arizona Republic* newspaper

discussed that adding new services to the public library, like Internet services, brought

different groups to the library. Seftel goes on to explain that libraries are reaching out to

groups and trying to market books like the bookstores do to increase traffic and

circulation.

Seftel's article quotes Leslie Burger, the former president of the American Library

Association (ALA).   "Once we started offering public computing, that brought people

back to libraries and attracted a lot of groups that wouldn't have fit our 'library profile' in

the past," said Burger (Seftel, 2007). As the president of ALA Burger is commenting on

a generalization of public computing in public libraries.

The Internet in the Public Library

Computers and the Internet have changed the public library's role in the

community and society. The public library has had to adapt to the technological

revolution that has been ongoing in society and culture since the 1980s. Table 2, below,

suggests that public libraries did not overwhelmingly embrace computers or the Internet

22

until after 1997. In this instance "connected to the Internet" may mean either a staff or public access computer. This date coincides with the beginning of the Gates Foundation grants to public libraries for the acquisition of computers and software (Gordon, Gordon, Moore, & Heuertz, 2003). Based upon 1994-1996 statistics (Bertot, McClure & Zweizig, 1996), it appears public libraries did not generally provide public access computers.

Table 2: Public Library Use of Internet and Public Access Computers[3]

	1994[4]	1996	1997	1998	2000	2002	2004
% Connected to the Internet	20.9%*	44.6%*	72.3%*	83.6%[a]	95.7%[a]	98.7%[a]	99.6%[a]
% of Public Access Computers	12.7%[5]	27.8%[6]	60.4%[7]	73.3%	94.5%	95.3%	98.4%

*Note: * denotes library systems; [a] denotes library outlets*

Prior to 1997 (Bertot, McClure, and Zweizig, 1996), data from the National Commission of Library and Information Science (NCLIS) indicates that libraries serving a population of over 100,000 were more likely to adopt Internet connectivity than libraries serving smaller populations. The authors detail a number of factors for these findings including: a) the vision of either the leadership or the library board; b) the desire of the library community served (Bertot, McClure, & Zweizig, 1996). According to the authors, these factors were less important to libraries serving smaller populations due to limited funding for technological innovation (Bertot, McClure, & Zweizig, 1996).

There is a void in the library literature relating to public libraries as providers of public access computers and other technology. I searched the literature for articles about success stories, case studies, and research studies related to public access computers

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[3] U.S. Census Bureau. (1998-2006). *The statistical abstract of the U.S. 1998-2006.* Washington, DC: U.S. Census Bureau.

[4] This number was from a report written by Bertot, J. C., McClure, C. R., & Jaeger, P. T. (2005, May). Public libraries and the Internet 2004: Survey results and findings. Tallahassee, FL: College of Information, Information Use Management & Policy Institute, Florida State University.

[5] This number was from a report written by Bertot, J. C., McClure, C. R., & Zweizig, D. L. (1996). The 1996 national survey of public libraries and the Internet. Tallahassee, FL: College of Information, Information Use Management & Policy Institute, Florida State University.

[6] Ibid.

[7] This number was from a report written by Bertot, J. C., McClure, C. R., & Fletcher, P. D. (1997). The 1997 national survey of public libraries and the Internet: Final report. Tallahassee, FL: College of Information, Information Use Management & Policy Institute, Florida State University.

being brought into public libraries. With the exception of a few Gates Foundation stories

in *American Libraries* and *Library Journal*, there were very few of these kinds of articles.

The search terms "technology and public libraries," "public access computers and public

libraries," "information technology and public libraries," retrieved a few current articles

from the *Library Literature and Information Science Full Text* (Wilson) and *Library,*

Information Science, and Technology Abstract (EBSCO) databases. The same terms used

in the business and public administration databases retrieved nothing. In addition, I did

keyword searches using "change management and public libraries," and "information

technology and public libraries" in the same set of databases with very few articles were

found. Searches using the same terms of UMI ProQuest and OVID Dissertation databases

yielded approximately 10 dissertations; however, not all of them were applicable to this

research.

Chapter 3

Methodology

> We will provide the technological infrastructure but as it becomes more accepted we can sort of return to our role which is informing the present. Providing all the media for people to learn, for recreational use, I see and I want our community to still look to the library to be the community hub. I think there will be a lot more use of the library as a commons. I am very interested in the commons idea.
>
> Lorraine Mallory
> Owl Public Library

This study looked at public libraries and how technology influenced the organizations as a whole using qualitative interview methods. Qualitative methods in library and information science, when analyzing organizational culture, have focused on case study research using a single library. This research looked at 14 libraries in an effort to have some ability to compare and contrast between the organizations.

Technology, organizational change, and public access computers as one topic has not been well researched in library and information science (LIS). It has not been well researched outside of our discipline either. This study is exploratory in nature because there was nothing to use as a baseline except for Willard's study from 1990 done in Australian public libraries.

Out of the research, three distinct themes emerged from the data: city government, services and facilities, and people. The perceptions are based primarily upon the library directors' understanding of city government, services and facilities, and people. While other participants than library directors were interviewed, the staff tended to support what the directors mentioned.

1. What drove the introduction of public access computers in public libraries?

2. How has public library culture changed since the introduction of computers for patron use?

3. What adjustments were necessary to deal with the influx of computers and other technology in public libraries?

4. Have public access computers changed the way the library is organized and how it is staffed?

The research questions were exploratory in order to get a perception of the interviewees' experience with public access computers and organizational change. For example, the intention behind question three was to get the perceptions necessary to deal with technology in public libraries. Participants' answers focused more on how the library director and staff dealt with technology in their facility such as where the cable was run for their computers and where the PCs were initially placed in the library.

The fourth question was to see if the library director and their staff felt there were a vision for the library in the past, present, and the future. Leadership and being visionary go together (Sheldon, 1991). This question also led into the question regarding organization and staffing. How the library was staffed in the past and at the time of the interview is an indication of whether or not the organization has changed. for this study artifacts were collected extensively, the documents were used minimally. Most of the directors discussed changes in their organizational chart in depth and provided copies of the charts.

Qualitative Methodology

Qualitative methods need to take place in the natural settings of the participants and be focused on participants' interpretation of events (Creswell, 2003). An interview provides snapshots of participants' experiences in particular times and places and enables them to explain phenomena. Phenomenology identifies the essence of human experience concerning a phenomenon as described by the participants in the study (Creswell, 2003; Hitzler & Eberle, 2004; Moustakas, 1994). The phenomena examined for this study was the introduction of public access computers into the participants' public libraries as described by them.

Phenomenology was the appropriate strategy to use in the study because it enabled me to understand the lived experiences of the study participants (Creswell, 2003; Hitzler & Eberle, 2004; Moustakas, 1994). Lived experience was appropriate for this research because, per Schein's levels of culture, group experience is affected by each individual. When interviewing a small number of people to understand their experiences with technology and the relationship of these experiences to the changes that were made in the public library, it was important to realize that technological changes influenced their everyday lives for good or ill. This ability to understand what occurred in their lives was what Moustakas (1994; Hitzler & Eberle, 2004) talked about when discussing the participants and the researcher understanding the lived experience. Phenomenology also necessitates awareness not only of oneself but of others. The participants were very cognizant of others' experiences such as patrons and other staff members.

The use of phenomenology enabled me to acquire the stories of how public access computers came to be part of the public library at each particular location. The stories

focused the interviews, which in turn helped to determine which questions to ask.

Focused interviews were developed in the 1940s in relation to communication research

and propaganda analysis (Hopf, 2004). According to Hopf the scope of the interviews

should not be too narrow so that interviewees have maximum opportunity to react to the

questions (Hopf, 2004, p. 205). Hopf says that the scope, specificity, depth, and personal

contact of the group interview can help to bring out a "reserved, non-directive

management of a conversation with an interest in very specific information and the

opportunity for an object-related explanation of meanings" (p. 206). Organizational

change at the public library was influenced and affected by the advent of public access

computers. The overarching questions listed in Appendix B were important to determine

how the participants perceived the organizational changes that occurred in their libraries

and if they were due to the introduction of public access computers.

The perception of organizational change was different for each group –

administration and staff members – depending on how they were personally affected by

it. Administrators viewed organizational change from the aspect of the entire public

library. Staff members viewed organizational change from the aspect of their department

and their particular role within the department and then the public library as a whole.

What happened in the interviews was unscripted.

Participants and Setting

This study was conducted in 14 different public library sites in the Midwest

during January through March, 2007. Each public library was located in close proximity

to the researcher and facilitated the ease of conducting the research. Each library serves a

population of between 25,000 and 99,999. To get input from organizational leaders, the

population was limited to library directors and library staff.

These particular size criteria were selected in order to identify public libraries

large enough to have a significant investment in computers and printers for the public to

use.

Table 3: Public Library Population for the Midwest[8]

	State												
Population	IL	IN	IA	KS	MI	MN	MO	NE	ND	OH	SD	WI	Total
Less than 1,000	45	9	108	142	8	14	5	157	30	1	49	20	588
1,000 – 2,499	142	45	230	84	24	32	26	67	26	4	35	81	796
2,500 – 4,999	113	38	94	44	75	23	26	18	7	22	18	89	567
5,000 – 9,999	101	45	55	24	96	24	26	17	7	57	9	69	530
10,000 – 24,999	124	46	30	17	97	18	34	9	8	67	11	76	537
25,000 – 49,999	66	30	14	8	43	8	16	6	2	50	1	26	270
50,000 – 99,999	26	16	7	1	21	4	9	0	3	28	1	11	127
25,000 – 99,999	**92**	**46**	**21**	**9**	**64**	**12**	**25**	**6**	**5**	**78**	**2**	**37**	**397**
100,000 – 249,999	8	8	2	3	16	10	5	0	0	13	1	6	72
250,000 – 499,999	0	1	0	2	3	6	2	2	0	5	0	1	22
500,000 – 999,999	0	1	0	0	1	1	2	0	0	3	0	1	9
1,000,000+	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	*626*	*239*	*540*	*325*	*384*	*140*	*151*	*276*	*83*	*250*	*125*	*380*	*3,519*

Using the *American Library Directory* and Hennen's American Public Library

Ratings (HAPLRs) online, there are a total of 397[9] library systems listed in the Midwest

for the population criteria of 25,000 to 99,999. Directors' names and address were found

using online state library databases.

There were a total of 397 libraries to choose from. For the time I had available,

20 libraries were considered to be manageable to visit. Twenty-one libraries were chosen

each library director was called and asked to participate in the project through a script

that was approved through the University of Missouri-Columbia Institutional Review

[8] Chute, A., Kroe, P. E., O'Shea, P., Craig, T., Freeman, M., Hardesty, L., et al. (2006). *Public libraries in the United States: Fiscal year 2004* (NCES 2006-349). U. S. Department of Education. Washington, DC: National Center for Education Statistics.
[9] Hennen's American Public Library Ratings (HAPLRs) data is from 2006 and is more up-to-date than anything else available at this time.

Board (IRB) (Appendix D). Fourteen agreed to participate. The directors who chose not

to participate had various reasons. One library director was in the middle of an expansion

project. A couple of the library directors were having budget problems and did not want

me in the middle of it. Some library directors did not have the time to participate in the

research.

Institutional memory was critical to this project. If the director did not have

longevity at the public library, the director was asked to choose another administrator(s)

or manager that had at least 10 years or more of service. Some of the staff members

interviewed had institutional memory of five to 25 years. The study attempted to go back

in time through people's perceptions of what happened when public access computers

were brought into the library.

The participants in the study were directors, managers, and staff members of

libraries located in the Midwest of the United States. Table 4 below shows the gender

breakdown of the staff of the libraries.

Table 4: Gender of Participants

	Directors		Other Staff		Total	
	No.	%	No.	%	No.	%
Female	8	57.1	16	76.1	24	68.6
Male	6	42.9	5	23.9	11	31.4
Total	14	100.0	21	100.0	35	100.0

The previous table indicates that the participants are normative to the library profession.

The participants had different levels of service at their individual libraries as seen in

Table 5. In some cases they may have had a short tenure at their current library but had a

long term career in librarianship as can be seen in Table 6 below.

Table 5: Participants Years of Service at Current Library

Years	No. of Participants	%
0-5	8	23.0%
6-10	2	5.7%
11-15	9	25.7%
16-20	6	17.1%
21-25	4	11.4%
26+	6	17.1%
Total	35	100.0%

Table 6: Participants Years of Service in Librarianship

Years	No. of Participants	%
0-5	4	11.4%
6-10	2	6.0%
11-15	7	20.0%
16-20	5	14.3%
21-25	5	14.3%
26-30	6	17.1%
31+	6	17.1%
Total	35	100.0

Semi-Structured Interview Design

Semi-structured one-on-one and small group interviews were done with different groups at each library. As the majority of the interviews were individual interviews there was no danger of putting staff members into a negative power relationship with their directors. The same questions were asked of each participant in the groups. Administrators were chosen to get information regarding the administration's point of view of technology and organizational change. The staff members had different points of view of what occurred when public access computers were put into place.

The need for qualitative research to ensure validity and reliability of their studies has been pointed out by Lincoln and Guba (1985), Denzin and Lincoln (2000) and Flick

(2006) even if it is called something else (James & Busher, 2006). The definition of reliability "refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observers on different occasions" (Silverman, 2005, p. 210).

For the purposes of this dissertation the definition of validity will be taken from Silverman (2005) and is "I mean truth" (p. 210). Validity is the degree to which the data has trustworthiness in qualitative methodology (Bowen, 2006; Charmaz, 2006; James & Busher, 2006; Johnson, 1997; Koch, 2006; Lietz, Langor, & Furman, 2006; Morrow, 2005; Morse, Barrett, Mayan, Olson, & Spiers, 2002; Peräkylä, 2004; Poggenpoel, 2005; Porter, 2007; Roberts, Priest, & Traynor, 2006; Shenton, 2004; Silverman, 2004). In addition to looking at the trustworthiness of the data one must determine the credibility, authenticity, and rigor of it.

Authenticity as described by Guba and Lincoln (2005) was that fairness was "thought to be a quality of balance; that is, all stakeholder views, perspectives, claims, concerns, and voices should be apparent in the text" (p. 207). In this dissertation the views of the director and staff are the prominent opinions and voices analyzed and described. The stakeholder beliefs were elaborated through the director and staff and may have been biased when explained to me in the interview process.

One method of trustworthiness and creditability is to use member checking (Lincoln and Guba, 1985) where each participant is given a copy of their transcript for validation (See Appendix H). The respondents' then correct what was transcribed, if necessary, and send it back via email to me. If no response occurred when sending the transcript out to the participant, a follow up email was sent out (see Appendix I). The

follow up email told the participant that if no changes were received by a certain date the transcript would be considered correct. Use of member checking determines the accuracy of the findings by taking the specific descriptions or themes back to participants and letting them determine whether they are accurate (Creswell, 2003, p. 196; Lietz, Langer, & Furman, 2006; Lincoln & Guba, 1985; Silverman, 2005). The majority of the participants (18, 51.4%) returned their transcripts with corrections and clarifications. The respondents cleaned up sentence structures and grammar. In the course of reviewing the transcript, many of the interviewees' clarified some of the answers to the interview questions by expounding further. For example, one participant's changed the following from "[Director's name] is the only hire they have control over" to "The Director is the only hire the Library Board evaluates and I would assume they would be involved in hiring a new director." The change makes the transcript more understandable and readable.

Seven respondents returned an email saying that no corrections were needed. The remaining 10 did not respond to either email. Table 7 below recaps the member checking results.

Table 7: Member Checking Results

Returned with Corrections	18	51.4%
Returned with No Corrections	7	20.0%
Not Returned	10	28.6%
Totals	35	100.0%

The dissertation was sent to each participant via email to make sure they were not identified (see Appendix J). None of the participants returned any comments saying they were identifiable based upon what was written in the dissertation about them either through the interview transcripts or discussions about their particular library.

Another method to ensure trustworthiness and rigor is through the use of triangulation (Denzin & Lincoln, 2005; Creswell, 2003; Flick, 2006; Padgett, 1998). The method of triangulation I chose was data triangulation. Data triangulation is "the use of more than one data source" (Padgett, 1998, p. 97). The organizational charts that were used to determine if there were changes to the culture of the public libraries studied triangulate the data with the transcripts of the library directors. It enables me to verify the information the library directors discuss about title changes that have occurred within their organizations during the time that public access computers were introduced into their public libraries.

Data Collection Procedures

Interviews

The interviews were semi-structured individual and group interviews with the library director and one or two other staff members within each of the 14 libraries. These interviews were conducted face-to-face and recorded with an audio tape recorder. The majority of the interviews lasted approximately 30 to 90 minutes. The interviews were transcribed verbatim by the researcher or a qualified transcriber. Content analysis procedures were used to access the impact of the addition of public access computer on library workers' perceptions (Mehring, 2004). The data was stripped of all identifying information on participants, library systems, cities, and states for confidentiality purposes (Clandinin & Connelly, 2000). Additionally, where appropriate, any dollar amounts listed were removed to avoid identification based on the ability to use technology (i.e. Google or other Internet search engines) to find the libraries participating in the research.

IRB requires that researchers guarantee anonymity to all participants in a research project done at a university or college (Clandinin & Connelly, 2000). Researchers' ability to guarantee confidentiality enables people to participate in research projects without any fear of repercussions due to something that was said or done. As a researcher, I wanted to ensure that my participants have a positive experience and would be willing to entertain the idea of engaging in other studies or projects done by others.

In order to honor the need to keep the participants and their libraries confidential as well as respect their need for privacy, pseudonyms are used for all library systems and staff members participating in the study. The participants were given the opportunity to provide their own pseudonym if desired. If no pseudonym was given to me by the participant, one was assigned. Each library has been identified by using random selection of North American bird names as shown in Table 8 below.

Table 8: List of Libraries and Directors Pseudonyms

Library	Director
Eagle Public Library	Victor Higgins
Falcon Public Library	Lisa Blaine
Heron Public Library	Rupert Loomis
Sandpiper Public Library	Justin Sedlak
Cardinal Public Library	Amber Bright
Wren Public Library	Edward Langford
Finch Public Library	Mark Williams
Owl Public Library	Lorraine Mallory
Hawk Public Library	Blythe Vance
Osprey Public Library	Ethel Bourdeaux
Condor Public Library	Jack Taylor
Kestrel Public Library	Arabella Clement
Egret Public Library	Mary Adams
Crane Public Library	Violet Ghent

Artifacts

Anyone who reads documents as a basic representation of *something else* is looking at them as a "window pane" (Gusfield, 1976, p. 16) through which one is looking at a person, an action, or a fact (Wolff, 2004, p. 284). Wolff (2004) suggests that the artifacts be initially read through aloud with no intention to initially code the data. Wolff's suggestions were followed. I became familiar with organizational charts of the public libraries' in relation to the interview data and job titles. The initial coding was looking for categories where actions or processes have taken place in regards to information technology that has impacted or influenced organizational change. For a fictional example, perhaps looking at two job descriptions over a period of 10 years shows a considerable change in the tasks of reference librarians that can be attributed to information technology. This finding would be important to this study.

After reading the documents, each set for each library they will be compared to see what changes there are between them if any. The differences between the documents will be coded to determine what types of changes have occurred. The documents will also be compared and contrasted to what has been said by the interview participants to see if there are similarities or differences between them (Wolff, 2004; Flick, 2006; Creswell, 2003).

Data Analysis

The interview data was transcribed by me or a qualified transcriber. Once the interviews were transcribed, the transcripts were sent to each participant for member checking, and once returned and edited, set aside. The interviews were read with no intention to code the data. At that point, the goal was immersion into the data and to read

the transcripts to determine what the participants knew and how they answered the questions. Again, the data was set aside for a short period of time. This break gave me time to let the data percolate in my mind before coming back and starting the initial coding. I manually coded the data.

When using content analysis, the goal is to find discrete ideas within the interviews in order to label them and organize them into categories of actions and roles. This is known as open coding (Böhm, 2004; Creswell & Brown, 1992; Strauss & Corbin, 1990). The categories are converted into typologies. The ability to go through the data numerous times enabled me to step away and then come back to it with fresh eyes. For this study, I wanted to discover what phenomena come out of the data from the subjects' point-of-view. What occurred in the library when public access computers were introduced for patron usage and how that changed the organization is important. One caveat –participants memories may have been hazy, especially for information that reached back in time. As interviews progressed, past events became clearer to the participants and they remembered more of the incidents that occurred.

The next phase was go through the data with the intent to finding contextual factors that link the categories that show connections through the conditions (Böhm, 2004; Creswell & Brown, 1992; Strauss & Corbin, 1990). Finding contextual factors enabled me to begin to develop storylines for each of the participants in order discover what each had experienced when the public access computers had been initially installed in the libraries. When working with the interview transcripts, the data was gone over multiple times and coded. The coding was refined with each pass through the data while the categories and stories come up through the data [see Appendix A].

37

Coding and categorization was done when reading the transcripts and artifacts. During the reading, I would place keywords in the margins that came up over and over in the different transcripts. For example, the fact that automation was the beginning of computers being introduced into public libraries was brought up over and over. This was coded as "automation" in all the transcripts.

The transcripts were read and analyzed upward of a dozen times. As I was using qualitative methods, every new analysis provided new information and insight or confirmed conclusions that were already drawn. The ability to validate the conclusions enabled me to ensure that the theoretical framework worked with the findings.

As the artifacts looked at were organizational charts, there were either changes to the organization or there were not. Some of the library directors were able to give me retrospective organization charts (past and present) in which to compare the charts. Others were only able to give their present organization charts which limit the amount of analysis that can be done to the data.

Organization of Findings Chapters

As I was working with 32 interview transcripts and more than 500 pages with 35 participants, it became obvious very quickly that I would be unable to use everything I had heard from them. After a frantic phone call and a couple of meetings with my advisor who specializes in qualitative research, I split the transcripts into three major themes – city government, services and facilities, and people. These categories were the three that kept coming up over and over in the transcripts. There would be snippets of others like adult programming but they would not be as prevalent as these three. It was evident that to the participants' these were the important areas that was explained and

discussed. From a theoretical perspective, organizational change occurred in public

libraries over a period of 20 years. The organizational change was started with the onset

of automation. When automation occurred, the way the public library culture had always

been began to change in subtle ways. Job descriptions for catalogers were different

because these employees were expected to use computers and OPACs (Online Public

Access Computers) in which to catalog records for books. Using computers in this

instance was their first incarnation of use in many public libraries that I visited.

The three overarching categories assisted me to organize the data. These major

areas would be my three findings and discussion chapters and I would discuss and use

only a portion of the public libraries' transcripts in each. Once this decision was made, I

understood that the richness of the data I had collected would limit me from telling all the

great stories everyone had imparted to me, but that this was the only way to handle the

overwhelming amount of data. Some of the themes that were discarded were cataloging,

collection development, reading particularly the one read program, library as place,

filtering, and marketing of the library. While all of the participants had the themes listed

above in their transcripts, the three overarching categories came through in most of the

interviews.

The data was placed into three overarching categories – city government, services

and facilities, and people. All of those areas interact with technology and the

organization in some way. *City governmen*t was something that I understood that most

libraries dealt with; however, some libraries dealt with city management more adeptly

than others. Those library directors who had challenges with their city administration in

some cases had inherited it or had a financial crisis due to inadequate revenue that had

created difficult choices. In one case, the library director had made an interesting decision in the 1980s that was still in place at the time of the interview which put them in a good light with the city but at the same time created disagreement with the state library.

Every public library must occupy and manage a facility of some kind. The age and condition of the *facility* that each library "lives" in does vary and it was quickly evident medium sized library directors are also facility managers. As the facility manager, it was up to the director to make sure facility issues were repaired, replaced, or handled. The oldest building was a 1900s era Carnegie building and the newest was one built in 2000. Each building had its own quirks and foibles that needed to be dealt with and most had not been built with the idea of computer and communications technology. This in itself created directors who found innovative solutions to make sure public access computers were available to their patrons.

The portion of the second category alluded to the fact that technology and facilities work hand in hand in providing the patrons with the *services* that are given. Typically these are intermediated by the staff but the facility and technology are intimately intertwined with the service.

The final major theme was *people*. Some of the library directors were more fortunate than others in that they had adequate staff or an abundance of staff. Other directors were not as fortunate due to financial or political difficulties. Technology has created situations where some directors have changed the way certain members of their staff are utilized and others have added whole new departments to deal with public access computers. Lastly, when organizational change occurs there can be instances of

resistance to change on the part of individuals who are members of the institution. These

public libraries had their fair share of people who resisted change.

Chapter 4

Technology and City Government

The basic . . . what the city is paying . . . salaries, benefits. That's the big chunk.
Utilities in the building, phone service, Internet service. . . . That is about it for what
budget the city has been paying.[10]

Edward Langford
Director, Wren Public Library

City Government and Public Libraries

The relationship and rapport a public library director has with the city is a key

component to making the library a success. A successful library has enough staff to

adequately run day-to-day library processes, keep it open the number of hours the patrons

would like, collect sufficient materials for community use, and ensure the public access

computers are connected to the Internet. In the cities I visited, the mayor, with the

assistance of the City Council, appointed the Board of Trustees who then hired the library

director. The library director was responsible for hiring the library employees. However,

what looked like a very clear cut relationship did not reveal the complexities of reporting,

accountability and funding.

Funding Public Libraries

The majority of the libraries in the study are funded directly by city government

with additional money coming from county government to provide rural patrons' library

services. The relationship between the library directors and their city governments

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[10] All quotations are excerpted from the verbatim transcripts of the interviews with the participants. No
alterations have been made to grammar usage or sentence structure which occurs in ordinary conversation.
I have chosen to forego the use of [sic] in recounting the participants' narratives. In some instances dollar
amounts have been removed to further protect the identity of the respondents and their locations.

ranged between positive to negative. In one case an adversarial relationship was

unknowingly inherited when a director accepted the position at the library. In another

instance, the relationship between the city and the library director depended upon the

good will of the city administrator of the time. In all situations, the relationship had the

potential of affecting the service the taxpayers received. It could be argued that while

there are many demands upon a city or county government's purse strings, the library is

one of the best values that can be provided to the community. According to the American

Library Association's Office for Research and Statistics (2003) "Americans spend $25.25

a year [per individual] for the public library." A report prepared by Levin, Driscoll, and

Fleeter (2006) for nine Southwestern Ohio public libraries stated:

> The application of a Household Expenditures multiplier, as published by
> the Bureau of Economic Analysis, U.S. Department of Commerce to
> $190.4 million worth of library benefits results in a total quantifiable
> economic benefit of library investment equivalent to about $238.6 million
> or about $3.81 per dollar expended in library operations (p. 11).

This chapter focuses on six stories that illustrate how positive or tenuous

relationships can mold the administrative abilities of a director to manage a library.

Some directors are more politically savvy than others. All decisions had political

implications consciously or unconsciously when made.

Funding Computers

The director of Eagle Public Library has a problem. The city government does not

understand why it should provide patrons with public access computers. The technology

librarian from Eagle Public Library, Lynette Pucci, explains the circumstances:

> It is a real process in educating the powers that be that technology
> particularly for the public is [an] important service that they have come to
> expect when they come to a library. It is one thing for us to say in a staff
> meeting, . . . that I need six more computers because I want to give this to

the public. They don't see city work being done; I mean nobody is
creating a plan that the Zoning Commission has to read about . . . It is a
service; it's a service that our public uses.

In this community, the city provides 100% of the library funding. The library is

dependent upon money from the city government which has not been forthcoming with

any regularity for public access computers. In addition, because of its affluence the

public library has not been eligible for Gates Foundation money.

In order for the library to update from eight public access computers (six Internet

access computers, two dedicated word processing/Microsoft software) to 15 combined

Internet access and Microsoft office computers the library took funds from the Friends of

the Library and the Library Foundation. The city agreed to pick up the costs for the

computer desks. This transition has taken five years. According to technology librarian,

Lynette Pucci:

> . . . it becomes budgetary issues more than anything else. He [the director]
> has been the one going to the Foundation and convincing them. We have
> people in the Foundation who are very opposed to using any of their
> money. We have had people in our Foundation . . . like the city should be
> providing that and I don't necessarily disagree . . . I do look at it as an
> ongoing service. I don't look at it as a one time thing but in the mean time
> Mr. Higgins has convinced them that the patrons are the ones that are
> suffering so we have used Foundation money . . . to make up some of the
> shortfalls . . . we can't wait five year more years until the city finances
> may get straightened out.

The city government where the Eagle Public Library is located has experienced

significant budget shortfalls for the last few years. Consequently funding for each

department has experienced cuts. A combination of budget cuts and an audit, topped off

by a new city administrator, has caused confusion within the different departments of the

city. In this city, the Board of Trustees serves in an advisory capacity and the library

director reports directly to the city manager. To add to the confusion, when a new

information technology manager was hired by the city, all of the money earmarked for

the different departments for computers was moved to the IT budget under a lump sum

with no departmental designations. The mayor decided that expenditures for computers

no longer belonged in the library budget and transferred it to one Information Services

(IS) budget. This situation has created a lack of control of the library's IT budget and the

director described to me there was no rationale how money is spent. Mr. Higgins

explains the complexities of the budget.

> . . . programs like periodicals, databases, and so forth went to his
> department and he didn't know what they were and what to do with them.
> His budget . . . is one lump sum – computer services. He doesn't have it
> broken out saying this is library expense, police expense, fire expense, and
> so forth. He is getting all of our bills and says he spends all his money on
> you guys instead of everybody else, what's going on? If he broke the
> budget out for each department and then went to the city and said I need
> more money . . . they are saying there is one big hole. Put all the money
> there and pay what you can . . .
>
> . . . It can be anything he was asked to purchase and he puts his budget
> together based on what everybody else asks for but he puts it under one
> lump sum and we basically have to fight for that and hope that our
> services are paid for.

One thing the library director has succeeded in is to have all his database subscription

services removed from the computer services budget and back to the library budget.

Database subscription services were something the library needed to control and the

city's computer department had nothing to do with anyway. The successful argument

was that these were materials and not a part of the technology budget.

New Building Needed – Apply Here

Some of the library directors interviewed expressed a need for either a new

building or an expansion to the existing one. An expansion or a new building can be a

hard sell if the city government is not on board. Sandpiper Public Library serves a

community of approximately 27,000. The current library building has a unique shape and

they use every square inch. Due to its unique shape there is a lot of wasted space in

hallways, stairwells, and triangular shaped rooms. The director, Justin Sedlak, talked

about some of the misconceptions and issues created by the introduction of public access

computers.

> The idea people had at first when they started automating . . . with
> computers you're going to need smaller buildings. Books are things, but
> computers are also things. Things that take up a lot more space than a
> book. You have to have the computer, you have to have a desk and a
> chair, space around the chair because people have to pull in their chair and
> push out their chair to sit and so that actually takes a lot more space than
> when we didn't have computers . . . I mean they really thought, well
> everything is on the computer so you don't need books so your libraries
> are going to get smaller and smaller. So far that hasn't happened.

> This building is about 32 years old. It was built in 1975; not built for
> computers at all. . . . it is made out of concrete so for the computer room
> upstairs we put in the false floor which helped a lot.

Mr. Sedlak also discussed some of the challenges he experienced with city government.

Initially, they did not see that an expansion was something the community needed.

> When I first came . . . we were trying to get money for the building
> addition and it hadn't been gone about in a very positive way . . . There
> were some people on the council said, "What do you need a building for if
> everyone has Google at home?" If everyone has the Internet they can find
> whatever they want . . . They were just not informed. . . . basically my job
> was to inform them and let them know that Google doesn't answer
> everything in the world unless your needs are very small. My strategy was
> to make a Power Point . . . I took what I was hearing through the
> grapevine, those exact things that I was hearing, put them into the form of
> questions and answers on my Power Point and answered them directly.
> Why do we still need a library? Look at our usage. Everybody has a
> computer a home; they don't need to come to the library to use a computer
> anymore. No, maybe in your circle of friends that have enough money to
> own computers that is true but a lot of people still don't. Or they have
> computers and they don't know how to use them so they are here anyway
> even though they have a computer sitting at home . . . They wanted
> personal contact, personal help, just being around other people . .   Yeah,

they had five computers at home and they were still at the library and that is not going to change. I had to get that across to people. The fact that the library is an economic development tool. . .

. . . we had our meeting between the advisory board and City Council. Some people said, "We don't need to hear this we know this already" but they did need to hear it. After the Power Point presentation there was complete change in their understanding; the light bulb went on in peoples' heads. We have got to do something. The next morning I was called to lunch with the city manager. Before the meeting he was talking a [dollar amount] which would build hardly anything. All of a sudden, well I can find [dollar amount] at least for you. By the end of that month we had our [dollar amount] saved over five years. Complete change in the way people were thinking . . . is interesting when you face peoples' ideas of what technology is, and whether or not you need a library even with technology. It is an educating process, really. It is constantly educating the patrons and educating the city.

As a result of his presentation and dedication in serving the library patrons in his community, Mr. Sedlak is planning for an expansion of the existing library building in order to expand the technology available for his community. It was an educational process for the City Council and the advisory board that dealt with the library. This was a considerable accomplishment for a director at a library with limited tenure.

Coin Operated Public Access Computers

In the 1980s, Heron Public Library director, Rupert Loomis, decided to put coin operated mechanisms on the public access typewriters to control people who monopolized them. When computers began to become available in public libraries, Mr. Loomis decided he did not want staff to deal with having to keep track of when patrons got on and off the computers. Therefore, he bought more of the coin operated mechanisms and placed them on the public access computers. The staff at the library has had no problem accepting this state of affairs. The director is an autocratic and controlling leader so it is no surprise that the staff does not object to the coin operated public access computers for the public.

The idea of having coin operated public access computers in a public library stunned me. It goes to the heart of the digital divide issue and free access of information in public libraries. It also limits access for those patrons who could not afford to pay the fee per hour that was charged. The city government likes the revenue stream that the coin operated machines bring in but the state library has problems with the situation. Mr. Loomis explains:

> . . . when we first started having computers for the public to access the Internet I decided to purchase some more of those coin ops and attach them to the computers. It's really worked well for us, however, before I retire, I'm going to try to get into a system that you use a library card for free access. My city is very happy with the coin-ops because they bring in over [an amount] a month on the computers. And every now and then a patron will come in who's just scandalized because they can go to a small library 20 miles away and get free access.

> . . . I haven't started dickering with the state library, but I probably could get a grant from them to pay for half the cost of it, but the city's not going to be very happy to lose that [an amount] a year.

> . . . public access computers are used primarily for games and for email. I may be a bit conservative. . but I really don't see why it's an issue.

> . . . we do have one free computer that we allow patrons to use to access the state library databases and our own databases. It's for research though, not for games or email.

It is interesting to note that in the beginning of the Internet service at Heron Public Library, Mr. Loomis had negotiated a deal with an Internet Service Provider (ISP) for the city as well as providing the revenue stream as mentioned above.

> . . . One thing this library did that I'm glad that I had foresight to do was to work with a local Internet provider back in the early 90s a man . . . wanted to start providing Internet to the community. . . he said "If you provide me with this space for my Internet equipment, I'll give you and the city free Internet access." I said okay. . . I signed a contract . . . We have free Internet access. . .

While Mr. Loomis is looking at retirement in a couple of years, he has run the public library his way during his tenure there. The support from the city has depended upon who the city administrator is at any one time. Currently, the city administrator is supportive of the library.

None of the other public libraries that I visited had coin operated mechanisms for their computers. The directors had either sign up sheets with manual determination of when someone needs to get on or off a computer or there was software loaded onto the computers to manage the process. Time and print management software is available that will handle patrons logging on and off computers using their library card IDs with little or no staff interaction. In the majority of the libraries I visited (see Table 9 below), this is how computer time limits were dealt with. This solution is another way to deal with time limits for patrons on public access computers without charging them a fee per hour and limiting their access to information at the public library.

Table 9: Libraries with Computer Sign In Software

Library	Computer Sign In Software Available?
Cardinal Public Library	N
Condor Public Library	Y
Crane Public Library	Y
Eagle Public Library	N
Egret Public Library	Y
Falcon Public Library	Y
Finch Public Library	Y
Hawk Public Library	Y
Heron Public Library	N
Kestrel Public Library	N
Osprey Public Library	Y
Owl Public Library	Y
Sandpiper Public Library	Y
Wren Public Library	Y

New Library, Minimal Budget, and Staff

Condor Public Library's facility is six years old. The Mayor uses the public

library as a positive technological wonder when taking potential new business owners on

a tour of the city. He touts it as a positive for economic development purposes.

However, appearances are deceiving. There are 10 people on the library staff, down from

17, and the budget is minimal. Of the 10 people on the staff, two of them work totally

behind the scenes. The city only funds the salaries and benefits of the staff of 10 and

building utilities. The city funds none of the materials like books, magazines, electronic

databases, computers, office supplies, or any of the things a business needs to run their

day to day business. To add to the complexity, there is a longstanding adversarial

relationship between the public library and the City Council.

> . . . No books, no materials, nothing online. They don't keep up with
> hardware . . . when I came here we had a lot of Windows 2000 machines.
> Those are all XP now so it's all on one platform. The Foundation paid for
> that. The Friends of the Library have bought every newspaper and
> magazine that's come in here for three years. . . . They've also been very
> generous helping us build the collection. They've even been purchasing
> some of the processing materials you need. You know, stickers and tape,
> tattle tape and all the stuff. . . It just kills me. It's the best bargain in the
> state. It's better though. We have a mayor who at least has a clue. We
> used to be a very strong city mayor, council government until . . . it was a
> year in January that they switched over and actually hired a city manager.

> . . . I tell people that we went from being the biggest drain on the city
> budget to being an asset to the [city] from December 31st to January 1st
> when the new mayor came in.

There has been a historic lack of trust between the library director and the mayor

that goes back to 1984. Mr. Langford, the current library director, explains what he

walked into.

> . . . I've been in places where libraries are ignored. But this is the first
> place I've been where there was an antagonistic relationship between the
> library Board and the City Council. So that's been kind of interesting to

work through, but I think it's better. There's still not a lot of trust. That comes with time, I hope.

On top of all this lack of trust, the library was given a significant bequest that the City Council felt should have been theirs. The fight over the initial control of the endowment has created more long-term animosity as well. Again, Mr. Langford was not there when the initial decision was made to deposit the substantial amount of money with the library Foundation. As director he has had to live with the effects of it. The basis of this lack of trust is a bequest left to the public library that the City Council felt the council should have had control over.

> . . . So we've been wrangling with this ever since I got here. In fact, I'd been here about a month and had to go to a City Council budget hearing, and one of the council members, sitting up there in all his magnificence said, "Gee, it would be really bad if we had to sue the library to get our money back." I'd been here a month and the first thing out of your mouth is "we're going to sue you?" I thought, okay, I see where the library stands here. So anyway, it's just one of those ongoing . . . the Board and the Foundation's philosophy is "it was given to the library, it's the library's money, it's safely invested, we're keeping it."

The lines in this battle for the endowment have been drawn. The library, Board of Trustees, and Library Foundation is on one side; the City Council is on the other. Interestingly, about the time the endowment was set up, the city was under financial strain, and decided to cut budgets. At this point, the library staff was cut significantly along with their materials budget.

Need a New Library

Imagine a library located in a rural area and that is located in a Carnegie building with a poorly done retrofit attached to it on one side. There are seven public access computers and no more room for additional technology. Prior to the installation of the wireless network no one realized that the majority of people using wireless would want to

51

plug their laptops into nonexistent electrical outlets. The Carnegie portion of the public

library was built before electricity was available.

The city government did not see a problem with the current library building. The

library director and the Friends of the Library conducted focus groups to find out what

the community members felt about the current facility. Focus group results

overwhelmingly indicated the need for a new building. Based on the focus group results,

a building fund managed by the Friends is begun to solicit gifts from the community

along with working on the foundation for a bond issue drive. The city still did not want

to support the building or the bond drive and felt the voters should decide. Library

director, Amber Bright, and community member activists did a grassroots end run around

the City Council.

> . . . most smaller libraries in scrappy little communities like this one. . .
> they don't really have a vision. They are just trying to keep up basically.
> I will say . . . kind of against that point is that the library for the last eight
> years has been working on a new building and . . . had a vision to have a
> new building that has adequate technology to meet the needs of our
> patrons. We were told over and over again by the City Council, by
> consultants that we would never achieve this . . . and if we did . . . we
> would have to have run several bond referendums and it would be a long
> hard road. It has been a long hard road but we have won at 71% yes vote
> on the first bond referendum for $X million that we ran and that has been
> the first time in anyone's history or anyone's memory that a bond
> referendum has been successful on the first vote in this community.

> So evidently . . . we must have some vision that we communicated.
> Really it is technology. The biggest question and the biggest naysayer's
> would say why we need a library, we have computers. . . . that is always
> what you say now if you want to oppose libraries. Why do we need a
> physical library all you need is a bunch of computers. Give everybody a
> laptop kind of idea. And, you know, obviously, if you are a librarian who
> has actually worked with people you understand that is not exactly right.
> So we were able to communicate that vision that you need to have an
> institution that promotes the use of technology as well as other more
> traditional resources and it is there to help people and to help them to get
> access to the technology. You just can't throw technology at people. So
> evidently we must have articulated that vision pretty well because we won

the bond referendum and we have also achieved more than $X million in private funding . . .

Ms. Bright is excited and happy about the grassroots process and the fact that local

businesses, foundations, and citizens were behind the drive for a new library. She

explains how the bond and building fund drive started.

> . . . were able to win this way . . . we started the Friends organization probably, I think it was 1997 or 1998 so as a 501(c)(3). That is who started getting money shockingly [fast]. Money started rolling in. We did a focus group study in 2000 with 88 community members.
>
> We and Friends funded it and of course a lot of volunteers. Out of that focus group that was where the dissatisfaction with the current library came. That is where the first inkling that . . . people think the library sucks – the physical facility – and we need a new one. From the focus group we formed a citizens committee that studied the library. The Friends hired an architect . . . this was all done with Friends money and some gift money. To be fair the city maybe gave us [an amount] or less for some money to study some things with. This has all happened since 2000 in increments. There was one whole year where we lost our city manager and he was fired. That we had to stop because there was so much acrimony with the city that they wouldn't even let us put a bond referendum on the ballot. So we just waited and kept working and finally here it is.
>
> One thing the City Council members who opposed the library building did not

consider was that there were ramifications for not supporting it as they found it to their

peril.

> . . . a couple of them [City Council members] were voted out because they didn't really support it. The city on the other hand they didn't really oppose it actively. Well some of them did but they are gone. They also did this great thing that City Council people do and that's saying that "we just want the people to decide." They fell back not as leaders but just sounding boards which is the perfect cop out and we see that all the time in city government. In this case, the people kind of decided and it just took a lot of hard work. There are a lot of other partners. . . There was corporate help and foundation help so it all kind of all came together.

Cardinal Public Library had unprecedented grassroots support that the City Council

questioned and did not understand. There was a company who donated substantial funds

along with land where the library is to be built. Another local foundation offered a

substantial donation if the bond measure passed. The Friends had enough gift money

along with the bond issue to support the building of the new library. While the City

Council did not understand the public good and economic development advantage of the

new library, members of the community did.

New Building, Hiring Freeze

Crane Public Library is located in a building of approximately 70,000 square feet

and is eight years old. The building has been recently updated for increased technology

capabilities through grants. For a building of this size; however, the staff is barely

adequate. Director, Violet Ghent, explains the changes in staffing patterns.

> It has changed because of layoffs . . . When I started here . . . They had
> many more MLS's on staff and they had more people in reference around
> the building in different positions. But then as cuts started they had to start
> laying people off. . . . I cut one part time person . . . I can't cut any more
> and we are now down to bare bones. I cannot run that building without
> any less people and they haven't asked me to cut any more. . . I told the
> mayor if we cut anymore, we are going to have probably cut out being
> open on Sunday afternoons and probably be closed earlier in the day on
> other days of the week. I said that is the only way we can do it. We have
> got to cut services if we are going cut any more staff.
>
> When I said Sunday afternoon the mayor says oh we can't do that. He
> knows it is political suicide because we have so many people coming in
> here on Sunday and my Board said "good job Violet." They said you
> were really playing on his political side on that one. Well, I was just
> looking at what day of the week can we close and we don't need the
> cleaning crew in here and that's Sunday and Saturday but we can't close
> on Saturday. Four hours on Sunday afternoon – sure. I said that would cut
> down the cost of cleaning, it would cut down on utilities, no staff on
> Sundays, and the big thing was the staff was saying that if we close on
> Sunday we would have more people during the week. I said no. If we
> close on Sunday that means cut in staff; hours are cut and we can't take
> those hours and move them into other parts of the week.
>
> . . . [the mayor] knows if we close Sunday afternoons while he and the
> City Council . . . are all elected it would be a problem.

Director Violet Ghent clearly understood the political implications of her conversation with the Mayor. In order to prevent any more cuts at the library, she presented a potential solution to save money that she knew would be unpalatable to the Mayor and City Council. Ms. Ghent was being politically savvy and reading the situation clearly.

Discussion

Kanter (2001) analyzed digital culture in the late 1990s and commented "life is now defined by where we stand with respect to the Internet" (p. 1). All of the libraries mentioned in this chapter could attest to that statement. Additionally, each one learned that their leadership skills became critical in their ability to deal with the city governmental structure. Rainey (2003) and Bennis (1999) both agree that leadership is critical in an environment where change is constant. Whether the work environment is in corporate America or a non-profit organization, change is a fact of life.

The libraries that succeeded in marshalling their forces and overcoming adversity in their communities did so for differing reasons. Two of them were told by their city leaders, "We have computers. Why do we need a library?" Once again, there are ill-informed city officials. In one case, Justin Sedlak, director of the Sandpiper Public Library took the statement and turned it into positive by educating his stakeholders in the value the library provides the community. Sandpiper Public Library desperately needs more space. When Mr. Sedlak was hired, he walked into a situation where the previous director was reclusive and did not communicate well with the city and the community. Once Mr. Sedlak understood the needs of the library and the community, he set out to

persuade the city leaders that an expansion was needed. He was successful in overcoming the objections of the city.

Amber Bright, director of the Cardinal Public Library, had a mission that was a little different. The community was solidly behind a new facility but the city was not. The city felt the Carnegie building with its strange addition was all the patrons needed. With leadership from Ms. Bright and the Friends group, they were able to perform grassroots political magic.   The grassroots activism occurred through a combination of the library, Friends, business community, and citizens coalesced into an unbeatable bond referendum. On top of the bond referendum passing the first time around, they had enough in building fund donations to make up the rest of the money. The leadership involved in this is immense. Amber Bright portrayed a leader that was vital to the outcome and enabled her library to achieve their goals as was noted in the management literature (Bennis, 1999; Cope & Waddell, 2001; Rainey, 2003).

The other side of the coin is a lack of leadership abilities. Being a public library director means standing up for what the community needs. Sometimes that means making waves. One of the public library directors interviewed has little support from city leadership for public access computers for his community. The city does not want to support something that does not provide tangible work products for city government. In the city's mind, public access computers for citizens are a waste of money. The director has been able to overcome the lack of funding by going to the library Foundation; however, the Foundation also feels it is the city's role to fund technology for the public. This situation is a case where the director has failed to convince the city of the importance of the public library and its role in their city. Bennis (1999, p. 63) says "The

manager does things right; the leader does the right thing." In Eagle Public Library's case, there are a couple of situations where the director has not been strong enough to overcome barriers to his library's success. Leadership is not easy. It is an art not a science. The library director will solve nothing by complaining about the situation. Going to the Foundation is a commendable way to find a stopgap funding mechanism for the public access computers they need. It does not solve the problem. The solution to the problem is educating city leaders to understand that public libraries are there to serve the taxpayers and provide them with access to information in whatever form that may be.

The digital divide is not the topic of my dissertation; however, when researching medium sized libraries and public access computers it inadvertently came up. The Heron Public Library with their coin operated public access computers is in a situation where a monetary barrier is limiting access to information to lower socioeconomic patrons living in the community. The director, Rupert Loomis, has no problem with this situation. The city government supports the coin operated machines as it brings a revenue stream into the city coffers. Anytime a revenue stream comes into a city, the Mayor or City Manager (depending on type of city government structure) believes this is a good situation. The state library has problems with the situation and wants the library to remove the coin operating system off their public access computers.

The attitude in some of the U.S. society is that everybody has a computer is incorrect. According to the U.S. Census Bureau (2007) 61.6% of the households have computers and 54.6% have Internet access in the U.S. based on 2003 data. The 2007 *Statistical Abstract* has a table that provides data for Internet access and usage for adults over 18 years of age which is partially recreated here below as Table 10 with just the

2005 data. Table 10 shows the representation of the total U.S. as well as each individual

region of the country. The Midwest region shows that 23% of adults have accessed the

Internet in the last 30 days. In the same region it shows that only 23.8% of adults over 18

have Internet access at home, work, or somewhere else. From that data a supposition

could be made that 76.2% has no Internet access at all. This data is from 2005 it helps to

make the case for the desirability of public access computers in public libraries.

Table 10: Internet Access & Usage and Online Service Usage: 2005[11]

(,000)	US		Midwest		Northeast		South		West	
Total Adults	215,800	100.0%	48,555	22.5%	41,218	19.1%	78,120	36.2%	49,202	22.8%
Internet Usage last 30 days	140,507	65.1%	11,168	23.0%	8,161	19.8%	26,248	33.6%	11,612	23.6%
Have Internet Access										
Home or work or other	172,050	79.7%	11,556	23.8%	8,285	20.1%	26,014	33.3%	11,218	22.8%
Home	137,866	63.9%	10,973	22.6%	8,573	20.8%	25,779	33.0%	11,612	23.6%
Work	77,044	35.7%	10,779	22.2%	8,450	20.5%	26,561	34.0%	11,464	23.3%
Used Internet Last 30 Days										
Home or work or other	138,037	64.0%	11,216	23.1%	8,161	19.8%	26,092	33.4%	11,612	23.6%
Home	118,047	54.7%	10,973	22.6%	8,408	20.4%	25,779	33.0%	11,809	24.0%
Work	65,252	30.2%	10,731	22.1%	8,367	20.3%	26,326	33.7%	11,710	23.8%

Heron Public Library is an example of where the group has entrenched underlying

assumptions that can be difficult for someone outside of the organization to see. In many

ways these are unconscious and taken for granted by the staff at the library. As Schein

(2003) discusses, these assumptions "tend to be nonconfrontable and nondebatable, and

hence extremely difficult to change" (p. 31). There is a degree of consensus that results in

repeated success in implementing certain beliefs and values (Schein, 2003).

The other person I interviewed at Heron Public Library, Michelle Coyle, had no

problem with the coin operated mechanisms the public library uses because these were

part of the espoused values and beliefs of the organization. This is a case of being

acculturated into the group norms and accepting them as a given. Due to the long tenure

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[11] U.S. Census Bureau. (2007). *Statistical abstract of the United States: 2007:* Table 1137. Washington,
DC: U.S. Census Bureau. The designations of Midwest, Northeast, South, and West are listed in
Appendix J.

of both Rupert Loomis and Michelle Coyle, this is an entrenched belief and part of the system at the Heron Public Library. Ms. Coyle explains:

> . . . Let's see, we've got coin operated for internet. We're probably one of the few libraries, and people complain every time they hear about it, that they have to put coins in. [An amount] will give them 15 minutes. It they're just checking email, that's usually enough if they're quick with it. Otherwise its [an amount] an hour to use it and the screen shuts off when . . . well it will go back to it if they put some more quarters in. But that's how ours is. . . We did it from the start.

Schein (2003) makes the comments "an individual will hold onto certain basic assumptions in order to ratify his or her membership in the group" (p. 63). These assumptions have evolved into a common way of thinking for the people at the library and the city reinforces this by appreciating the revenue stream.

This presents a conflicting situation for the library. The library is putting up barriers to information access by having the coin operated mechanisms on the public access machines. The city leaders like the revenue stream. The state library wants it changed to allow free access of information. The library director has made the comment that prior to him retiring he would probably change the way the computers allow for patrons to be timed on the computers via software of some kind for free. The director has chosen a path strewn with obstacles in dealing with the state library with the coin operated computers. The state library would like to see public access computers the patrons can use for free. This also allows the director to reinforce the group norms at the public library.

Two libraries built new buildings within the last eight years. While the new facilities were being built, both of the cities where the libraries were located encountered financial difficulties. As the U.S. economy became enmeshed in a recession between

2001 and 2003, it is not unreasonable to believe the local communities and city governments have confronted financial struggles as well. That being said, both libraries have had layoffs – one has gone from a high of 17 employees to 10. The other has gone from more than adequate staffing to a bare bones staff.

Building a new library does not always improve services to the public if after being in the building for a time the staffing levels decrease. In both the Wren and Crane Public Libraries' cases, the directors' personnel are skeletal. In the case of Wren it caused the library to decrease hours to the public. It also made purchasing materials somewhat problematic as their funding was reduced to nothing.

Building a new library facility may not solve all the problems the stakeholders believe it will. While the space will be new and the technology will be easier to put in as the cabling and electricity outlets will be plentiful there are other funding issues to consider like staffing, materials, and computers just to name a few. The Crane Public Library, while having adequate materials and technology due to easy access to grant funding, still does not have enough people to staff the library adequately. While the director, Violet Ghent, has not cut hours she has told the Mayor and financial director that would be next as there are no more people to cut.

Reducing staff, as mentioned above, is an easy solution to funding crises, but it affects the morale of the remaining staff. Everyone is always expecting the axe to fall on their neck eventually, which makes for a demotivated work force that does not serve the public well. A public library needs to have a strong public service ethic in order to provide the materials and thee access to information the patrons need and desire.

Sometimes getting the attention of the public takes cutting hours or favored

programming.

In contrast to a public library being a department of a city government, four of the

libraries visited were a different type of political entity. Blythe Vance, director Hawk

Public Library, explains:

> We are an independent political subdivision so we are tax funded by our
> municipality. The City Council can't really do anything to us except
> possibly make moves to disband us. We are totally under the direction of
> our Board of Trustees. The city gets involved only in that they are the
> ones who appoint the trustees so in a way they do control [us] to a certain
> extent . . .
>
> . . . it is a dedicated tax so the City Council tax is one, schools is another,
> library is a third. They [City Council] can't come for our money in any
> way. It comes directly to us. Although we enjoy the benefit of having the
> city manage our money . . . we are basically two completely separate
> political subdivisions.
>
> . . . my budget is totally independent of them. . . . if they [City Council]
> decided they needed a new fire truck they couldn't say well we are just
> going to take the book budget and buy a fire truck because it is not their
> money.

The public libraries that are independent from city government are able to make

decisions with just their Board of Trustees that are in the best interests of their patrons.

Within the city government structure, many times there are competing needs within the

different departments for the same funds, so what is in the best interests of the patron

may be a moot point. Being a separate political subdivision from the city allows the

public library director and board the independence to set their budget and make local

decisions.

A couple of the libraries I visited could be improved through better

communication with their city government. The directors at Eagle Public Library and

Wren Public Library both have situations where communication may alleviate the issues

they are facing. Communication should be clear, concise, and to the point. The city

managers or Mayors in both cities may not want to hear the truth of the situation but

sometimes laying the cards on the table is better than continually going around the

problem by using the Friends or the Foundation.

Funding sources for the libraries visited consisted of city generated tax revenues,

county tax revenues, state funding, and grants. City funding was the main source for 10

of the 14 libraries. The city government would determine the level of funding for each

city department through a budget process. Each department of the city would turn in a

proposed budget which usually included some wish list items and then the city and the

library director, in this case, would negotiate it down. Some libraries located in rural

areas would also get a small amount of county funding to provide services to those

patrons. State governments provided funding typically through the state library.

Depending on state funds would depend on how the money would be distributed. Some

would actually get a small amount of money directly from the state along with a reduced

rate for commercial databases available through the state library. In other states, there

was grant money that could be applied for through the state library. It depended upon the

politics and legislative atmosphere of the state.

The Friends of the Library groups along with some Library Foundations also

provide funding to the libraries. The 10 libraries that had direct city funding their Friends

groups did fund raising for the library through book sales and would pass that money

onto the library. The libraries that had Library Foundations had been recipients of some

large endowments that had been invested and the interest had been distributed to the

library on an annual basis either through grants or through directed spending. By directed

spending, the person who left the money to the library may have stipulated that the fund be used to purchase certain types of books or materials. Then lastly, some libraries received direct monetary gifts from their patrons and unless these are directed towards something specific the directors can spend them as they choose.

Libraries can write grants to different charitable and governmental organizations. For example, the Institute of Museum and Library Services (IMLS) will fund programs for public libraries. The state libraries will fund materials and programs for the public libraries in their states. Library directors will also write grants to take advantage of the money available from these sources as well. This soft money, however, cannot be counted upon on a yearly basis and is usually a one time increase in revenue for a particular project. All grant projects need to have an accounting of funds spent to the group that funded it at the end of the time period specified in the project.

The four libraries that were not directly involved with a city were independent political subdivisions that were funded by direct taxes paid to them from the citizens of their district. The mayor appointed the Board of Trustees but had no say in how the money was spent. For some reason, this level of independence allowed these libraries to be better managed financially. The library directors' decisions were not second guessed by the city and they could do what they needed. The only difficulty would be if they needed to raise the amount the taxpayers are paying. The director and the Board of Trustees would have to put forward a tax issue to be voted on by the library district. Thus the increase in the tax rate is in the hands of the taxpayers. These library directors also take advantage of the Friends and Foundation groups along with outside grant opportunities that come along.

The ability of a library director to lead an organization is especially important in times of change. A director needs to have vision in order understand where s/he is going. My definition of leadership shows an ability to delegate, vision to see something no one else can and ability to articulate it, and enthusiasm for where the organization is headed. A manager manages the day-to-day tasks to get the job done of providing services to their patrons. One of the questions I asked each participant was if the director had vision. It was interesting how each participant appeared to define vision. I still remember one answer from a staff member that the director "needed to dream bigger." I felt that said it all. The director was a manager not a leader. Those directors who answered the question stating that their vision was a "new facility" did not understand the question. While a new facility can be a goal or an objective, the vision is how to achieve it.

Leadership as Bennis (2003, 1999; Sheldon, 1991) defined it is vision, communication, trust, and self-confidence. While most of the directors had communication and self-confidence, not all of them had vision and trust. The idea of trust or a position of trust means the staff has trust in the leader. A situation occurred where one staff member did not trust their manager to do what was right and questioned the director behind closed doors. This same director has difficulties in getting adequate funding for public access computers. In fact, the staff member has been successfully manipulating the director to take on more duties the staff member no longer wants to do. A leader would deal with the problem employee and not allow the issue to fester. The director is managing the library not leading it.

Group culture in the library comes from the leader of the organization. If there is no obvious leader, someone else in the library will be recognized. In the example above,

the assistant director is the de facto leader as she has been there longer than the director. The director will not confront the assistant director as tasks have been peeled from her position and put onto the director. The director has, in essence, allowed it to happen. The public library where this director works has never become a cohesive group. There was a de facto leader there prior to the director ever walking in the door.

Schein makes the comment that "Every group must learn how to become a group" (p. 133). The majority of the public libraries that were studied were cohesive, well functioning groups that worked well together. They had visible organizational structures and processes for being in the library. Some of the artifacts included budgets, meeting minutes, process documents, job descriptions, licensing agreements, and other documents. Included in their artifacts are the rituals that each library goes through when a new employee is hired. The process of the tour the new employee is taken on and by whom. As the new person is introduced to everyone in the library, the role will be clearly delineated and explained. Even some visitors have this experience at the public library when working with the director. By indoctrinating the new employee in the rituals of the library it demonstrates clearly the culture that is inherent within it and how it operates on a day to day basis. The indoctrination is subtle and on many levels unconscious but in time the new hire will have an innate ability to traverse the library culture and what are the group norms for their department and the entire organization.

Chapter 5

Technology, Facilities, and Services

The building does not look it but it was built in 1969. They thought electricity was a fad. There are not any plugs out there and there is no way to get electricity out there. I am serious.

Blythe Vance
Director, Hawk Public Library

Imagine the dream job is yours – you have achieved the pinnacle of success in your profession and became a public library director of a medium sized library. If you have not worked at a small or medium sized library, you do not realize what you have just signed on for as the director. If you have, you may have an inkling of what lies before you. As a researcher, I had no idea of the challenges and opportunities directors of small and medium sized libraries faced.

The stories in this chapter come from the library directors and their staff visited in Midwest. Each library faced a different set of difficulties or is still facing them. This chapter will not include all the stories but will be a composite and includes quotes from the one on one interviews that were conducted over the winter of 2007.

Old Buildings and Technology

Buildings that were built prior to 1990 did not always consider future technological needs. The majority of the libraries visited were built prior to 1990; two were still in their original Carnegie buildings with some renovations. As the quote in the beginning of the chapter alludes to, the idea of electricity was not seen as vital to running an office as long as one had lights in the ceiling. Technology that became prevalent with automation in the 1980s and public access computers in the 1990s runs on electricity –

huge amounts of it. The second prong of that is the cabling needed to run the computers attached to a network and telecommunications. Buildings that were built prior to 1975, typically had telephone cabling that was hard wired into the walls – modular plugs were not the norm prior to the mid-1970s.

As a library director in an older building, innovation and creativity are the ways to adapt the building to the changing environment occurring in society and the library profession. Automation occurred in many of these libraries in the late 1980s and early 1990s. Of the libraries visited, the last to automate did so in 1995. What are the obstacles these directors' faced when trying to wire the buildings for computers? One building had 24" thick concrete poured floors they had to go through. Another director had 12' thick walls. A different building had ugly power poles put everywhere so there was electricity. There were buildings with no power because they were built before electricity was the norm. Then there are buildings where the director had to cut channels in concrete floors because there was no drop ceilings in which to pull wires. Those listed above are just some samples. These are by no means all of the things that were explained in their stories.

Wireless Technology

Adding wireless seems to be a relatively easy and inexpensive thing to add to the technology infrastructure for most libraries. All the IT person needs to do is add some access points that are connected back to a hub or router that then connect to the network server for Internet access. Whether or not a firewall or password protection is placed on the wireless network is up to each library. That is all that the library needed to do; however, as most of the libraries were visited quickly found out there is something else

the patrons expect that nobody thinks about, easy access to an electrical outlet or surge strip. In the newer buildings this is not a big impediment because the facilities have adequate electrical outlets. In an older building, however, this can be a major road block.

One of the libraries is partially in a Carnegie building and there are portions of the building that did not have electrical outlets until once the director of the library needed it to provide wireless service. Another director made the comment that she did not think it was the library's responsibility to provide electrical access if they have laptops with batteries. This would be the case if all computer batteries were created equal but some do not have a good charge life which is why patrons may need to plug in.

Electrical outlets were not plentiful in facilities when built in the 1960s. If the building had ceiling lights and four or five outlets spread through out the building for the vacuum cleaner the library was good to go. As technology became increasingly important, the buildings became increasingly difficult to work with for the staff because of the lack of outlets.

Automation

Automation of the card catalog was the first signal that computers would become important. Dumb terminals were initially used to access the catalog to do searches on the title, author, and subject by the patron and then the new miracle – keyword searches. People told 14 different stories that some patrons missed the old card catalogs and did not like the computerized OPACs. In fact, most of the staff still occasionally gets complaints that the card catalog cabinets are gone. Included in the automation of catalogs was a loss of cataloging staff that did not, could not, or would not learn the new automated catalog software who was not all replaced. The staff who was not replaced

68

was due to automation needing fewer people to run the software. This turnover of staff

provided an opportunity for those coming out of library school who were interested in

automated cataloging. It was the beginning of a new computerized era for automation of

catalogs.

Catalogs were just the first step in automation. Along with automating catalogs,

circulation was sometimes automated as well once the books were bar coded in the

libraries. One library director began bar coding her library in 1976 and began using

Gaylord's circulation system over the next nine years. In 1985 Dynix converted Hawk

Public Library's catalog using the existing Gaylord bar codes and according to the

director was one of the first three public libraries to automate in their state. The whole

reason the library moved to Dynix from Gaylord was the fact that Dynix had an

integrated library system and different modules available. This library was an early

adopter of technology. Many of the libraries visited automated in the mid-1990s once the

technology had many of the bugs worked out and they were able to get grants from state

libraries to do so.

The public libraries that were visited appeared to be cautious when adopting new

technology unless their leader was forward thinking and a risk taker. Those leaders that

wanted to be careful or did not have the funding or city support were late adopters. As

one director, Lisa Blaine of Falcon Public Library put it,

> . . . the particular trustee is off our board now, we had a trustee who I like
> her belief that the leading edge is too often the bleeding edge and so we
> don't necessarily want to be there but ahead of the curve. We have been
> pretty fortunate to be there (meaning ahead of the curve).

Computer Technology

Many of the libraries had computers for word processing, spreadsheets, and other types of software that were not connected to the Internet during the late 1980s and early 1990s.

> Well, we had . . . an Apple at one point. It was probably early 90s. I don't think we had public access computers in the old (Carnegie) building. I think we had an Apple 2e or something like that. It wasn't connected to anything. Public access computers for people to use.
> [*Lisa Blaine,* Director, Falcon Public Library]

One library had an Internet PC provided by a local community college in 1993. Granted the computer was in a locked room and a staff member had to accompany a patron to use it, but this again was early in the scheme of things for public libraries. Another public library received a grant in 1994 from a telecommunications company to install Internet access in the library. The grant was used to install the connection and also buy the first round of public computers for the library. When taken in context that the Gates Foundation grants that began in 1997, these public libraries can be considered early adopters of the Internet. This did not support the comments of Bertot, McClure, & Zweizig (1996) in the NCLIS study where libraries serving communities of more than 100,000 possibly adopted Internet connectivity earlier than libraries serving smaller populations where I visited.

The number of public access computers in each public library varied depending on city support and whether or not the library was eligible for the Gates computer grants. Not all the libraries visited were eligible for Gates grants. Those that were not eligible for the Gates grants could be held back because their cities may not have been supportive of the move to public access computer technology for their patrons.

Table 11: Libraries & Round 1 Gates Grants Receipt

Library	Received Gates Grants
Cardinal Public Library	Yes
Condor Public Library	No
Crane Public Library	Yes
Eagle Public Library	No
Egret Public Library	Yes
Falcon Public Library	Yes
Finch Public Library	Yes
Hawk Public Library	Yes
Heron Public Library	No
Kestrel Public Library	Yes
Osprey Public Library	No
Owl Public Library	Yes
Sandpiper Public Library	Yes
Wren Public Library	Yes

Of the 14 libraries, 71% or 10 of the libraries received Gates grants in some form or another. The remaining 29% or four did not receive anything because they were not eligible under the provisions of the poverty level requirements based on the school lunch program.

Eagle Public Library, as discussed in Chapter 4, in particular was held back when they were not eligible for the Gates grants. When I visited in January 2007 they had six computers that were connected to the Internet and two that were software only machines. Soon after my visit, they planned on opening a computer lab of 13 public access computers with Internet connectivity that was funded partially through other grants. Two public access computers were planned for the children's department to serve those under 12 to bring the total to 15 public access computers. The library staff was doing the best it could but was having difficulties serving a population of 50,000 with only six Internet public access computers. The computers were busy from the moment the library opened until it closed 12 hours later.

How some of the directors dealt with the complexities of buildings and funding shortages shows innovation and creativity which are two things medium and small library directors need to have in abundance.

Computers, the Final Frontier?

The building was built in the 1960s. It has concrete slab floors, no drop ceilings with the convenient tiles that can be moved at will and wires pulled above it, and the computers need to be in a place where there is no electricity, no telecommunications, and right now, no desks or chairs but currently book shelves. First the books and shelves are moved. Now what? It really depends on the configuration of the building. When there are concrete slab floors with no drop ceilings, the director could cut channels in the concrete to place conduits to get power and telecommunication cables to the appropriate places. Blythe Vance director at Hawk Public Library explains how she has dealt with the complexities of her building.

> We have had to do interesting things to the building to accommodate computers because our building is on a slab out in the public area and the ceiling is a spline ceiling so there is absolutely no way to pull cable. . . . wireless was absolutely wonderful when it finally came for those reasons but until that time getting the cables out there was a nightmare.

> The building does not look it but it was built in 1969. . . They thought electricity was a fad. There are not any plugs out there and there is no way to get electricity out there. I am serious. When I first started working here there was not a public copier. To put in a copier, which took 220 at that time . . . they had to really fool around. All of the cabling that runs everything out there until recently ran through a single telephone conduit in the slab. We recarpeted over the last year and a half. We took the opportunity when we had the carpet up to finally channelize the floor to run some more cables and some more power lines. This was the second time we have replaced the carpet but because that wasn't done the first time we recarpeted there was a hump in the floor that contained some cables. It is worse than a Carnegie building, I mean it is so funny that it is a modern looking building but there is no way to run extra power or pull cables.

Another library has similar problems with power and cabling. The assistant director Delores Gloss at Egret Public Library describes some of the issues they have faced.

> This is a very difficult building to install technology in. It has 24 inch poured concrete floors and so when we first automated and we first pulled cable through the building we were six months before a bond election for a new building and we were so convinced we were going to have a new building soon that we thought we were looking at temporary installation of our wiring and cabling and stuff. Well, the bond election went down in a blaze of shame for a variety of reasons. The building is difficult. There are limited numbers of places that we can install wiring, you just can't say I would like to have a work station here. Electricity is the other problem. This building was designed in 1961 . . . it is not as bad as the original building that was built in 1901 was but there are power access issues, because even if you can get cabling some place, if you can't plug it in it doesn't really matter. So that has been a challenge in this building. Luckily we have some electricians in town who are willing to be creative and . . . rewire things for us and pull wire through places people might look askance at but so that's one thing that continues to be a challenge.

The Meeting Place

One of the participants was a children's manager who had been in the same library for 33 years. In her time, Mavis Jordan had seen a lot of changes. Once she could tell a story at story time and the kids would sit in rapt attention. Not any more. Now she says she has to be like a computer, constantly moving. She has an interesting take on where libraries need to go technologically in the next five years. This is a portion of our conversation.

> The have nots, yes, because there has to be some kind, but you know what is going to happen -- the have nots are eventually "haves," because of cell phones. I see lots of have nots in here and everyone has a cell phone and the cell phone is going to become the personal communicator or the personal computer. The next five years, it is going to go down in price. So this whole idea that, oh yes, we have to have the computers here at the library for the have nots . . . In five years it is all going to be out on a cell phone, and everybody and their brother has a cell phone. It is gone – our monopoly on information is gone. Get over it. Move on. Become something else. Kiss the books and information monopoly good bye.

Become something else. Part of that, I think, you have to key in and tap in to what Barnes & Nobles is doing and this is the experience. A meeting place; it is a place where you can come and socialize because everybody is in their own little cell phone world text messaging back and forth and back and forth. You are still human; you still need to be with people. That is where we need to go.

A place for art, a place for music, a place for people to meet, a place for whatever. This (the "this" refers to the actual Youth Room) is gone. Unfortunately.

Ms. Jordan discusses the need for a computer lab in the Youth Services area. The majority of the kids that come in after school go immediately up to the second floor where the computer lab is located.

The gang who comes in after school, who are 4th, 5th, and 6th grade. Do you think they are reading books? . . . So a lot of them go upstairs. We have got plans to change this whole area into a computer lab and I guarantee you it will be chock full everyday.

. . . I think there is all kinds of problems with that. That is a reality. In a public library, the hardest thing to do is to provide what the public wants rather than what you think they need.

You can only be a salmon so long and swimming upstream. I personally think the worst thing you can do to a child under two is put them on any kind of screen time at all – TV, computer – I think it is the worse developmentally you can do, as does the American Academy of Pediatrics.

But it is the reality. And in the public library, that is the reality. We are here to serve the public. If that is what the public wants, then that is what the public will get, because they will go some place else to get it. If you don't provide it, they will find it some place else and then we are dead. Unless you start to realize that. . . . If I say I only want Shakespeare in here, Newbery books, and that is all we are going to promote is Newbery and Caldecott and whatever.

Increased technology in children's and youth services is not new; however, part of the discussion I had with Ms. Jordan was that books are not being checked out and non-fiction books are changing to a format that is similar to looking at a computer screen. She made the comment that the schools are putting out informational readers because of

teaching to pass the tests due to the passage of the No Child Left Behind legislation.

When looking at public libraries, federal and state legislation may place burdens on them

as well as on school libraries. Exploring the consequences of legislative policy is beyond

the scope of this study.

New Buildings

The stories so far are just a couple of the more compelling ones. There are many

more stories about the buildings that had interesting issues. Some of the libraries that

were visited needed either a new building or an expansion to the existing one. An

expansion or a new building can be a hard sell when the city is not on board as seen in the

previous chapter and the story about Cardinal Public Library. There was only one

building that I visited that did not need a new building but could exist in their current

building by rethinking the use of their space.

There is one library whose director believes they need a new library and recently

attempted to pass a bond to get it funded. The bond failed because the community likes

the existing building and would rather see an expansion or remodel. Ellyn Jansen,

Collection Development Manager, at Osprey Public Library made the comment when

asked about vision for the library.

> Do I believe there's a vision for the library? Oh yes. And we tried to
> make that vision come true in 2004. We had a large campaign for a brand
> new library and a proposed tax increase for operating expenses. There
> were two separate propositions, and both of them were voted down. The
> one for operating expenses missed by about 150 votes. It was just
> pathetic. It was so sad. We really, really needed that. The other . . . [the
> city] is a small town within a metropolitan area and there were a lot of
> factors involved. There were all kinds of focus groups and we had
> consultants. It was a five year process to get to that vote, and it didn't
> happen. But we still do have a vision and the Board . . . and Ethel would
> be able to address this . . . the Board is working on this with Ethel.
> They've had staff input and that kind of thing. They're trying to bring it to

a vote in August. Not for a new library. They're going for a tax increase for operating expenses and the money to remodel this library. From the past failed vote we learned two things – the people didn't want the library in another location and they liked this building. So what you do is you try to get the monies to do what you have to do to make this library more user-friendly and to utilize the space better and incorporate the technology with a more professional look

Ethel Bourdeaux, the library director, cut Sunday and Monday evening hours along with the patron's hot reads and best sellers due to the tax increase failing to pass. Getting the attention of the public by cutting hours and materials the patrons like is one way to get them on board to support the library (White, 1995)

Changing Reference

Along these same lines, many of the directors and staff members that were interviewed made comments about the changing nature of reference. In the medium sized library, unless there is an information technology department, the reference and circulation departments are often responsible for the public access computers. The changing nature of reference in these libraries was mentioned in many of the interviews. The reference desk staff would do what I would term help desk training and tasks – help patrons get onto the Internet, assist with software issues, assist with hardware problems, help them find government forms, etc. The endless help desk tasks can overtake the staff.

While the staff is being asked help desk questions, many patrons are intimidated about getting help. The most interesting comments were that the patrons did not ask for help with the computers or searching on the Internet. Why didn't the librarians ask the users if they needed help? As the two quotations from two textbooks on reference and information service say below, roving reference is something that can make the patrons more comfortable about approaching the librarian for assistance.

. . . many reference departments encourage librarians to move from behind the desk and approach users (rather than vice versa), offering assistance to those who are staring blankly at a terminal or randomly eyeing shelves. Generally known as *roving*, this service operates on the assumption that many users do not ask for assistance, and that users can benefit from the librarians expertise in clarifying research strategies, suggesting additional resources, and otherwise enhancing the user's skill in finding information (Bopp & Smith, 2001, p. 269).

The librarian can also look approachable by roving through the reference area and helping users who may need assistance. Many users may not be comfortable initiating conversation with a librarian when they need help, so roving gives users a less formal opportunity to get assistance. As they roam, librarians can simply ask users if they are finding what they need (Cassell & Hiremath, 2006, p. 17-18).

None of the directors mentioned that their reference staff roams. Here is a short story of a reference situation that occurred in one of the libraries.

We have got the Internet and that has all the answers now. So people are often very surprised when we will go to a book to find the information that we want because that book can give us the information more quickly than you can do an Internet search whatever that might be but I think that has given people a real false security . . . in terms of the Internet is the be all and end all. We get the same thing with kids coming in here they will search for an hour or two on the Internet and then they will say do you have anything on the Civil War. . . . we have 25 shelves on the Civil War. What book did you want? A battle, the years, what did you need? It is that kind of mentality that is just not the kids but it is adults too who think that if you can't find it on the Internet it is not out there.
[*Mary Adams,* Egret Public Library]

. . . the reference work changed because things people used to call or come in and ask at their public library they are now finding for themselves on the Internet. So they call the library only when they can't find it. So the reference librarian gets the much more complicated questions. What we used to call ready reference is a very small portion of what they do now. There is a certain kind or age clientele that still calls and can you give me a phone number for whatever but that has certainly decreased. Now we do reference by email, we have a couple of IM (instant messenger) accounts that our reference staff have to be able to use because when they are on the reference desk, the question may come by phone, email, chat, or someone walking up to the desk. So that has definitely changed. [*Lisa Blaine*, Falcon Public Library]

> We have had some money just in terms of databases, you know, in terms of changing from a paper reference collection to a database collection and trying to instruct people on how to get online and how to use the databases, how to access them remotely. [*Lorraine Mallory*, Owl Public Library]

The changing face of reference is showing that some of the medium sized libraries are talking about reducing the size of their print reference collections. One of the librarians had been at the state's legislative day and had conversations with other librarians who had either weeded their entire reference collections and gone 100% electronic or had interfiled the reference collection in the non-fiction collection. The changing nature of information being available in an electronic format versus a tangible format is something that has been occurring over the last 20 years. In the last 10 years, it has become more pronounced which many of the directors and staff mentioned. One of the librarians said if the electronic version is not any better than the print and she already had the print version she would not purchase the electronic. The electronic is not always better. It depends on the product.

Commercial Databases and the Public Library

At one time if an article with a scholarly bent was needed by a public library patron, chances are they would make a trip to the local college or university library and hope they had the correct journal. Today, the patron would hope the library has the correct commercial database. One of the libraries visited discussed the changing technology available to the average public library and reference needs of the average patron. This interview was a small group interview with the director of the library, Jack Taylor, and the reference technology librarian, Elizabeth Book.

> [Jack Taylor] Now we can offer the resources that a university library was offering before and is maybe still offering. I don't know where university and college libraries are going as an organization, I am not involved with

that and I don't have any friends in that area but public libraries are able to do a lot of what they were doing in the past. . . . we have all that we have been doing such as children's programming, fiction, popular materials, programming of all sorts, but we are also growing into their area because we have all these resources that people can access. If they want to get into Psych Abstracts well there are ways that it can be done through a public library. We have a situation where we don't have to own all the information; all we have to have is access to get to the parts that we need.

[Elizabeth Book]   That shift has been . . . of all the different kinds of libraries has been the most used for public libraries because of our previous limitations. Obviously we still don't have the full access to Social Sciences Citation Index and stuff, but at least we can get somebody started in a way that we couldn't before without being a fairly large branch, but that also requires by the way a lot of staff training on things they never had to be trained on before. We used to be able to say, "No we don't have that, you need to go down to [name of university]" but now we have to say we don't have full access but we have this and that actually provides a level of stress because of the need for training.

Future of Technology

As a director, part of your duties is to figure where technology is headed in 20 years and how the building will stand up to the changes. Will the building be adequate? What changes will need to occur? One of the directors had just finished a 20 year facility needs assessment. Some of her comments alluded to the fact that as a director it is a matter of pulling out the crystal ball and working with a consultant but neither of you is sure where the future lays with technology because it changes so quickly. Here is what she said.

We just last month completed 20 year facility needs assessment. That purpose was to identify facility needs and I said to our consultant that we were working with I said, "you know are we even going to need computers, we are looking at 2030," which is what you have to do with buildings but it is so hard to do with technology. Are we even going to need computers in 2030? Should we be putting this much space into computers? Then we started joking and he said, "Well, even if they are just like cones hanging from the ceiling and you stand under them and all the electronic stuff goes into these diodes in your brain. If that is what is it is. You are going to need space for the cone, so for our facilities, square footage, needs assessment that we are working with looking towards 2030,

we have about doubled the space (for computers) we have now for what we will need then. Will it be computers? Will it be just little receiving cones that you stand under and get all the electronic information? We don't know what they are but our vision to 2030 about doubled the square footage of the library that will be designated for computers or whatever comes after them.

Radio Frequency Identification (RFID)

A couple of the directors discussed whether or not they would upgrade to RFID systems in the near future. Violet Ghent, director of Crane Public Library, discussed the conversion to RFID was something that is down the road. The library had a drive up automated return system that recently had some problems.

> . . . they have a technology book return and it just never worked real well. Paperbacks get caught in the roller bars and one night it almost caught fire if somebody hadn't come in at that time and it was smelling. It burned belts and gears. So we just pulled the thing out. Right now what we have out there is something the city maintenance crew came up with and designed and it is a conveyer belt and it has an inferred eye and it goes on and off. . . When we get to RFID which is something we are talking about doing we need to look at a good automated book return system that we can get with RFID.

In the library profession there are mixed feelings about RFID and whether or not it is an appropriate technology for libraries. One issue is that RFID may lead to the expectation that the patron may be providing more self service at the library. Jack Taylor, director at Condor Public Library discusses the service levels and RFID.

> RFID has been a little oversold as far as how it is going to reduce costs. The way to make it pay for itself is to essentially lower the level of service you provide to the public and make everything more self-service. If we go down that road and we spend several hundred thousand dollars going to RFID, the outcome is that we are going to expect more work from the public. For example, people would like a book drop near their homes so they don't have to bring their books all the way over here. Although it is an attractive idea from the users' perspective, it would be very expensive for the library. If you want to make RFID technology work for you, the end user has to do more and there is always a resistance to that.

Another library, Falcon Public Library, actually has an RFID project on the books in order to make the change. Ms. Blaine, the director, told me it will take a while to tag all the books and they will be running dual systems for a while but her city has supported her decision to move forward with the new technology. Falcon Public Library does not have self-check machines and will only have them once the library finishes putting all the tags in over 200,000 items.

As seen above, different libraries and directors view new technologies with varying degrees of acceptance. Some decide not to tackle the projects until they work out what the city government's expectation is of the new technology like RFID. Others move forward expecting it will make their jobs easier in the long-term. Implementing a project that will change the way an organization runs their tasks and processes affects everyone. Careful consideration of the technology and its ancillary effects needs to be considered before determining to make the change. When a change and its effects are not considered, that is when chaos and confusion can ensue creating a bigger mess than if careful planning had been undertaken.

Discussion

Technology in public libraries has influenced just about every facet imaginable. Willard (1990) when discussing the rate of diffusion of technological innovation when she conducted her study in 1984-1989 probably would not believe the changes that have occurred 20 years later. The computer has become a necessary tool in the library behind the scenes and for patrons.

Public access computers have come to mean more than access to software programs since Willard's study. A patron can access the Internet and software programs

as well as commercial databases and online catalogs. According to the Bertot, McClure, Jaeger, and Ryan (2006), the majority of libraries (98.6%) in the United States have some sort of Internet access for their patrons. In addition to public access computers, all of the libraries visited had wireless available for their patrons as this is an easy and inexpensive way to increase access to the Internet for users who have their own laptop computers. As mentioned above, the biggest issue with wireless is the accessibility to electrical outlets by the laptop users. Depending on when the library was built, the availability of electrical outlets will vary.

The Bill and Melinda Gates Foundation had an influence upon the libraries that were eligible for the first round of grants that started in 1997. While most of the states I visited were generally funded in the later years, all were very appreciative of the computers or funds they received through the Gates Grants. The second round of the Gates Grants that will begin in the fall was mentioned to most of the participants but none of them were sure if they would be involved. The decision of which libraries will be receiving technology to update their computers lies in the hands of the state libraries (Bill & Melinda Gates Foundation, 2007).

The majority of the buildings were not built with technology in mind. When public access computers were first put into libraries it had to be considered where to plug them in and make sure there was adequate space for the patron to use them. Once the Internet and the World Wide Web became something everyone wanted to use, there were additional challenges.

The libraries visited had anywhere from six to 40 public access computers. Some of the computers were only for Internet access; others were multipurpose. The way the

computer resources were deployed depended upon the management and how they chose

to manage the resources of the library. The decision to have "software only" computers

which were not connected to the Internet was typically a decision that was made with the

desire to allow patrons to be able to type papers or other documents for long periods of

times. What many of the libraries have discovered was that the demand for software only

computers lessened in time, with the exception of the computers in the children's and

youth services department. I had one youth services manager explain that many of the

kids came in after school to type reports or papers but as she only had a couple of

computers in her area it was difficult to deal with the demand. Nicole Rodriguez, Youth

Services Manager, Hawk Public Library explains:

> . . . people are very pleased to have this access especially now more and
> more schools and teachers require typed projects or Power Point
> presentations and a lot of kids don't have access to that at their homes or
> perhaps the printer is down and it isn't going to be fixed for a while so it is
> great that we are able to have that. Although it has been a little bit of a
> concern with us because we would really like the school system to take a
> little bit more ownership and that they have these resources that they don't
> avail to their kids after school hours. So that is a problem. All the schools
> have computer labs but they don't let the kids use the computer labs after
> hours and so when kids have deadlines we only have three computers in
> our department that have word processing so between the hours of 3
> o'clock and 5-9 often all of our computers are full with being used for the
> typing or Internet and games.

When there is a requirement made by teachers that students must type their

reports or prepare Power Point presentations, teachers are making the assumption that

everyone has computer access, which may not be necessarily true. The parents then turn

to the public library to fill the gap which may be overflowing with kids working on the

same assignment. With limited resources at the library, this can create more issues for

the community, parents, and kids.

As the public library's role has been changing, the facility has been at the center of the change. While the library still has books and other tangible materials, it also has computers, meeting rooms, tables, chairs, and other amenities conducive for those wishing to use the facility as a gathering place. In many of the library facilities, the meeting rooms, if not used for the libraries' own programming, have outside groups that reserve the rooms on an ongoing basis. Many of the directors and staff who were interviewed felt that one of the present and future roles the public library would fill will be as a gathering place for the local community. While technology is a drawing card to the library, some people come to the library to interact with other patrons or just people watch. Our society is becoming more and more insular and this is creating a need for places where people can gather.

Prior to the research, I had never visited any rural public libraries. So the belief by some of the directors who were interviewed that they needed a new library building was a phenomenon I did not expect to find. Add into the conversation the need to expand the buildings and the ability to see into the future to figure out what the space requirements will be for technology. As one director told me, she expected to double the space she needed for technology. The question that should also have been asked was, do you decrease your materials in anticipation for that event, do you add onto the building, or build a new one? The literature looking at facilities, technology, and libraries is sparse. Needing to update a building generally takes some amount of renovation as Williamsburg Regional Library discovered (Kurzeja & Charbeneau, 1999). When retrofitting technology into existing space it is sometimes not easy until a renovation is done and then during the renovation the director should think about it with future changes

84

in mind as Thomas (2000) discussed. Thomas' article made a point about thinking about the next renovation down the line when making the changes. Something I learned in the corporate world was there are never too many electrical or cable outlets or cable which is something anyone doing a new building, an expansion, or renovation will discover.

Organizational culture manifests itself with facilities as it houses the people who work in the public library. If the facility is an adequate one, the staff and patrons will be in a place that is attractive and has the materials they need. If the building is inadequate, the staff and patrons will see that the library has problems. As mentioned in the story about Cardinal Public Library, the director, Friends, and community all see the facility as something that needed to be improved by building something new. This motivated the community to make sure the library was able to move forward with the objective of building a new building. This situation is win-win. The patrons will eventually get more public access computer; the staff will have a better space to work in. The organizational culture of the library will improve by being in an improved facility.

Organizational environment is part of the group culture. It is the climate of the group. If the climate of the public library is a positive one this will be reflected in the norms, values, and underlying assumptions of the groups. To take the other side, if the environment is negative this too will be represented in the group's espoused beliefs and values. The culture of a group in a public library not only includes the staff. The culture can also include the Friends group, the Foundation, and the patrons. There may be subcultures that are evident within the library building where it is housed.

Staff perceptions of the organizational culture can differ from the leadership of the public library. In any group, there can be those that can never be pleased by the status

quo. The staff perceptions of the libraries that were visited were generally positive about their director and the direction of the leadership. While there were some staff members who felt they needed new facilities, the leadership and the staff were on the some same page in most cases. Osprey Public Library was the exception. The library board had attempted a bond issue for a new building a few years ago that had failed. The reason it had failed was the citizens liked the building the library was housed in and it was within walking distance of downtown. The Board of Trustees and director intend to expand or renovate the library and will have a new bond issue for the voters in order to pay for it. If it passes, the library will be renovated. The Board of Trustees and the director did not agree with the community but through the ballot box they spoke.

Chapter 6

Technology and Organizational Change

I hated the card catalog. I had to file the damn cards, well drop them anyway, but the majority of the patrons I would say are not resistant to change. The card catalog issue was one.

<div align="right">

Blythe Vance
Director, Hawk Public Library

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People, People who need People[12]

The city government that funds the library and the buildings that house the books and materials are nothing without the people who run the everyday tasks. What does it take to run a library? It takes a dedicated staff who works with people on a daily basis. Anyone who says that librarianship is not a public service job is uninformed. Amber Bright, one of the directors, made the comment:

> If you are not flexible and you are not public service oriented, you don't belong in public libraries. You should be somewhere else. You are going to deal with change because we exist in society and society changes constantly.

The staff sizes varied depending on the size of the community and library as well as the funding. The smallest full time equivalent (FTE) staff I saw was 10; the largest staff was 32. In many of the libraries they would have nine or ten full-time staff and 12 to 20 part-time staff that worked circulation, shelving, or cataloging. It depended upon the leadership and management style of the director and the tradition in the library.

One of my research questions was if technology had impacted organizational change particularly in the way staff was put together. I can now say that in the libraries I

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[12] Styne, J., & Merrill, B. (1964). People. In *Funny girl*, original soundtrack recording. New York: Columbia.

visited the answer is yes. Some of the libraries had added staff, changed titles, added

whole departments, or added part-time staff. In some cases, they were bound by hiring

freezes or funding issues. Again, each library had their own set of circumstances with

which they needed to contend. The stories below are by no means to be considered all

inclusive of the libraries visited; however, they are the most interesting. It shows that,

along with working with the city government and older buildings, creativity comes up in

dealing with people. Most of the directors I met were personable and welcoming to me.

I did not hear any tales out of school about them. A couple of the directors spoke openly

about seeking retirement in two to three years after certain long-term goals are achieved

which speaks to the graying of the library profession. Although I did not ask the ages of

the directors, I would say the majority were in their mid to late 40s to early 60s. The

majority of the staff also fell into that age range with a few exceptions who were in their

late 20s and 30s.

Changing Titles for Technology

      Lisa Blaine, the director of one of the first libraries I visited, had been at her

library for 25 years. She had been the director for 12 years. When she has a job opening

of any kind, she assesses how that position fits within the whole library system. Ms.

Blaine is responsible for the main library and overseeing two other branches.

> . . . we did have a reference librarian position . . . someone left and when
> filling the position instead of filling it with a librarian we filled it with a
> technology specialist, a kind of electronic resources specialist. We have
> had several different titles here. This was the late 90s, maybe 2000. So
> we haven't, and this is kind of my management style, every time we have
> an opening we look at our organizational structure and what may have
> changed so that we don't ever just when someone leaves automatically fill
> that position with some just like the person who left. So we have been
> able to over the years to pretty much do this with attrition to make the
> changes we needed to. In fact, switching the assistant director to the

systems administrator happened when I was promoted from assistant director to director and then rather than hiring an assistant director we hired a systems administrator.

Adapting as attrition occurred was a unique way to handle the changing times with technology becoming a larger piece of the library. I asked an IT person a question about the impact of technology. He told me he would show me the impact of technology if I could wait a minute while he turned off the electricity and then we could see what would happen.

Technology Departments

Two of the libraries I visited had IT departments that ran their public access computer labs. Finch Public Library's Technology Department had a manager, two full-time and five part-time people, plus some volunteers who ran the public access computer labs and the automation software for the integrated library system (ILS). The director of Finch Public Library, Mark Williams, explains the largest organizational change he has had under his tenure.

> It's changed a little bit. The most recent change is the technology center. We knew that. It opened in March '05 and probably in August of '04, Trudy was named director . . . the manager. So at that point she then joined the department head crew, which is our leadership team, and began meeting weekly with us. So that's been almost three years . . . so that was a pretty significant change I think at that point. We just turned into an in-house thing when they all applied. All three full time people applied to be the manager and all thought that they would be the obvious choice which is probably not that unusual – all different backgrounds; different lengths of employment. They all felt the best qualified to manage and she was by far the best qualified, even on paper she was. That worked out pretty good. So at that point about a year before we opened we were under construction, so we formed a department at that time. The reference assistants were still over there but they knew they would be transferring out.

The other library that has a technology staff is Sandpiper Public Library and this is partially due to the way the building is configured. The computers are in a lab that is

separate from the rest of the library and there is no line of sight from anywhere else. It necessitated the need to have staff who supervise what is going on in the room where the patrons using the computers.

More Changing Titles

Lorraine Mallory is a no nonsense director with an eye on the future. She has always been interested in technology. In medium sized libraries it is not uncommon to find two different people assigned to network administration duties related to public access computers and the automation software. She has two people who are primarily responsible for technology at her library. One is a library assistant III who is the network administrator and is responsible for all the public access computers. The other is the assistant director who is responsible for the automation software along with her many other duties. Ms. Mallory explains how the current network administrator came into her position.

> We did have two 30 hour people who were hired specifically for their computer skills and they took care of all of the technical problems of which we had many in the beginning. The printers won't work; nobody knows how to make them work. The computers need rebooting. . . They were out on the floor; they didn't work the same hours. They worked evenings and they could provide that kind of just technical support for all of these computers. Why won't Word come up? Do you have this? Why can't I print when the screen is black? The whole thing with that.

> Eventually one of our staff people, Ana, who is so capable with computers, got her library assistant I position changed to full-time. Then when we did job audits and she went library assistant II. Library assistant I is the least paid and the least skills required. Then she went to a library assistant II. In under which she does all of our updating of all our computers every Thursday morning, she puts patches on, everything except the network which we have contracted out to do. Just recently we did another job audit and she was promoted to a library assistant III . . .

> Our assistant director does all our Dynix communication and all that kind of decision making and Ana does everything else. . . That is how one position has evolved and we have certainly needed it to evolve like that.

90

Changing titles that reflect on an organizational chart is one way to mark how technology has impacted public libraries. As seen by the participants' discussion of their organizational changes that permeated their culture through public access computers many realized these changes but I am not sure they were aware of the implications of the changes to their group.

In one case, the technology department, a whole new sub-group and sub-culture was formed in the library. When the technology department was configured, there were three different full-time employees that had previously been responsible for the computer training, the automation software, and all PC hardware/software maintenance. Additionally, there were five part-time people who had worked in the reference department and were responsible for monitoring patrons on public access computers. The new technology department manager was the one who had previously done the computer training for the public and staff. The technology department began to reflect the new manager's, Trudy Young's, espoused values and beliefs. Ms. Young had no formal library training but was an information technology (IT) person and brought those values and belief structures into her department. IT personnel in this library had a different focus than the library people. IT people concentrate more on what the technology can achieve and simplify processes for the organization than the people, materials, and programs. The librarians that I spoke to at Finch Public Library were, at times, in conflict with how Ms. Young's department perceived where the organization needed to go into the future. Both groups felt the other did not understand their values and beliefs of their training.

Ms. Young joined the leadership group which was run by the director Mark Williams. Both these groups had underlying assumptions and have incorporated these within the library as a whole. The Finch Public Library was a good example of group culture in an organizational environment as Schein discusses. Mr. Williams began the leadership group for a specific purpose (Schein, 2003). Each person in the leadership group brought their own "wealth of prior learning in the forms of assumptions, expectations, and patterns of coping . . ." Schein, 2003, p. 67). This begins what Schein calls the "Stages of Group Evolution" (p. 70). Each stage builds the group up to a functioning group from formation to building to work to maturity (Schein, 2003). After three years, the leadership group at Finch Public Library is in the maturity stage and is comfortable working together and leading the library forward into the future.

Generation Gap

One of the directors has a generational gap at her library between the 20 something's and the 50 something's. It has become so adversarial between the two groups that she is considering bringing in a consultant to help her deal with the age gap. In addition to this she is having clashes with her circulation manager about bringing in self check machines and their placement on the circulation desk. Here is Ethel Bourdeaux's story.

> My biggest challenge right now . . . I have a huge challenge with the generational gap. I think it's worse now than it's ever been in my career. The 20 some things on the staff clashing . . . I mean I have huge clashes over technology and change and I'm going to have to hire a consultant to help me get through that. So, the culture, I think the generation gap, the people, the students coming out of library school now are so different from me and my generation. What they know, their culture. What they want and does that answer it? . . .
>
> . . . I can just give you one example. The self check machines that we're going to have. Most of the libraries that you go in and if you notice where

the self check machine is, it's going to be off to the side. Basically used as a coat rack, like a treadmill is at your house. That's not going to happen here and I have huge issues it's going to go right on the circulation desk. It's going to be in your face when you walk in. That's what you're going to be confronted with. The circulation manager says "no, we're not going to put it there, we're going to put it off to the side."

She goes on to discuss her IT/marketing director who is one of the younger people at her library which embodies the generation gap.

Plus she's the marketing director. She does a lot of the adult programs. And see that's the generation thing. Everything I say, I send around the room and I say who will do this, she always raises her hand. She is completely overloaded. And that's her generation. She wants to take on everything.

Well, she's energetic, enthusiastic, she wants to do it all, she wants to learn it all. She needs to back off and say I can't do that well, let somebody else do that. But she doesn't. And then the older ones see her and they go . . .

In this discussion of Ms. Bourdeaux's difficulty with the two different age groups, the 20s and the 50s, the younger marketing manager is new in her position and career. The marketing manager is excited to be working in her field and making her mark. Those in their late 40s and early 50s are in many ways marking time until they can retire. They have been there and done that. They are jealous that the marketing manager is at the excited stage and they are not.

Resistance to Change

Everyone interviewed had stories about resistance to change. It did not matter who it was. They all had stories. Many of them talked about people who retired rather than deal with automation when catalogs were initially computerized. For others, it was when reference began changing and became the babysitter and help desk for the public access computers. Some of them were in denial that there was any resistance to change

in their library but in most libraries I interviewed at least two people and there was

always at least one story. In some cases, the tenure of the person would affect the story.

In answer to the question, "Has there been resistance to change by staff or

patrons?" Here are some of the answers.

Denial of Resistance to Change

Some of the directors did not believe there had been resistance to change to

technology on the part of their staff. When probes occurred during the interview to

question this denial of resistance to change this is the time where the directors admitted

that some of their staff had left due to changing technology. As can be illustrated by the

next few stories below, each one is a director who felt that their staff did not resist change

but when questioned further realized that some had retired when certain aspects of

technology had come along in many cases that being during the automation of the

catalog.

> No I don't think so. Some staff they left . . . it is true. Some of the older
> staff, we had one staff member that really was very resistant and we just
> sort of had to work around that until the person retired and that is what
> you do. Then we have an older staff member that retired and now is a, she
> still works part-time . . . she is an older staff member that probably didn't
> really have any interest in computers and, you know, was kind of negative
> about computers. She has adapted very easily and now comes in and uses
> the public Internets all the time. It is just interesting. Some people are
> flexible; some aren't and if they are not flexible they are not going to deal
> well with change and it doesn't matter what change it is though. So I
> don't think we have had a lot of resistance and we have had a lot of
> change. [*Amber Bright*, Cardinal Public Library]
>
> Well I've had . . . years ago I had some patrons who just wouldn't use the
> computer. They probably didn't know how to type so they wouldn't use a
> computer. And when we first automated, my head of circulation retired.
> It was time for her to retire. She was 67 or so. It was a good time for her
> to move out. Oh no, I don't think there's been any resistance, I think
> people adapted to it. We're finding when we have an opportunity to hire
> an employee, a younger employee, who's grown up with computers is
> much better employee and they're not afraid of. SIRSI is a complicated

difficult system and the younger people adapt to it and learn it much
easier.   [*Rupert Loomis*, Heron Public Library]

Yes and no. Not as much as I would have imagined. I am trying; no we
haven't really had a lot in the past. It is quite interesting. We haven't
encountered that.

[Diane[13]] No retirements because of technology coming on board?

Yes we did have one. A woman who wanted to scale down her work to a
30 hour position but the 30 hour position meant that she would be one of
the people who helped with the computers and she did not want to do that.
She wanted to bring her interlibrary loan work along with her and we said
absolutely not. You are comfortable with interlibrary loan and that is this
full time job but not the interlibrary loan is not a full time job but that is
this job. So she did retire. You can learn it, you are perfectly capable, you
know you are. We will send you to all of the classes you want. There is
no reason you can't do this because we know how work has been and you
have always been successful at what you tried to do but she was not
willing to do this. Right now we are meeting with some resistance as we
move forward even from computers particularly with some people who
have been here a long time and particularly in the way, Jenny is fairly new
our system manager because she is very capable of taking us where we
need to go. We had a systems manager that was not capable of doing that
so we had a lot of stasis for a long time and now we have some resistance
of moving to the client to catalog and we have had instruction, we have
had the [state library] person come up instruct on how easy it was going to
be to move to the client, and resistance – real resistance in learning a new
go live but we have spent a lot of money what it is Adobe or Photoshop.
[*Lorraine Mallory*, Owl Public Library]

As can been seen from the stories above, that once dialog began flowing the actual

resistance to a new assistant director, the cataloging system, or whatever it was came out.

Not Understanding Technology

In one library, an IT staff member had to deal with a library where the staff would

walk around with floppy disks in hand and not save anything to the hard drive. The staff

would also be hesitant to back up their hard drives or floppy disks not understanding that

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[13] In excerpts from the narratives that include dialogue, I have identified myself as Diane.

disks of all kinds can go bad and one can lose data. Once this was explained to the staff

over a few months, there were behavior changes that occurred.

The story below is at the Owl Public Library and the IT staff member, Ana Miller,

was going through a computer conversion and attempted to get a cataloger from having

two computers to one because the cataloger did not understand that everything she

needed to do one a daily basis could be handled on one computer.

> I had one staff member that had two computers on her desk because when
> she started they had to have a separate computer for cataloging because it
> was a straight into OCLC that was the way she had always done it and
> even though Windows is multitasking she felt more comfortable having
> two computers. One for cataloging and one for everything else she did.
> So it took a little bit and finally I said when we were doing some changes I
> said well you know you will have to work in here for a while until we get
> this straightened around out here and I can only have you use one
> computer while you are out here. I will show you how to go between
> them but then once you get back to your desk then whatever. Of course
> once she started using one computer she found out it was so much easier
> and she didn't have to worry about other stuff . . . So then it was fine.
> [*Ana Miller*, Owl Public Library]

The ability to use just one computer had to be shown to the cataloger in question and

once she realized that it would save her time she was fine with it. Many times it is just a

training issue that needs to be addressed as was the case in this situation. As is pointed

out in the change management literature there needs to be "investment in change calls for

collateral investment in training" (Bolman & Deal, 2003, p. 370). Training will influence

the organization to positively enhance the culture if it is handled in the right way. The

ability to provide training when change happens helps the employees to feel more

comfortable and willing to embrace it. Bolman and Deal discuss that "training,

psychological support, and participation will increase the likelihood that the employees

will understand and feel comfortable with the change" (p. 373).

Coping Strategies

When discussing resistance to change with Mavis Jordan, she had a very unique perspective on it. She felt whatever the technology it was a policy and you learned to cope with the situation.

> You either agree or you agree and you go along with the change. You disagree and you still go along with the change or you disagree and you quit. Basically you either have to comply or you leave. . . Yep, it is how it happens. It isn't just with introductions in technology, it is with anything. Any kind of different policy or whatever.
> [*Mavis Jordan,* Crane Public Library]

Ms. Jordan did go on to say that when public libraries had closed stacks in the early 20th century and decided to open the stacks to the public there were probably librarians that were shocked by that decision. Although opening stacks may not be seen in the 21st century as a technological change it would have been a policy shift that may have been shocking to those 20th century librarians.

Updating Software

When an organization works through a computer conversion, no one is really sure if it the change is going to be something that is for the best. At Crane Public Library when the library staff updated the Integrated Library System (ILS) to the newest version that was a text based version to an Internet based version there has been true resistance. Many of the library directors that I visited made comments about losing the function keys in their cataloging systems and moving to using mouse instead. This situation at Crane Public Library is similar. There was no mandate set down when the change occurred so everyone chose how they would implement the change as the story below shows.

> What I gather there was some resistance because nobody really knew how to, what to do with this new technology. . . Where there has been real resistance to going from text based to the Internet based system because

the text based they are all know the commands and they are all comfortable with all those commands those function commands when I came I said we have got to get onto. Half of them are doing Millennium and half of them are still doing text based. I haven't even learned the text based I just learned Millennium. I just started using it because it is so much more user friendly but it is because they are leaving their comfort zone from one to the other. When I was at PLA at Boston I went to the Innovative directors meeting, they said they would be pulling the plug on maintenance for text based and I thought hallelujah. This will help. So I came back and told the staff that we have to get to Millennium but I think what we need is we need to have a professional come in and train us. . . Since I have been here biggest resistance have been that. [*Violet Ghent,* Crane Public Library]

In Violet Ghent's discussion of the cataloging system at Crane Public Library what was not explained was the current library director passed away during the implementation of the system and the children's manager had to step in and take over. The children's manager basically had to learn the system on the fly as it was being converted which explains why the system has not been used to the fullest. So during a major change in an organization another major change occurred compounding the situation. It is no wonder they are still resisting the change as the original change has such negative connotations attached to it.

Old versus New Systems

When a public library automated many times the old long term staff would decide not to stay because they did not want to learn the new system. They preferred the old system. Those on the staff that were older may have tried to stay on but determined the new computer system was just something they either did not want to learn or could not learn for whatever reasons. Mary Adams, the director at Egret Public Library, explains what occurred at her library.

At that time we had some old long term staff and physically older age wise
and they did not learn as quickly or as well or retain as much as well. So I
think they had problems and they are some that moved on or retired.
[*Mary Adams,* Egret Public Library]

Differing Cultural Values

When there is new technology not everyone is as accepting of it. There was an

employee at one library who felt the computer was the work of the devil. Many times

over the course of human history different contraptions have been not thought well of –

the printing press – is one example. Everyone has different cultural values and we need

to respect everyone's belief systems.

We actually had one lady quit because she thought the computer was the
devil's work. . . .
[*Tasha Delany*, Finch Public Library]

As the stories above show, when there are technology changes, resistance to

change is alive and well. As Carayon & Karsh (2000) discussed, technological change

can create conditions of uncertainty and overload. While not all of the stories were told,

many of the participants talked about automation that cataloging managers and catalogers

retired because they did not want to learn the new way when the catalog was converted.

In many of the libraries I heard stories where the catalog had in the last five years or so

had gone from text-based platform to a Windows-based interface and many of them did

not like the new rendition. The staff was coping but some catalogers did not like the fact

the mouse had to be used instead of function keys. While the change to using a mouse

appears to be a very small change in the process of working in a cataloging position it is

still a culture change. As with any cultural change it needs to be explained to the staff and

dealt with in the public library organization.

In today's workplace change is a constant especially when any kind of technology is involved. In a medium sized library, this is very true. The collections are changing. Downloadable audio books and movies are the newest development for materials that is being touted out in the libraries. Many staff and patrons are excited to jump on board. Some are not. All change creates stress on organizations and the people within them (Carayon & Karsh, 2000; Dawson & Buchanan, 2005; Deiss, 2004; Schein, 2003).

Discussion

In the public library today, the employees are part of what makes the experience special to the patrons. Managing people can be challenging, or as Bennis (1999) comments, "Managing people is like herding cats." Cats have a tendency to want to go their own way. So do people. In the organizations that were visited, each library had made some changes in the way they were staffed to deal with technology. Some added people; others added tasks to people in certain positions; and in a couple of cases whole departments were created to deal with public access computers. As some of the anecdotes below show, there is no one right way to manage the change technology has wrought in public libraries. Some of the staff left because they chose not to adapt to the new technology. Others it was just time to move on to new things. Mark Williams, director of Finch Public Library, has done a good job of managing technology in his library. Finch Public Library is one of the two libraries that have a technology department that handles the public access computers. By having the technology department, it puts little or no strain on the reference and circulation departments. The community appears to like the library and staff that I interviewed seemed to enjoy working at the library. The only complaint that I heard was that the technology staff

were not librarians and were more interested in technology than libraries. I also heard the same complaint from the technology staff about the librarians being less interested in using the technology and more interested in the library.

Lorraine Mallory, director of the Owl Public Library, was another success story in managing technology. She found a way to merge a network administrator within her existing staff infrastructure and make it work. While there was just one person plus the Assistant Director who assisted, this is more people than most of the libraries besides Finch and Sandpiper Public Libraries.

Most of the libraries were successful in merging technology within the workings of the public library with only a half a person. A couple of the libraries used either city IT or contract IT staff to do the technology work. It was key to have a director who understood what was needed as far as equipment, money, and support. The couple of libraries that were not successful had either poor city support or funding issues.

When automation and then public access computers were introduced to public libraries, there was a transformative change in the way libraries conducted business. Any time something new happens, there can be resistance to change. As some of the stories indicated, automation was particularly stressful for some members of the staffs of the libraries to handle. The turnover that occurred was for many different reasons. Some of the staff left because they chose not to adapt to the new technology. Others it was just time to move on to new things.

With any organization, there need to be goals and objectives and the determination if they are being met. If goals are not being met,

It makes members of the organization uncomfortable and anxious – a state
that we can think of as *survival anxiety*, in that it implies that *unless we*

> *change, something bad will happen to the individual, the group, and/or the*
> *organization* (Schein, 2003, p. 322, emphasis in the original).

During the organizational change that had occurred due to the addition of the public

access computer, the everyday processes and tasks of the staff were modified. These

accommodations by staff initially included making lists of patrons who wanted to use the

public access computers and timing those who were on the computers. In some libraries,

the reference and/or circulation staff became the computer police. This job was not

something any of them signed up for but in a medium sized library during the mid-1990s

the reference staff was the group that became responsible for the computers.

The public access computers necessitated someone who understood and could

handle dealing with network administration of personal computers. It was a slow

realization for some of the libraries that there was a need to have a staff person to handle

computers. The majority of them did have at least one person who is assigned to deal

with computers on a part-time basis. Each person's title was verified using organization

charts provided by the library directors of each library.

Table 12: Libraries Network Administrator/PC Troubleshooter

Library	Computer Position	Title
Cardinal Public Library	N	
Condor Public Library	Y	Reference Technology Librarian
Crane Public Library	Y	Network Manager
Eagle Public Library	Y	Librarian I
Egret Public Library	Y	Assistant Director[14]
Falcon Public Library	Y	Library Technology Specialist
Finch Public Library	Y	Computer Specialist/System Operator
Hawk Public Library	Y	Reference Librarian/IT
Heron Public Library	N	
Kestrel Public Library	Y	Network Administrator
Osprey Public Library	Y	Marketing Director/IT
Owl Public Library	Y	Library Assistant III
Sandpiper Public Library	Y	Technology Learning Center Coordinator
Wren Public Library	N	

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[14] The assistant director was not counted as a part-time computer troubleshooter as she has an enormous workload in addition to being the network administrator for the library.

Of the libraries I visited 71% or 10 of them had someone who was assigned on either a

full-time or a part-time basis. Three of them relied upon outsourced or city assistance

when anything other than a basic need was required. One had an assistant director who

was also in charge of the automation software as well as wearing many other hats at the

library. The age of the public access computers does impact the time people spend on

troubleshooting or dealing with issues related to the computers. In some cases the age of

the hardware was between five and seven years old but the innards of the hardware may

have been rebuilt in the last three years.

By far the bigger issue in all of the libraries was the resistance to change that

occurred when either automation or when public access computers were implemented.

As mentioned in the literature, resistance to change is something all industries that

employ humans encounter (Bennis, 1999, 2003; Carayon & Karsh, 2000; Dawson &

Buchanan, 2005; Deiss, 2004; Schein, 1999b, 2003).

> The key to understanding resistance to change is to recognize that some
> behavior that has become dysfunctional for us may nevertheless be
> difficult to give up because this might make us lose group membership or
> may violate some aspect of our identity (Schein, 2003, p. 321).

As the quote by Schein comments resistance to change can make people react as

dysfunctional beings. The group identity and membership with the public library is

important to the people who work there. The group membership within the subculture of

the departments was also important. As mentioned above, the changes needed to be sold

but there had to "buy in" by senior management. By senior management the director and

department heads had to agree the change needed to occur. The long tenure of the

employees speaks to the desire to stay in a place of employment because they like being

there or there is some long-term reason (i.e. retirement benefits) for staying.

The most interesting resistance-to-change stories were the ones about the catalogers and the upgrades to the automation software that was occurring. In each case, the software was moving from using function keys (i.e. F1, F2, etc.) to using the mouse. The catalogers did not like using the mouse and quite a few of the directors made that comment. In fact, the catalogers preferred a text based interaction with the cataloging software. Using the mouse slows down the work process by taking the hands off the keyboard. In one library, half the staff was still using the text based software and the other half using the Windows based software causing a cultural problem for the director. When the original software update occurred the catalogers were given a choice to stay with the text based instead of forcing everyone to the new version of the software. At ALA, the director found out that the software company was going to stop maintaining the text based software; she finally had the impetus to move everybody to the Windows based software.

The entire chapter has been enmeshed in organizational change that involved people in the public libraries that were visited. People in the libraries are members of an umbrella organization – the public library in which they belong. Additionally, the other group culture they were a part of is departmental. Each department in the library has a unique group environment that differentiates their members. When a change of any kind occurs, it upsets the status quo. As has been mentioned, that can create what Schein (2003) calls group members that become "dysfunctional beings" (p. 321). This dysfunction occurs because we are enmeshed in "*unlearning*, because what we have learned has become embedded in various routines and may have become part of our personal and group identity" (Schein, p. 321, emphasis in the original).

While change is not a good or bad thing on which to place a value judgment upon, it does impact the people in an organization. The sometimes substantial pain that occurs while the change happens creates havoc within the organizational culture as well as the subcultures.

> . . . One of the biggest technology problems I have had here was to get from Dynix to Horizon because it required an expenditure of funds and I couldn't get the city to recognize the need for this. A lot of this was wrapped up in the fact that they [the city] were searching for an IS director and no new technology was being purchased . . . Well, [after hiring] he didn't have the money and had some other priorities that were dropped on him too because there was a lot of stuff that didn't get done when they were deciding that we needed to hire somebody. . . . we actually had a woman here doing a technology survey . . . and the day she was here we had a major crash [of the automation system]. After that we got that system right away. But when we implemented the Horizon system we spent a fair amount of time getting the staff comfortable with it before we deployed it. [*Jack Taylor*, Condor Public Library]

In the excerpt from the interview, an automation system crashed after repeated attempts by the director, Jack Taylor, to get the funds to replace it. Due to problems in the parent organizations, the city with hiring an IT director, the request was not responded to. After hiring an IT director, the library being one of many departments within the city was on the list just not on the top of the list until the system crashed while an outsider is there doing a survey on the library and their information technology infrastructure. While the system was immediately replaced, it took time to train the staff on the new system before it was deployed. All of this takes time and creates a level of stress and havoc on the organization while it is occurring. Then once the change has happened, been processed, people trained or schooled in the change, and their work habits shifted, things will settle back down – eventually.

Chapter 7

Findings, Future Research, and Conclusion

> So it is interesting when you face peoples' idea of what technology is, and whether or not you need a library even with technology. It is an educating process really.
>
> Justin Sedlak
> Sandpiper Public Library

Findings

The research questions were inquiring about public access computers influence upon organizational change in public libraries. Every participant explained that automation started the organizational change that has through time occurred in public libraries. Public access computers have extended that change throughout the entire public library organizational structure and personnel. Organizational change has occurred in public libraries because of public access computers and automation.

Automation was not part of the research questions of this dissertation but has come out as part of the findings. Automation, as has been discussed, began the introduction of computers into public libraries. It was the first foray into computers for public libraries. Once automation occurred with the catalog and then the circulation system, public access computers were next brought onto the scene. This explanation is more simplistic than it was for the public libraries and their staff. Bringing in both the automation and public access computers needed funding, community, board, city, and staff support.

When automation was initially introduced it affected the technical services and circulation staff. Catalogers were expected to change their methods from a manual

process to an automated one, in some cases, almost overnight. Automation created a

cultural shift that was not expected by management. The cultural shift was one that

caused turnover of staff – or another way to put it – people quit because of the

technological changes. Most of the directors lost staff when automation was put in place.

An example of people leaving because of technology is the story Peter Vegas tells when

he was hired at Sandpiper Public Library.

> . . . time period right before I started there was a staff turnover of
> employees that did not embrace computers or technology and chose to
> leave or for whatever reason left. For instance, that's why there was an
> opening for me to come here because the cataloger was not enthusiastic
> about going through the trauma of automating and she had been here 17
> years and then left. I would say that the initial implementation to people
> that had never used technology was pretty severe.

The other reason for decreasing staffing levels is that more could be done with fewer

people because automation made it easier. For the circulation staff, it automated the book

check out process.

As the technological shift started to flow to other parts of the public library, the

culture began shifting.

> We have had some large projects for community awareness in the early
> days of the internet. . . . probably the most significant way that we did it
> was to develop a Community Resources database. . . . we provided
> information on about 10 community service agencies – human, social
> services groups and clubs. A group of representatives from the agencies
> formed a 501(c)3, found money, gathered information and hired someone
> to data enter the information into the community resource module of the
> Dynix integrated library system. To gain access to the database, a person
> or agency had to dial into our server and retrieve the information. The
> Community Resources organizing group purchased modems for key
> agencies so that the agencies could dial into the central server and find
> "just in time-information on local agencies."

Where things were once done by manual processes; they are now done automated through computers. When public access computers started to be introduced into the public libraries, the impact was small. One of the libraries that I visited, Falcon Public Library, the director, Lisa Blaine, said that the library had a public access computer during the late 1980s but it was not connected to the Internet. It was in 1994 that Falcon Public Library introduced the Internet to their patron base with a grant. This began the organizational change that occurred in concert with the public access computers. Ms. Blaine changed her organization in two significant ways that was a result of automation and public access computers. The first change occurred when instead of hiring an assistant director she hired a system administrator to handle the automation software when Ms. Blaine was promoted. The second change was when replacing a reference librarian she chose to hire someone who had software skills instead of a MLS and the librarian skills. Ms. Blaine felt the library skills could be taught but the ability to figure out database software quickly could not be as easily taught and wanted someone with an information technology background. Ms. Blaine explains part of the cultural shift that occurred in her library.

> . . . that is such a much more efficient process than going and pulling six
> different cards out of different parts of the alphabet in the old card catalog.
> . . . We said that – this will be more efficient. That is true. It takes a clerk
> a lot less time to wand in a bar code and have the system delete everything
> about that record than it did to go to the old card catalog but we need the
> infrastructure maintenance and the troubleshooting maintenance and so we
> really needed a higher level skill. So we hired a systems administrator
> instead of a clerk.

Schein (2003) discusses the group norms that occur in an organization and how it permeates the entire culture. Besides having an overarching group norm culture, each of the departments within the public library would have its own subculture. For example,

the subculture of the youth and children's department would be very different from an IT department. In fact, different types of people are attracted to each of the different departments within the public library (i.e. technical services, youth and children's department, reference, public services, IT, and administration).

An example of the subculture between two departments is at Crane Public Library where the IT and youth services groups serve the same patrons but have a different ways of achieving the service. In IT, it is all about the technology. The IT manager, Rex Moyer, is responsible for all the public access computers and WiFi access in the public library building. Mr. Moyer made the comment that

> . . . one of the library's . . . biggest problem is we have to supply such a wide spectrum of people that we have to adapt to each type of thing as we go along so we don't try to lose anybody.

The youth services manager, Mavis Jordan, believes that,

> . . . that is very much all technology or where we are heading and that is what they have been trained to do [current library students]. Which still despite all the technology is why people come into library is the humanity side of it, the programming, the meeting other people, the sitting and watching people, the mall people who just like to be with other people.

In the youth services department, there is a large print collection that Ms. Jordan says does not get checked out as much as she would like to see it get checked out but her programs draw huge numbers. When looking at the numbers for the youth services programming, one drew over 700 children and their parents. The subculture between the IT and youth services departments are very diverse and draw on different methods – technology in one; programming in the other.

Public library culture has changed significantly over the last 12 to 15 years with the introduction of public access computers. Although initially begun by automating the catalog and circulation, the public access computer cemented the cultural shift that

automation started. In some of the libraries the cultural shift is noticed through looking at

the different skills set that was required of librarians and other staff members. The

patrons began asking for public access computers and as one of the director's mentioned

in his interview.

> People expect computers when they come into the library now and they
> EXPECT the library to offer online sources. When we first started having
> computers, it was nice that we had them but it wasn't an expectation at
> that point. There is a difference in the culture that way. The new
> generations of people coming into the library don't remember a time when
> we weren't automated and expect things to be a certain way. (*Justin
> Sedlak,* Sandpiper Public Library)

As has been previously noted, computerization and automation brought resistance

to change which created staff turnover – those who were not able to shift to the new

systems and technologies. The management literature has supported the fact that

anything new in an organization can bring about resistance to change; it does not just

have to be a technological change (Bennis, 1999, 2003; Bolman & Deal, 2003; Carayon

& Karsh, 2000; Dawson & Buchanan, 2005; Deiss, 2004; Schein, 1999b, 2003). As I

was told by one of my participants, making sure everyone knew what the change was and

that they understood how it was going to impact their work process was important before

it occurred. Preparing staff could make the adaptation occur more smoothly than if it is

brought to them as a surprise move.

Taking public library culture one step further, Schein (2003) discusses the group

cultural norm for the organizations that he worked with over his 40 years of consulting.

By the time a consultant is brought into the organization, there is typically a problem that

needs to be solved or handled. The ability to apply the levels of culture to the public

libraries that were visited was difficult. Underlying assumptions are "the unconscious,

taken for granted beliefs, perceptions, thoughts, and feelings" (Schein, 2003, p. 16). Each

110

library has unconscious assumptions that each person knows that are the unwritten rules

for the way the library is run. Although no one may ever talk about them, it is something

that is known within the culture of each particular library. The underlying assumptions

of each library were also different. For example, one library may have lifelong learning

as underlying assumption; another as a gathering place for the community. These

institutions were 14 different groups with unique personalities and each had their own

espoused beliefs and values. Sometimes what the patron needed and what the library

organization provided was different. This could be different due to funding issues or lack

of communication. It depended upon the management structure at the library, the

director, the Board of Trustees (if applicable), and how involved the community was with

the organization. For instance, the library that had the coin operated computers could not

have had a very involved community because after 10 or more years the computers were

still there. Even with patrons and the state library complaining about the lack of free

public access computers to the director, the situation did not change. As Weick (1976)

mentions this may be indicative of whether or not the library was tightly or loosely

coupled with the parent organization. The level of control of the parent organization, the

city government, may have an impact on the services that are provided to the community.

Each participant while a member of the public library at large and the overarching

culture was also a member of a department that has its own subculture. This view from

the different departments could color the way public access computers and their

introduction into public libraries is viewed. If the participant had to support or work with

public access computers and patrons, it could also bias their view. Not all interviewees

viewed public access computers from a positive perspective. Many of them felt they

were a necessary evil in the public library. One of the participants, Ana Miller at Owl

Public Library, related a conversation she had with another staff member.

> I had a staff member tell me one time that "I wish we didn't have any
> computers at all and we just go back and then we wouldn't need so many
> people." I said no you would need twice as many people and they would
> all be in the backroom typing cards because she thinks of computers she
> doesn't think of the ILS, she is thinking of email and internet.

The staff member was bemoaning the public access computers but did not think through

her complaint about computers in general. While most of the staff members interviewed

like the automated catalog and circulation systems, not all of them were happy about the

stresses and problems that public access computers has placed on the public library.

All of the directors discussed difficulties in finding adequate funding for

materials and updating or replacing the public access computers. The most common

complaint was the unpredictability of the equipment that would all of a sudden "blow up"

as Mary Adams, the library director of Egret Public Library explains.

> It can be when a server goes down, when you are in a city type situation it
> is not like you have a reserve and we didn't budget for a server this year,
> where do you get the money for the server that you need now today. You
> can't wait 8 months down the road and put it in next year's budget. We
> just had to do it. Luckily we have something they call the library grant
> fund and that is where we put our state grant aid money every year and
> fortunately do not spend it down every year and we did have some back up
> money so we could purchase our server today. I don't have $10,000
> hanging around in my pocket, thank you. . . So you have to be prepared.
> That has been one of our biggest frustrations has been one of the
> unreliability's of the equipment. If it hasn't been an equipment problem,
> then it is an electrical problem, it can be an internet provider problem,
> there are so many options and you just go crazy.

Ms. Adams was not the only director to recently have a server go bad but hopefully there

are contingency funds of some sort either through the city, the Friends of the Library

group, or through a Library Foundation of some sort. Unfortunately, a server is

something the library cannot do without in this technology driven world where the ILS,

the public access computers, the web site, and commercial databases all need it to survive. Usually each component is on separate servers or at least the ILS is separated from everything else. Typically, the director cannot wait for a Board of Trustees meeting to occur to make the decision to replace the server. This situation with a server would supersede the hierarchical decision making that occurs in a library. The exception to this would be where the director reports directly to either the city manager or Mayor.

How this impacts culture is that, as mentioned above, it puts stress on the staff and environment because they need to find the money to pay for whatever needs to be repaired. A server going out that provides Internet access for the public computers would limit what the patrons could access. If a public access computer goes bad, for instance, it can be taken out of service until it can be dealt with by rebuilding the insides or replacing it when the new budget is put in place. A server impacts everyone's ability to access the Internet on an hourly and daily basis. This day to day worry is not something that is at the front of a director or administrative teams mind; however, depending on the age of the equipment, the levels of the budget and any other external factors that are not known can impact planned budget items. A $10,000 server could create a situation where funds are diverted from other budget line items like materials in the short term. Neither situation is ideal and can cause public outcry but managing is about choices and sometimes the two things to choose between like a server and materials is a no win scenario because no one really wins.

Public Library Culture Using Schein's Framework

Both the libraries depicted below in Tables 13 and 14 are being incorporated into Schein's framework so it can be seen how each library manifests the organizational

changes within them. Each of the library directors had written mission, goals, and

objectives that were set out on their web sites and discussed in their interviews. Members

of their staffs were aware of these goals and objectives which included the technological

changes related to public access computers.

In the case of the Finch Public Library the staff did not always agree on how

different objectives needed to be met. In fact, one of the librarians made the comment

that it sometimes appeared that the director would make changes for the sake of change.

The director, Mark Williams, was very willing to try new things technology wise.

Sometimes this would either negatively or positively impact the culture of the public

library but he was willing to deal with the fall out of his decisions.

Table 13: Finch Public Library

Artifacts	*Visible organizational structures and processes (hard to decipher)* - Technology Department managing public access computers, 2004-present - Reference Department managing public access computers, 1995-2004 - Organizational Hierarchy chart
Espoused Beliefs and Values	*Strategies, goals, philosophies (espoused justifications)* - Mission Statement mentioned "Providing accessible information" - Assertion about "lifelong learning" in Library Vision Statement
Underlying Assumptions	Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate source of values and action) Mark Williams' description of the technology center to manage the public access computers as being "better for the customer"

	• Tasha Delany's depiction of public access computers as "a center for technological literacy"

The Falcon Public Library has a director, Lisa Blaine, who would consider the fit of an open job position be it a part-time custodian or reference librarian before filling it. In fact, this is evidenced when she was promoted to director, Ms. Blaine backfilled behind her old position of assistant director with a systems administrator to handle the ILS (automation) system. Later in her tenure when a reference librarian had left, she was able to backfill that position with a library technology specialist position. The library technology specialist position was one that dealt with learning and teaching all new software (database, commercial, and other) to patrons and staff that the library purchased.

Table 14: Falcon Public Library

Artifacts	*Visible organizational structures and processes (hard to decipher)* • Systems Administrator job description, 2007 • Assistant Director job description, 1995 • Library Technology Specialist job description, 2007 • Reference Assistant job description, 2000 • Organizational chart
Espoused Beliefs and Values	*Strategies, goals, philosophies (espoused justifications)* • Beliefs about public access computers and WiFi • Statement about "connecting patrons to a world of ideas" in the library's mission statement
Underlying Assumptions	Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate source of values and action) • Lisa Blaine's description of

	public access computers as "we are committed to helping our patrons"

Both public libraries in this particular example also had espoused values and beliefs that upheld the artifacts. What is not seen on Tables 13 and 14 above is in all of Schein's depictions of the artifacts, underlying assumptions, and espoused values and beliefs is that the movement is in both directions. For example, in the following diagram is a graphic detail of what is meant by that statement.

Figure 2: Levels of Culture[15]

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┌─────────────────────────────────┐
│            Artifacts            │
└─────────────────────────────────┘
                ↓   ↑
┌─────────────────────────────────┐
│       Espoused Beliefs          │
│          and Values             │
└─────────────────────────────────┘
                ↓   ↑
┌─────────────────────────────────┐
│          Underlying             │
│         Assumptions             │
└─────────────────────────────────┘
```
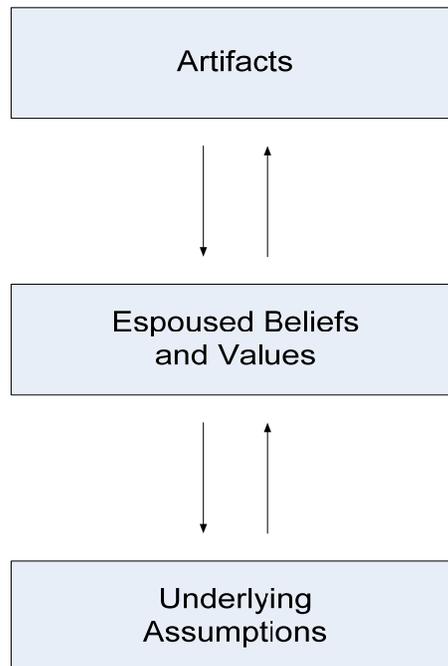
The figure above demonstrates that while there are three levels they move back and forth between one another. This is evident when analyzing the data from the Finch and Falcon Public Libraries. The ability to observe the way technology has influenced

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[15] Schein, E. H. (2003). *Organizational culture and leadership* (3rd ed.). San Francisco: Jossey-Bass, p. 26. Used with permission.

the organizational change in both of these public libraries are within the way departments

or job descriptions are laid out as well as the processes supporting them. The espoused

values and beliefs are part of the mission, objectives, and goals that each director set out.

The underlying assumptions then came out in the interviews through the analysis of the

transcripts tying it all together.

Organizational Culture and Public Libraries

In Chapter 2 culture was defined according to Schein's (2003) definition and is

restated here:

> . . . a pattern of shared basic assumptions that was learned by a group as it
> solved its problems of external adaptation and internal integration, that has
> worked well enough to be considered valid and, therefore, to be taught to
> the new member as the correct way to perceive, think, and feel in relation
> to those problems (p. 17).

The internal integration of technology into the culture of the public library has occurred

over the last 12-15 years as it relates to public access computers. According to the library

directors interviewed, the majority of the 14 public libraries visited brought in public

access computers during 1994 through 1997. Most of them started with one or a couple

public access computers then expanded from there as the Internet caught on with the

public. When the Gates Foundation began in 1997, the states that I visited were some of

the last to be given access to funding for computers so they were not in the first 10 states.

Public access computers (PACs) directly changed culture in the reference

department in 12 of the 14 libraries. Two of the public libraries have technology

departments that deal with the PACs but it did not begin that way. Both of the libraries

had reference departments that began to monitor the PACs and over time they moved to a

technology department – one due to the architecture of the building and the other because

of the director wanted to move that way.

117

As has been mentioned in Chapter 5, reference has been changing due to the introduction of electronic sources but that has not been the only change. The other change has been the transformation of reference to being what I have been calling the "computer help desk." A computer help desk situation is where the reference staff deal with all manner of questions related to the PACs like the printer is jammed, can you help me find the Internet, and I don't know how to open Word just to mention a few. While this is not what the participants of the interviews called it, it is what the reference staff is doing. Blythe Vance, the director of Hawk Public Library, explains what reference staff today does in medium sized libraries.

> . . . because in most libraries of our size it is the reference staff is who ends up with computers. We don't have the luxury of having a staff person whose job it is to deal with the public access computers. . . But our reference librarians get unhappy if they have to spend more than four hours a day out there on the reference desk. I mean really unhappy and some of it is the sheer annoyance of dealing with computer stuff. We get a lot of people in who are not able to cope with it at all and so they need a ton of help. We serve a very diverse population because of our geographic position in the area. . . So we get a lot of people in who need help. The computers need a lot of help – not all the time, but sometimes. Reference work is just a very different thing. I think they do a little less traditional reference than we used to do when we didn't have computers and all that kind of stuff entails. It is harder on them to be out there in that kind of environment than it was when we just had reference questions. So I don't think anybody could stay out there happily the way I did or get anything done. . . I wouldn't be happy out there now dealing with people who want me to show them how to buy something on eBay or search their credit report or learn how to send email to their sister. Fill out a government form. Apply for a job in janitorial services when they can barely read. . .

The changing face of reference is a cultural change in public libraries. This change in reference moved it from what is called traditional reference – questions by the patrons that are answered primarily from print sources – to a new reference model where not only are reference questions asked but also computer help desk questions. The new reference

model which incorporates the help desk questions is a culture change because what the reference staff does on a day-to-day basis has shifted.

Organizational change can encompass many different aspects of an institution. Hiring employees to work at a library is for the most part the same. The titles have not changed too much but what is encompassed in the work has. When looking for new employees most of the library directors look for employees must have computer skills. Fifteen years or so ago, whether one had computer skills really did not matter. Today it is imperative that when someone fills out an application to work at the library that they have computer skills. One of the directors put it they need people with higher skill levels to fill the positions that are available today. The hiring trends in public libraries need a people with higher skill levels and computer literacy. Justin Sedlak, director at Sandpiper Public Library, explains how he hires people.

> One thing I can tell you is that when I hire people in this town it is a lot easier because this is a [certain type] town and we get people who are very computer oriented. Where I used to live we would tell people "you know it is not so easy as you think it is to be a clerk." People think checking in and checking out books is really very easy. There are tons of computer commands that you need to know. In this library we have Horizon which is a point and click type of thing. We had classic Dynix in my other library and you had to know commands and type them in. People would say, "Yeah, yeah," and I would hire them. Then they would say "I can't deal with this, it is too much to learn. It is way more difficult than I thought it was." I told you that in the interview. It is just vastly different from what people's expectation expectations are when they come to work, as in the amount of knowledge they need to know even to do something as low down the rung on the ladder as a clerk in a library. You have to know computers so there is a lot of training involved in that.

The directors' have the ability to explain that there is a need to have computer skills for clerical positions are something they all face in public libraries. All businesses today

need to have skilled employees with computer skills even at the lower levels of the organization.

New Technologies in Public Libraries

Computer software is constantly being updated. Recently Microsoft came out with a new version of its operating software and Office Suite. I only know of one library I visited that was planning to update to Vista in the fall of 2007. One of the other libraries had already updated to Office 2007 which I found out when a transcript was returned. Again, adapting to new technology is something that hinges on funding and the time to implement it by the library. For example in the case of Microsoft, many of the libraries may decide to wait six months or a year until the majority of the bugs are fixed before updating (Kniffel, 2007). According to some research on Vista, many of the experts suggest waiting until a new machine is purchased because the old computer would have to be updated with new RAM (minimum 2 GB), processor, hard drive (Vista needs 40 GB on its own), and video card (DeJean, 2007; Gomes, 2007; Huber, 2007; Johnston, 2007; McDougall, 2007; Wildstrom, 2007). Vista does not work with all existing software that is currently out in the market like Adobe products (e.g. Acrobat, Dreamweaver) which many public libraries may run on their public access machines (McDougall, 2007). As mentioned in Kniffel's article, the big issue for libraries of all sizes is that there will be two operating systems at the library as new machines are brought in that have Microsoft Vista loaded on them. Patrons will be sitting next to each other on computers with different operating systems and interfaces. According to one article, Microsoft plans to support Windows XP through 2014 but only for free through

April 2009 (McDougall, 2007, p. 64). Again, a choice will have to be made between paying for support of Windows XP and paying to upgrade old machines.

Culturally how communication is handled at some of the libraries has changed with the adoption of email. One of the libraries, Condor Public Library, makes sure all employees have access during the day to a computer to check their email. Email is the main way the library staff communicates among themselves. The use of email allows for the staff at the library to be aware of the local culture by the receiving of email from the administration of the library. When changes occur, all staff is aware of it quickly and no one can say they were not told that something new was instituted. The only problems evident was there are some staff members who resist checking their email more than once a day but through education and training this was being addressed. When staff has easy access to email this is symbolic of the cultural change that encourage libraries to also provide public access computers for their patrons to use.

As one of the librarians told me:

> . . . technology allowing us to communicate through email and what not has really helped to make sure that other people are aware of what other people are doing. The ability to search the online catalog and being able see someone has put a hold on that. Have that be immediate, "Oh I am sorry that's on hold" because literally someone just put it on hold rather than some sort of delay or an upload or whatever which I saw on an old OPAC system. So that instant ability to know where are materials are, to know where people are because of calendars, to know which rooms are available, that is a big thing that we have been working on and actually I want to see about adding some other resources that we deal with and using Outlook to manage them. . . . so there isn't that fight over the room being booked. That ability to empower people to find the information and that is true both for the staff and the patrons.

This change has permeated the profession and society. It allows libraries and staff all over the country to stay connected and network with one another. The list servs the professional associations moderate allow staff to keep up-to-date with new developments

121

in the profession. The Internet is another way to keep up-to-date with what is going on. Technology empowers the knowledge of the patrons and staff to be able to do more than previously which had to be done manually.

Facilities, Services, and Technology

Chapter 5 deals with this issue extensively but when I originally asked the question about "what adjustments were necessary to deal with the influx of computers and other technology in public libraries"? I expected answers about people and computers generally. The perceptions of the participants regarding this question were about the physical adjustments needed to be made to the buildings because they were not constructed with technology as part of the blueprint. Interestingly, this became one of the more fascinating pieces of the research because it was not something I had considered. As I have discovered, it is very difficult to anticipate what answers will be found in qualitative research. I ended with more questions than answers at the end of the day.

As has been mentioned, the biggest road blocks encountered by the directors adapting their buildings for public access computers was the lack of electrical outlets and depending on the architectural components of their building whether or not they had some place to run telecommunications cabling (i.e. CAT5 cable). Many of the directors ended up building computer rooms in closets or other out of the way places because this was not something that was originally considered necessary when the building was constructed in the 1960s or 1970s. I was impressed by the ability of the directors to be agile and creative in finding answers on how to get the technology necessary to provide the services their patrons wanted and needed. When public access computers were originally brought into these public libraries, maybe one or two computers would be

connected to the Internet. As time progressed, in many of these towns there was no other

place for some of their patrons to get Internet access except at the library and the number

of computers expanded due to grants and other funding opportunities.

The directors who had a building that needed expansion or new buildings have a

whole different set of issues with which to deal. The city government does not always

support the idea that the public library needs more space nor do they always see the

library as something the community needs. The directors listened to their communities in

determining the needs as well. As discussed, one of the attitudes the directors came

across with city government and community was "Everybody has computers and

Google." Educating their city government and community was a role for those directors

whose duty it was to bring about the funding of a new building or expansion.

Another issue related to facilities is funding by the city government. As a caveat,

there were four public libraries that were not beholden to any city government but were

separate political subdivisions and had different issues regarding facilities. Those public

libraries whose fate is tied with a city and/or county government were locked fiscally in

step with them. Many of the library directors were able to find funding through nonprofit

Foundations or Friends groups that were able to raise tax deductible donations for the

library. The one question I kept coming back to was should the city be responsible for

funding technology like public access computers for patrons? My answer should be yes.

The library as the directors and other staff members would point out is like any other

service it provides as a city service. The library services is payable through tax dollars

everyone pays through either sales or property tax or both. Many of the libraries did not

know where the money would come from to pay for upgrades to servers, computers,

software, printers, automation software, or whatever it was they needed. As far as I was aware, there was no policy or legislation that required the cities to fund public access computers for the public library. Public access computers are a service the directors have chosen to provide to the patrons of their communities.

The libraries visited had, as mentioned previously, anywhere from six to 40 public access computers. In the libraries with fewer machines, the public access computers would be busy from the moment the library opened until it closed. One day when I arrived at a library the staff was putting up signs on the outside doors that the Internet was down. I was watching the faces of the people waiting to go in once the library was opened. I could tell that the majority of them were there to use the public access machines. None of them were too happy with the development. There are members of the public who depend upon the public access machines to conduct their business. It is imperative that city governments continue to adequately fund public libraries and not to depend upon the largesse of the Foundations, Friends, other donations, and the Gates Foundation to pay for the technology and materials that are needed.

Computers take up a considerable amount of space in public libraries. In the future, they will take up more space as the number of public access machines expand. Will the predictions of Mavis Jordan, the youth services manager at Crane Public Library, come true and will the Internet migrate mainly to cell phones and personal digital assistants (PDAs) that are affordable for everyone? I could not find any empirical research to back cell phones taking the place of computers; however, it is a possibility based upon what cellular telephone companies are currently offering (e.g. iPhones).

With the potential of computers taking up more space, does this mean building bigger libraries to house the print collection and the public access computers? Not necessarily. Public libraries are bound by their mission, vision, and objectives to provide what they believe their community wants and needs. Whether or not collection sizes stay the same is something that could be debated as e-books and other electronic formats become more familiar to patrons.

Limitations and Biases

As with any research project there are limitation and biases that are inherent in the way we look at the world. I would have to say that my first bias was that I was hesitant about using qualitative methods at all. I felt qualitative methods would limit my data and not allow me to explore all the aspects of my topic that I felt using a quantitative survey would allow. I was very wrong. I learned more about my topic, myself, public libraries, and my participants than I could have by staying safe and sound in an office and mailing out a survey. Going into the field and conducting research was fun and exciting.

I look at all situations with a strong dose of business realism in my view. I have a tendency to look at the big picture to see where things fit within the whole in any given situation. While this may not be a limitation it is a bias. In a couple of my visits to the public libraries I know I saw things very differently than the director and staff because I could immediately see how things could be improved. It is perhaps that snap judgment that we all sometimes make in an atmosphere that is unfamiliar to us and not knowing all the facts. When seeing things through a business lens when visiting public libraries, I would say nothing because saying anything would bias the participants. While I may not have agreed with everything the participants shared with me, I tried to be as unbiased as I

125

possibly could knowing that some of my bias would leak through as it is just human nature.

Using interviews with a qualitative method limits the way the data can be extrapolated to the rest of the public library population (Yin, 2003). This data will be considered valid only for the public libraries that have been involved in the study.

As with any research endeavor whether it is done through using quantitative or qualitative methods, it shows a snapshot in time and cannot be easily generalized to all situations.

Future Research

I found quickly that the journey in qualitative research is never totally complete. I asked questions of my participants and they provided answers. When listening later to the interviews, I would have more questions. This aspect of the research is just the nature of the beast when doing qualitative methods. Many times you end up having many more questions than answers.

This research project was exploratory in nature and I do not expect it to be the end of my interest in technology and its impact upon organizational change in public libraries. I saw this as a first step because my original intent was to do a mixed methods project with a survey and interviews. I quickly realized I did not know what questions to ask besides the basics of asking how many computers a library had and what kind of software was loaded. I came up with a survey that did not ask the right kinds of questions regarding organizational change. At that point, this became a qualitative project.

For future research I envision a second phase to this project and replicating this study in another part of the country perhaps the East, the South, or the West to find out if

126

the results are regional to the Midwest or common to all public libraries in the United States. Another phase will be to conduct a survey of informed questions regarding organizational change and technology in public libraries to discover more about organizational change in general and specifically. The survey would be a mixed method of qualitative and quantitative questions. Quantitative questions can box the respondent in and cause them to answer how the researcher wants them to.

In my research questions, I originally had a question about the Bill and Melinda Gates Foundation and funding of public access computers. I realized that this needed a different type of research than what I was doing. Florida State University's College of Information is actually funded to do research on the Gates Foundation's interest on public access computers (FSU, 2007). The thrust of the research is regarding Internet connectivity and public access computers (Bertot, McClure, Jaeger, & Ryan, 2006). There are not any questions regarding organizational change and technology on the questionnaires, however, in the last round FSU's researchers did some qualitative interviews to a few public libraries and released the information in their most recent report (Bertot, McClure, Jaeger & Ryan). Further research needs to be done to determine the influence of the Gates Foundation's grants organizational change on public libraries.

The changing face of reference came up time and time again in the interviews. Reference and the way it is changing were discussed by the directors as moving from a print reference collection to an electronic one. Is this really occurring? If so, where is it occurring? Is it in public libraries, school libraries, academic libraries, special libraries or in all four? What types of resources are they purchasing for their collections? Are any public libraries eliminating their print collections and moving totally to electronic

sources? If so, why? If not, why not? Is the reference department using IM? Chat?

Email reference?

The other part of reference in medium sized libraries is the aspect of the computer

help desk. A help desk is where the patrons ask all those questions regarding the

computer. It was obvious in the interviews with the directors and other staff members

that so much of what is occurring in the reference department is computer related. So

this creates whole different sets of questions. Are library and information science

education training reference librarians and staff adequately to handle help desk duties?

Do the staff have the computer skills to deal with the types of questions they are being

asked? Have the reference librarians and other staff been trained on the different software

and databases that are available at their library? If they have not been trained, why not?

What happens if the staff does not have the answer? Is there someone else the staff can

refer the question to at the library? Is there training that occurs at the library or that is

outsourced by the library?

When I began writing my proposal for the topic approval for my dissertation one

of things I was looking for was a comprehensive book on the history of computers in

public libraries. I quickly found out there was not one. I emailed Professor Wayne

Wiegand to ask him if he knew of anyone writing such a history.[16] Professor Wiegand

told me no but I should write one myself. One of the future research projects should be a

history of computers in public libraries before the people that were involved in the first

round of computers are gone. We need to understand where we have been so as we move

forward we do not repeat the mistakes of the past.

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[16] W. Wiegand, personal communication, January 2007.

Facilities were a large part of my study. This aspect of my dissertation was not something I expected. The 14 public libraries I visited as mentioned previously in chapter 5 are in buildings that were built between 1900 and 2000. Each time frame has different issues to deal with as far as infrastructure improvements. Those public libraries that have the ability to either build a new building or expand their existing facility have started down that road. The directors showed creativeness in dealing with buildings that were not built for technology. The advent of wireless will, hopefully, make technology a little easier for some of them to handle in their buildings. The issue with electricity will not be as easy to solve. The inadequate level of electrical outlets and panels is something the majority of them have had to deal with at one time or another. A future research project would be to find out how widespread this issue and is there any way of finding a solution to the problem.

One of the people I interviewed was a youth services manager who was beginning to see marked changes in the children that were coming to her public library. She has kids as young as 18 months and 3 years of age who use the public access computers to check email. I know some adults who have difficulty dealing with technology. We talked at length about the impact of No Child Left Behind and how it has changed the way kids are taught. Kids are taught to pass a test. Are we as a profession ready for the changes that are beginning to occur in children's and youth services? Do we even know these changes are coming? Has there been any research? Are there cognitive issues with the way kids are being taught reading? If not, there should be some research to look at the way these kids are cognitively developing. Has the way children are taught in school

because of No Child Left Behind made them informational readers? I do not know but it something that we need to think about and research.

If the ways kids are being taught in school today are creating adults who in the future will not be readers for entertainment, how will that impact the adult fiction and nonfiction section in future public libraries? Will informational readers change the way the adults are served in the public library in the future as these readers transition? Will there be fewer books in the public library? What will the collections in the future look like?

While looking at the public access computers and listening to the participants tell me about the services they provided in their libraries, I kept wondering about the computer services that were on the computers. Are public libraries providing the right services? What are patrons accessing? Do patrons need additional assistance? If the patrons need additional services, what do they need? Do most libraries have the basic government documents bookmarked for their patrons and users of public access computers? What do our patrons want as far as computer services in the public library? Do we have the software programs loaded on the public access computers the patrons want to use? Are there enough computer training classes? Are we targeting those patrons who are afraid of computers? If not, why not?

Radio frequency identification tags or RFID as it is called in the literature is the latest innovation in automating libraries. Three of the library directors talked about the trend and if they were planning to convert to RFID. Of the libraries I spoke to, as mentioned above, only one has a project on the books. One is thinking about moving to RFID and the other is not sure. As one of the directors I interviewed mentioned, RFID is

something that will create a public library that is more self service for patrons. Have we even asked our patrons if that is something they want? Do we care what our patrons want because this is going to theoretically save money? Will it save money? Is there any research that proves that RFID will save money? Is it going to solve all the problems? Is more self service where libraries should be going?

These questions are by no means all the questions I have from the research project I conducted. They are just the ones that stay at the front of my mind. I do not plan to answer all these questions but hopefully someone in the future will choose to do some research on these questions as technology in public libraries becomes more and more important. As one person told me, we cannot survive without our computers nor would I want to.

Conclusion

The impact of technology on organizational change in public libraries was a long and winding road to quote an old Beatles[17] song. Public access computers have changed the way certain departments in the public library function like reference and circulation. The advent of automation introduced computers to public libraries so that everyone working in the library uses one. Technology is here to stay but it will change as it does every 18 months or so. How much public libraries decide to change is up to them when technology shifts.

Technology in the form of public access computers has indirectly impacted the public library's organizational structure. The reference department in some of the libraries I visited was responsible for the public access computers. A couple of the

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[17] Lennon, J., & McCartney, P. (1970). Long and Winding Road. [The Beatles] On *Let it Be* [record]. New York: Capitol.

131

libraries have technology departments that handle all things related to the computers and the public. Who manages the computers depends in large part on the funding mechanisms in place at the library, the management style of the particular director, and the facility the library is housed in. The ability to provide patron access to the Internet and information is seen by the directors and staff interviewed as a necessary part of their jobs.

City government has a role in the public library in the majority of the libraries. The city provides the funding or budget for the library and the services it provides. While there may be an appointed Board of Trustees, the city influences the library operations by the amount of money it gives it to operate. Depending upon the rapport and relationship between the city leaders and the director an argument could be made that this determines the level of the budget as one director has found out.

The libraries that were independent political subdivisions and were not involved with a city appeared to have an easier time managing their budgets. The funding for those libraries was from a direct taxing mechanism. Those libraries had more freedom to set their budgets and spend the money they needed on the services the libraries believed their patrons desired.

The facilities where libraries were housed created a fascinating story to tell. While many of the buildings were beautiful and fun to be in they were a nightmare to manage. Electricity was the scarcest of commodity in most of the buildings. The directors had to figure out how to run cables when there was no obvious place (i.e. drop ceilings) to put them made it a challenge to figure out where to place the public access

computers. Wireless technology created easy access to the network for the patron but added the obstacle in some buildings of where to plug in the laptop.

Looking at the different groups of the 14 libraries it is obvious the each group has the artifacts, espoused beliefs and values and underlying assumptions that Schein (2003) talks about. Each library had thousands of pages of documents that showed their processes and organizational structures over time. For this dissertation I did not use the majority of them but I have thousands of pages of documents from the libraries. I was offered Board minutes from the 1800s until the present in some of the libraries.

The espoused beliefs and values in these libraries came from the director. The director set the tone of the library. Most of the libraries had approximately 15 to 20 employees and while there were smaller subcultures within those groups by department the library as a whole was one large group. The tone was definitely set from each director's management style and how they treated their people.

This research project actually only touches a small part of organizational culture in public libraries and how these libraries deal with change. Technology and change goes hand in hand. Change is a part of the culture when technology is involved because technology is always evolving. As technology continues to change it will be interesting to watch how the public library continues to progress.

APPENDIX A

REPRESENTATIVE CODING SCHEMA

City

       City doesn't pay for materials, computers, processing materials

"The basic . . . what the city's paying . . . salaries, benefits. That's the big chunk.
Utilities in the building, phone service, internet service." (*Edward Langford*, Wren
Public Library (PL))

       City manager style government

"The city manager is my boss and with an advisory board you will find that the minutes
are a lot different from a governing board." (*Justin Sedlak*, Sandpiper PL)

       Coin-op computers

"When we first started having computers for the public to access Internet, I decided to
purchase more of those coin ops and attach them to the computers. It's really worked well
for us . . ." (*Rupert Loomis*, Heron PL)

       Customer service focus

"I call them and you can't . . . and one of the mayor's big push is his staff . . . is customer
service. That's great, but when you've been on a desk for 9 hours and its five o'clock
and someone's pushing on your last nerve, I think it's kind of natural when you're not at
your best." (*Edward Langford*, Wren PL)

       Friends pay for materials

"No books, no materials, nothing online. They don't keep up with hardware or . . . well,
when I came here we had a lot of Windows 2000 machines. Those are all XP now so it's
all on one platform. The Foundation paid for that. The Friends of the Library have
bought every newspaper and magazine that's come in here for 3 years. There's another
local foundation that's kind of education arts, those types of things. They've also been
very generous helping us build the collection back. They've even been purchasing some
of the processing materials that you need. You know, stickers and tape, tattle tape and all
that stuff." (*Edward Langford*, Wren PL)

       Funding

"About how expensive the library is. It just kills me. It's the best bargain in the state.
It's better though. We have a mayor who at least has a clue." (*Edward Langford*, Wren
PL)

"I find the money for it." (*Justin Sedlak*, Sandpiper PL)

"It has cost a lot of money but it's not overwhelming. One thing this library did that I'm glad that I had for foresight to do was to work with a local internet provider. Back in the early '90s a man, an attorney, wanted to start providing internet to the community. He came to me. He wanted to have a space that he could access 24 hours a day that was close to the telephone company to house all of his internet equipment. And at the time he told me that the space requirement would be about the size of a breadbox. And so he said "If you provide me with this space for my internet equipment, I'll give you and the city free internet access." And I said okay. And I signed a contract. We have free internet access. It doesn't cost us a thing for that. All this money we get from our client lab, there's no cost in that. Every city computer has free internet access. The county courthouse now has free internet access. So all of this is being served from that first little contract, that first conversation and the company's very happy about it." (*Rupert Loomis*, Heron PL)

"Money to keep the computers up-to-date." (*Jenny Lind*, Owl PL)

"See that we have the money and the resources to implement our public access computers." (*Lorraine Mallory*, Owl PL)

". . . cost has been a big factor. . . . money has been key because we constantly need to upgrade the technology . . ." (*Lorraine Mallory*, Owl PL)

Gates Computers

"The problem with Gates is they're locked down, which is fine, but they're not locked down the way we want them locked down. . . There's something in the software that does what he's doing to keep people from going, destroying the whole way its set up, but they don't work well on the network with the non Gates ones somehow. I don't know enough about it. I just know that there's always an issue." (*Edward Langford*, Wren PL)

Lack of city involvement in technology

"The city hasn't become involved. It isn't that they haven't supported—they just haven't gotten there yet. The council members didn't have lap tops until now. The Library is updating City information on a very rudimentary site." (*Lorraine Mallory*, Owl PL)

Lack of trust and funding

"Yeah, that's why we've got the smallest budget of any library our size in the state. We just got the annual survey book . . . population, I think we're like about 7th or 8th out of this 10 group from the bottom . . . you know biggest one. We're dead last in funding. We're dead last in FTE's." (*Edward Langford*, Wren PL)

Library way ahead of the rest of the area

"That just goes to show you maybe what we are up against. No coordinated purchase of our computers. We just go ahead on our own. We aren't going to wait to order. It would be more advantageous if we ordered 50 to 100 at one time. I think part of it is because we are an administrative board and so we have all operated very separately from the city which has its positives and negatives. It means we can go ahead do what we darn well please. We have flexibility and we have the brains to do it and we don't have to wait around for those computers to be delivered." (*Lorraine Mallory*, Owl PL)

Management by Objectives

"Instead, I've been letting the board evaluate my personnel evaluation objectives each year. We use a yearly goals statement to guide us." (*Rupert Loomis*, Heron PL)

More animosity between city and library

"I've got a will over here. She died and she left the money to the library. Well, our code is kind of funny. In the code it says that anything that is donated to the city or an entity of the city has to go to the city and they invest it and they do whatever. But there's also a part in there that says any monies that come to the library are under the control of the library board . . . we have this [amount of money], we can do what we want with it. That's why there's an issue. If it was [an amount of money], nobody would care. They saw [an amount of money] and thought "we don't have to put any money in the library for 2 years. That will cover expenses for 2 years." (*Edward Langford*, Wren PL)

More money, space, staff – due to technology this is needed

"Here, we need more money, we need more space, we need more staff to give them one-on-one attention. At this point, we have to say "I can get you on the computer, I can show you how to get on the internet, I can explain how to change the URL, I cannot sit here and walk you through how to do something." We have had to say it is not going to happen because we don't have staff to do one-on-one like that. I am not even sure we would want to just because that one staff member would never do anything else all day." (*Jenny Lind*, Owl PL)

No city funding for technology

"The Friends bought the SAM software that we're using to get people to check computers, self check those." (*Edward Langford*, Wren PL)

No IT on staff; Contracts out

"Not on staff, no. We have a company here in town that gave us a good hourly rate. The guy that's been working with us . . . he actually came about the same time as I did . . . he

completely rebuilt our network and things start working. It's much better." (*Edward Langford*, Wren PL)

Patrons not happy about coin op Public Access Computers (PACs)

"Every now and then a patron will come in who's just scandalized because they can go to a small library 20 miles away and get free access." (*Rupert Loomis*, Heron PL)

PR and advertising

"PR and advertising is really important to the library." (*Justin Sedlak*, Sandpiper PL)

Rapport between city management structure and library

"And I think the animosity was . . . I mean I've been in places where libraries are ignored.   But this is the first place I've been where there was an antagonistic relationship between the library board and the city council. . . There's still not a lot of trust. That comes with time, I hope." (*Edward Langford*, Wren PL)

Rapport with city and county

"Well, I think neither the city nor county pay any attention. They don't care. Unfortunately I think a public library is a service that the city thinks it's obligated to provide, but it wants to do it with as little expenditures and resources as possible. It will always be a battle. Five years ago we had a real battle with the county. They wanted to pull away and not support the bookmobile. They were actually were stupid enough to get an item on the ballot to eliminate support for library service. We did a lot of work, particularly me, and the vote came in [number percent] in favor. [number percent]. And so now the county knows they're obligated to continue to provide library service." (*Rupert Loomis*, Heron PL)

Server

". . . the Foundation bought the server. And I need my server more than my computers. I've got one in there that we . . . I scoured the internet and finally found a rebuilt RAID to go in it, so when one of those goes, that one is going out." (*Edward Langford*, Wren PL)

State Library issue; Revenue

"I haven't started dickering with the [state library], but I probably could get a grant from them to pay for half the cost of it, but the city's not going to be very happy to lose that [dollar amount] a year." (*Rupert Loomis*, Heron PL)

Technology

"So it is interesting when you face peoples' ideas of what technology is, and whether or not you need a library even with technology. It is an educating process, really." (*Justin Sedlak*, Sandpiper PL)

"Especially when the batteries in those automatic faucets die. People will come out and go "the bathroom sink is just running and . . ." Well, the batteries died. It doesn't know to turn it off." (*Edward Langford*, Wren PL)

"No, maybe in your circle of friends that have enough money to own computers that is true but a lot of people still don't. Or they have computers and they don't know how to use them so they are here anyway even though they have a computer sitting at home. [Name], a library consultant, was working in the [City] area, one of the wealthiest counties in the country and they were wondering if [number] computers were enough. Every single person in that community could have owned [number] computers at home. But they were using them at the library and they couldn't get enough of them. They wanted personal contact, personal help, just being around other people, you know." (*Justin Sedlak*, Sandpiper PL)

"We are looking in the future the next year or two at least trying to get something called live network which would replace our filtering system with something similar but it also works as a firewall and will give us some really good reports and data on just how much of our bandwidth are we using and when are our peak periods and when are we ready to go to a T3 instead of a T1 and it also does the spam filtering as well. It will replace several things that we are doing in bits and pieces now plus give us some more information besides. There is always something out there that we need to be aware of." (*Ana Miller*, Owl PL)

Organizational Change

> *Biggest impact to our Public Library culture*

"Probably the hurry up and wait syndrome." (*Jenny Lind*, Owl PL)

> *Change*

"But then other things . . . the catalog, you know, you get updates all the time. Most of them don't affect, but every once and a while one of them will. "Why did they change this?" So you get, you know . . . these guys have been through, I think all librarians for that matter have been through enough change in the last 10 or 15 years that it's just "okay, here we go again. Everything's up in the air, we're going to start over." I think you learn to deal with it when you've changing as much as we have. I think is in all professions. Computers have come in and you just don't do business the way you did 15 or 20 years ago. You can't do business the way you did." (*Edward Langford*, Wren PL)

Communication through email

". . . on the other hand how is our organizational structure changed we do a lot better and more communicating because we do so much internal email and forwarding. We are communicating all day long and that has meant that our organization is much more communicative. We don't need so many meetings. We just communicate according to the kind of information needed. We still try to do – we don't email everything to everybody – I like to maintain the need to know. I am not going to tell all the staff to have them worry about issues that don't immediately affect them. We have very much of an organizational structure based on a need to know and responsibilities." (*Lorraine Mallory*, Owl PL)

"Just email alone. You don't have to go find so and so and talk to them and then go find so and so and talk to them or call a meeting or whatever because you can shoot off two or three emails and it is done." (*Ana Miller*, Owl PL)

Cultural change

"Quite frankly a lot of our service revolves around public access computers and educating people on how to use them,. So the culture has changed from one of quiet reading room, very intellectual I would say, a great deal of emphasis on non-fiction and reference to being one of assisting people in communication so that they can communicate with their peers and reach information outside the library but particularly communication." (*Lorraine Mallory*, Owl PL)

"I think there is probably more communication although the quality may not be as good in terms of emails fly back and forth between people who are two feet away. I saw that at my job at [other library] and I see that here." (*Jenny Lind*, Owl PL)

Dependent on technology

"We can't function any more without it. I guess that's how it has impacted. We can't catalog without it. We can't check out books without. We can't look up materials without it. So the whole culture has been changed because of it. We just can't do anything anymore without information technology." (*Lorraine Mallory*, Owl PL)

Different patrons

"It's the Hispanics; a lot of Hispanics use the computer lab. Some high school students also use it." (*Rupert Loomis*, Heron PL)

Director updates web site

"No, I enter data. We have a company that I think it's based in [a state] and they do city websites. I used to have one that was on our server and we maintained it, but I . . . this

was just better and it's cookie cutter and it looks it, but it does so much more than what I could ever design." (*Edward Langford*, Wren PL)

Hire employees with computer orientation

"One thing I can tell you is that when I hire people in this town it is a lot easier because this is a [certain type] town and we get people who are very computer oriented." (*Justin Sedlak*, Sandpiper PL)

Interaction of technology

"Other than constant being aware of what's out there now, how things are working. Does this play nicely with this, there is a lot of does this play nicely with this. [Dual platform with Mac/PCs.]" (*Ana Miller*, Owl PL)

Introduce community to Internet and PACs

"So, my role has also been to introduce the community to the internet and public access computers . . ." (*Lorraine Mallory*, Owl PL)

Larger use of library than before

"It has just changed the method by which the car repair men get their information. The library is definitely home to a new group of people of all ages who can't afford a computer at home and who come in here just for the purpose of using computers; I think it has translated into a larger use of the public library. Now whether it has translated into more for support for the library to continue its technological focus, I don't know. The people who come here aren't generally the people who are going to be able to support the library either economically nor can they articulate the goals of the library [city] is in some ways a very divided society. We have a much more working class community than we have had." (*Lorraine Mallory*, Owl PL)

Not enough space

"It is only now that we don't have enough. It has hindered in that we have never been able to have a computer room as such where we do our instruction or where people are removed from the other activity in the Library. Quite frankly I think that time has come and gone and if I were . . . I want pods of computers out on the floor. Computers have been so well integrated onto the fabric of the library that, oh maybe other than for teaching, I don't want all the computers in one location. I think they need to be out on the floor and I think that is direction that it is going. Not to segregate them, but to integrate them into the whole collection. That is why we still call it the reference area because that is where we would have our reference books so if people want to, you know, be near the reference area we had hoped that people would be accessing databases a lot more than they are over there. Reference databases." (*Lorraine Mallory*, Owl PL)

Outside networks

"Being that much more connected to outside sources like other libraries, vendors is certainly a big change." (*Jenny Lind*, Owl PL)

Patrons

"I think people want to be more self sufficient. I think they want to come in and take care of their business and not necessarily interact with the staff the way they used to. Most of the people that will stop and visit with you and just talk about whatever's going on or older people rather than younger ones. They're in, they're out and if they don't have to deal with us, that's fine with them. And I think that's been the major change." (*Edward Langford*, Wren PL)

"Now there isn't so much patron interest in searching for database information. Its where's the book, where's the My Space computer, where's the . . . There is a lot more "I want it now" than I remember back then. There is a lot more "what do you mean you are going to charge me" than I remember back then." (*Jenny Lind*, Owl Public Library)

Resistance to change

"Well I've had . . . years ago some patrons who just wouldn't use the computer. They probably didn't know how to type. And when we first automated, my head of circulation retired. . . Oh no, I don't think there's been any resistance, I think people adapted to it. We're finding when we have an opportunity to hire an employee, a younger employee, who's grown up with computers is much better employee." (*Rupert Loomis*, Heron PL)

". . . one of my first weeks here I had a patron confront me with "are you the one in charge of this catalog, well it stinks. I can't find this, I can't find that" so I said "I don't know how to do that either but I will learn and I'll show you." I have actually won her over now because I was able to do something she wanted, putting authors in our new book list that shows up in our catalog. She didn't want just titles; she wanted authors so I found out how to do that. We are slowly transitioning our cataloging from the (Connexion) browser to the client." (*Jenny Lind*, Owl PL)

"It could be, or just that everybody realizes we have two new sets of eyes and we are seeing it different from "its been 20 years, it works." I have changed my approach in some ways to say "I realize you have been doing this 20 years - let me tell you why I see that this needs to happen and what I think you will get out of it" rather than "why aren't you doing this."" (*Jenny Lind*, Owl PL)

"A woman who wanted to scale down her work to a 30 hour position but the 30 hour position meant that she would be one of the people who helped with the computers and she did not want to do that. She wanted to bring her interlibrary loan work along with her and we said absolutely not. You are comfortable with interlibrary loan and that is this

full time job but not the interlibrary loan is not a full time job but that is this job." (*Lorraine Mallory*, Owl PL)

"There is a lot of plain just getting staff acclimated, you know, I don't care if that is the way you have always done it that is the way we are doing it now. There were people walking around carrying their floppies five years ago when I started and it took me probably 18 months at least to get them to get rid of the floppies and to save to the network drive. We had . . . so we had no backup on their information and it took a long time to get people because they felt they had no control over it if they didn't have the floppy in their hand kind of thing." (*Ana Miller*, Owl PL)

"I had one staff member that had two computers on her desk because when she started they had to have a separate computer for cataloging because it was a straight into OCLC that was the way she had always done it and even though Windows is multitasking she felt more comfortable having two computers. One for cataloging and one for everything else she did. So it took a little bit and finally I said when we were doing some changes I said well you know you will have to work in here for a while until we get this straightened around out here and I can only have you use one computer while you are out here. I will show you how to go between them but then once you get back to your desk then whatever. Of course once she started using one computer she found out it was so much easier and she didn't have to worry about other stuff and yadda, yadda, yadda. So then it was fine. Sometimes you have to go around the back door to do some convincing. Sometimes you have to harass them into it. Sometimes you have to back off and say okay we will wait until next week and go at it again depending on who it is and depending on what the issue is." (*Ana Miller*, Owl PL)

"I had a staff member tell me one time that I wish we didn't have any computers at all and we just go back and then we wouldn't need so many people. I said no you would need twice as many people and they would all be in the backroom typing cards because she thinks of computers she doesn't think of the ILS, she is thinking of email and internet." (*Ana Miller*, Owl PL)

"People think checking in and checking out books is very easy. There are tons of computer commands that you need to know. In this library we have Horizon which is a point and click type of thing. We had classic Dynix in my other library and you had to know commands and type them in. People would say, yeah, yeah, and I would hire them. Then they would say "I can't deal with this, it is too much to learn. It is way more difficult than I thought it was." I told you that in the interview. It is just vastly different from what people's expectations are when they come to work, as in the amount of knowledge they need to know even to do something as low down the rung on the ladder as a clerk in a library. You have to know computers so there is a lot of training involved in that." (*Justin Sedlak*, Sandpiper PL)

"Some resistance from funding sources, of course, because it was very expensive to implement some of those things. They came around. In this city, people are very savvy so we don't have much problem with them understanding those kinds of things but some

other cities where I have worked it has been more difficult." (*Justin Sedlak*, Sandpiper PL)

"Right now we are meeting with some resistance as we move forward particularly with some people who have been here a long time and particularly in the way that the new Assistant Director handles things. This Assistant Director/Systems Manager she is very capable of taking us where we need to go. We had a systems manager that was not capable of doing that, so we had a lot of stasis for a long time and now we have some resistance of moving to the client to catalog and we have had instruction, we have had the [state library] trainer come up to instruct on how easy it was going to be to move to the client, and resistance – real resistance has developed in taking responsibility for learning new things." (*Lorraine Mallory*, Owl PL)

"There was some from the public at first when they thought the library was basically wasting money by having computers. Some of the public, you know. It is amazing how some of those people have come around and those people are some of the biggest "you gotta have it" people now." (*Justin Sedlak*, Sandpiper PL)

". . . the resistance to change was from staff members who weren't technology savvy. So there was just that learning curve and certainly for some of the older ones it was very difficult for them to learn something new and they didn't want to." (*Justin Sedlak*, Sandpiper PL)

Speed of delivery of information

"The speed with which you can deliver that information and the role of the individual in accessing their own information be it good or bad." (*Lorraine Mallory*, Owl PL)

Staffing

"I don't know how we're doing this with 10 people. [administrative assistant] doesn't work the desk and [maintenance] doesn't work the desk." (*Edward Langford*, Wren PL)

"Well obviously we didn't have IT in our libraries before there were computers so there are people that work in the library that we didn't need before." (*Justin Sedlak*, Sandpiper PL)

"We need somebody fulltime for marketing and somebody fulltime to manage our web site." (*Lorraine Mallory*, Owl PL)

Stakeholder support

". . . I know I was just at a Chamber of Commerce welcome party for the administrator and one of the realtors in the area when he found out I was from the library he was just thrilled that somebody from the library was at a Chamber event and he says he always recommends [the city] as a great community because of the library and other things. So

he clearly sees us as useful. I know the city council president or chair is a big library supporter. I know the library board is 150% behind what we are doing, how we do it. The library board president is a former undergraduate classmate of mine. We have gotten a lot of support from the school media specialists, from local groups that are looking for, or we approached them for, donations and they are happy to do it." (*Jenny Lind*, Owl PL)

Timing software on computers

"We also have interesting encounters with people because we have Envisionware which monitors the amount of time they are on the computer and they have to use their card. They think we are now in league with the FBI watching their every move on the computer. No, no we are the good guys." (*Justin Sedlak*, Sandpiper PL)

Training

"now all of them save to the network. Yeah and it is scary. Those types of things were training issues." (*Ana Miller*, Owl PL)

". . . we are really big on instead of looking it up for them at the staff terminal walking over and showing them how to use that, to make it as easy as possible." (*Jenny Lind*, Owl PL)

"So we have, as recently as this past year, had classes for senior citizens. The first thing that we teach them is the catalog. How to walk up to a catalog station and not be afraid of it and just start searching. We have done very simple searches to try and overcome their apprehension. I think that this is the most basic thing. If you can't go into a library and search eventually for a title be it a romance title or whatever, then you are stuck." (*Lorraine Mallory*, Owl PL)

Value of libraries

"I don't think they value libraries the way we used to, but then there are some who do. We have our regulars who thank us for everything we do." (*Jenny Lind*, Owl PL)

Vision

"I think [the director] is very dedicated to giving the public what they want, what they need. I think she embraces technology wholeheartedly." (*Ana Miller*, Owl PL)

"My vision is that, and I think the corporate vision would agree with this, libraries are going to become more community centered oriented, the living room of the community, people can do a lot of things online and we will continue to do that, but the building will still be needed. So the vision is that people need face time so it is going to become more oriented towards living room type spaces, community type spaces, hanging out at the library, having community meetings. That type of thing is what the building itself will be used for." (*Justin Sedlak*, Sandpiper PL)

Services

    Adult programming

"Programming I think will be very important. We have never done a lot of adult programming but I think as a cultural for this kind of community a cultural and intellectual center I think we can do that but I think we are going to have to team up more and more. We are going to have to get other partners in order to do this." (*Lorraine Mallory*, Owl PL)

    Automation

"We had a DYNIX system here for 7 years or so, but it was getting so expensive." (*Rupert Loomis*, Heron PL)

"We have had to change the infrastructure in that long ago in 1992 when we got our first integrated library system Dynix was requiring us to build a computer room." (*Lorraine Mallory*, Owl PL)

"Assistant director. She is the systems manager and decides the policy things and handles all the Sirsi Dynix." (*Lorraine Mallory*, Owl PL)

"And then we got Booktrack, which was . . . it's turned into Athena and then something else. You know, you bar coded the person, you bar coded the book and that's all it did was keep those matched up, but we thought it was fabulous. No more cards to dig through. So, I started at the beginning with libraries and then I've gone from that all the way up . . . we have Horizon here, which is pretty much a total system." (*Edward Langford*, Wren PL)

"The newer generations of people coming into the library don't remember a time when we weren't automated and expect things to be a certain way. I think we are able to offer a lot more to our public with automation." (*Justin Sedlak*, Sandpiper PL)

"People that make the library's automation run. Our catalogers also have to be people who know about the software that runs the automated software." (*Justin Sedlak*, Sandpiper PL)

    Changed reference work

"We have increased our materials allocation just in terms of databases, you know, in terms of changing from a paper reference collection to a database collection and trying to instruct people on how to get online and how to use the databases, how to access them remotely." (*Lorraine Mallory*, Owl PL)

". . . as soon as the OPAC was installed, we noticed a decline. . . . So that today we are doing very little reference work, very little." (*Rupert Loomis*, Heron PL)

"For reference I think we're going to be buying more and more proprietary databases and making them available to anybody who wants to get on our website. So, I think we're going to be like a middleman for information. The patron will come to us and then go out, go to the information. And we'll be spending more of our resources on that. Right now I have the EBSCO Car Repair Manual service. I have the [State Library] databases which includes the Wilson Index and other things. And I have an antique buyers/sellers database. But none of them are getting that much use." (*Rupert Loomis*, Heron PL)

Charge for ILL postage

"Now we charge postage here. "That's outrageous."" (*Jenny Lind*, Owl PL)

Charging for value added services

"We need to charge people for the TIFF files. We aren't going to give away our TIFF files that we have so carefully done. They are not free so we have had some resistance on charging people for certain services that we are not willing to offer for free any more." (*Lorraine Mallory*, Owl PL)

Community center and commons

"Providing all the media for people to learn, for recreational use, I see and I want our community to still look to the library to be the community hub. I think there will be a lot more use of the library as a commons. I am very interested in the commons idea." (*Lorraine Mallory*, Owl PL)

"This library has been a cultural center as well as a community center." (*Rupert Loomis*, Heron PL)

Community infrastructure – Dial up vs. High speed internet access

"But one of our problems is this community isn't saturated with high speed internet. A lot of people have the old dialup internet. So if we do . . . I think for awhile when we go to Overdrive or whatever we go to, we'll have to have a station here that will download into the MP3s or whatever." (*Rupert Loomis*, Heron PL)

Computer sign in/sign out

"We just put in a computer system to sign in and out of computers for the public and as soon as I mentioned that, "let's get that now. Can you put it in tomorrow?"" (*Edward Langford*, Wren PL)

Consortium

"We had an opportunity to form a consortium. So, the [city] Public Library, the [Community College] and this library started a consortium. The [city] Public Library has the server and the community college library and my library access the computer through internet. We've been doing that for 4 or 5 years now and that works well." (*Rupert Loomis*, Heron PL)

Constantly upgrading

"Now we try to have a computer life cycle management system, so that we replace a quarter of our total computers every year and we need them you know. They are always going on the blink and we are rearranging them from most highly used to less critical use. Let's see, money has been key because we constantly need to upgrade the technology and we can't go faster than the community that's a no-no, and I have been very careful about that – trying not to get ahead of what the community needs or wants or can absorb learning." (*Lorraine Mallory*, Owl PL)

Don't want to bother librarians

"People don't want to bother you, you look busy, or they don't want to feel like they're wasting your time." (*Edward Langford*, Wren PL)

Downloadable books and DVDs

"I think within a year's time we're going to have downloadable books. We're looking at "Overdrive," in the state. That's like recorded books that you can download online. I can envision within 5 years, it'll probably be 5 years; we'll abandon our DVD collection and just have downloadable video and books." (*Rupert Loomis*, Heron PL)

Drop in circulation of books

". . . since '92 we have had a decline in circulation." (*Rupert Loomis*, Heron PL)

Evaluation of resources

"There's the whole issue of trying to help people evaluate what they're finding now. That there's a difference between something .gov and something Uncle Joes.com. You know you've got to be careful about what you read and believe. Some people weed through all of it to see what it is they can actually use and trust." (*Edward Langford*, Wren PL)

Expectations of patrons

"People expect computers when they come into a library now and they EXPECT the library to offer online sources." (*Justin Sedlak*, Sandpiper PL)

Facilitator in access services

"They are very interested in communication and our library culture has gone from really being a check out or I guess from being commodities driven, you know, and dealing with books, magazines, discs, media kits, to being a facilitator in access services." (*Lorraine Mallory*, Owl PL)

Facilities

". . . we still use our CAT5 – our computers are hard-wired. We don't have a wireless connection to our system. Other than going out and coming back in." (*Lorraine Mallory*, Owl PL)

"The other thing that has saved us is our drop ceiling so all of our cabling has gone down through the pillars or column supports, the hollow pillars, but it has delayed us in purchasing additional computers because we chose not to put conduit in the concrete floor but simply to use our pillars of which there are a number." (*Lorraine Mallory*, Owl PL)

"One of the things when they built the building, they knew that technology was the way we were going so they made room for that expansion and we've got . . . we don't have them in here, but all over the library there's plugs and . . . Two of those are electrical sockets and two of those are PC. Of course everything now will go wireless. We won't need all those PC connections anymore, but that's still coming." (*Edward Langford*, Wren PL)

"The idea people had at first when they started automating was, well, with computers you're going to need smaller buildings. Books are things, but computers are also things. Things that take up a lot more space than a book. You have to have the computer, you have to have a desk and a chair, space around the chair because people have to pull in their chair and push out their chair to sit and so that actually takes a lot more space than when we didn't have computers." (*Justin Sedlak*, Sandpiper PL)

"When I first came here I faced something where we were trying to get money for the building addition and it hadn't been gone about in a very positive way before I came here. There were some people on the council said, "what do you need a building for if everyone has Google at home." If everyone has the internet they can find whatever they want. They had ideas. They were just not informed. I mean, basically my job was to inform them and let them know that Google doesn't answer everything in the world unless your needs are very small. My strategy was to make a power point and I could even share the power point with you and let you have it. I took what I was hearing through the grapevine, those exact things that I was hearing, put them into the form of questions and answers on my power point and answered them directly." (*Justin Sedlak*, Sandpiper PL)

"When they built this building in 1970 they had a lot of foresight for our cabling at the circ desk if you can believe that and under the ground cabling clear over to the reference desk for plugs and computers." (*Lorraine Mallory*, Owl PL)

"And I learned that the Head Librarian or Director is in charge of landscaping . . ." (*Edward Langford*, Wren PL)

"Over the years we have cabled more and more ports in order to directly connect our box with all parts of the library." (*Lorraine Mallory*, Owl PL)

Filtering

"This way the parents can do an informed consent and they can make the decision [about My Space]. It is their decision it is not our decision but by the same token we don't want to open it wide open for everybody. It is just too dangerous. We've had to look at make some changes on how we filter things. What we use to filter things." (*Ana Miller*, Owl PL)

Google

"I think it's the Google mentality. We'll often be working with a student and they get on the Wilson Index and we tell them that they can either email what they find home or they can print it out or they can go home and we can give them a card that gives them access to it and quite often they'll take the card and probably do their research at home." (*Rupert Loomis*, Heron PL)

"Students rely on Google. And they will Google something and maybe have a little bit of a problem with it and then ask us for help." (*Rupert Loomis*, Heron PL)

Help desk

". . . working with people who need help on the computer or fixing a computer problem or a printer problem. So the nature of reference changed dramatically." (*Rupert Loomis*, Heron PL)

"We do quite a bit of helping patrons instructional side, how to do this or that. We have people who don't understand." (*Ana Miller*, Owl PL)

". . . we've tried to make sure that everybody, especially on the floor, knows how everything works, at least enough to help somebody along and maybe get them to the point where they don't have to send everybody to [certain staff] . . ." (*Edward Langford*, Wren PL)

"Initially when we implemented the Internet and public access computers did have two 30 hour people who were hired specifically for their computer skills and they took care of

all of the technical problems of which we had many in the beginning." (*Lorraine Mallory*, Owl PL)

Implementation for PACs

". . . my role has been to plan for their implementation and see that it gets done." (*Lorraine Mallory*, Owl PL)

Increase in people in the library due to computers

"The public is not using library materials nearly as much. Even though we do not have the readership we once had, we are recording an all time high in the number of patrons who use the library. A good many of them just come in the door, go right to the computer lab, use the computer lab and walk out." (*Rupert Loomis*, Heron PL)

Increased circulation

"Our circulation is through the roof and some people are surprised by that." (*Justin Sedlak*, Sandpiper PL)

Literacy center

"I also see besides being a cultural and a commons center I see us as a family literacy center. I think it is moving much back that way. Not necessarily that we have a program to teach adults to read but I think to be a multicultural center too. We need to lead the way in multiculturalism and diversity and integrating people into our community. I think we still are the first place where new people to the community, new people to the country come to . . . we see that with the children all the time. We feel very pleased with the way that we can assist these children in becoming bilingual and learning about the library." (*Lorraine Mallory*, Owl PL)

". . . on the second floor we have a really large literacy program that I started 25 years ago or so. We worked primarily with Hispanics." (*Rupert Loomis*, Heron PL)

Macs

"We do have one Mac that we will be replacing next year." (*Ana Miller*, Owl PL)

Meeting Place

"We have always had, we have always been the socially open place that people have always come to for answers to questions." (*Lorraine Mallory*, Owl PL)

New technology

"We have some come in, you know, are 85-90 years old and they are heading right for that self check. They love that self-check and all it took was an introduction. There are a lot of things that I think that is true that they might be very resistant but once they get an introduction away they go." (*Ana Miller*, Owl PL)

Patrons just for PCs and WiFi

". . . in my experience we have a ton of people that stay at the doors and wait to get in and go straight to the computers. We have a lot more people bringing in their laptops and using our hot spot." (*Ana Miller*, Owl PL)

Popular reading

"Well, I think we're going to more fully adapt the concept of a popular reading library. I would hope that we have more programming and concentrate on youth." (*Rupert Loomis*, Heron PL)

"We have accepted the fact that we're a popular reading library. We're not a reference library. We don't have a collection for research. We are there for popular reading." (*Rupert Loomis*, Heron PL)

Public access computers (PACs) are used for games & email

". . . public access computers are used primarily for games and for email." (*Rupert Loomis*, Heron PL)

Read for information by patrons

"I'm buying a lot more of what I consider young adult books for the non-fiction collection because my patrons want an easier reading book: they want pictures and those are the kind of books that people use. So culturally, I think computers are making for a fast read mentality; find the information quickly and move on." (*Rupert Loomis*, Heron PL)

Remote access

"These are accessible at home or office. And we advertise, and we promote the use. They're not getting much use. The library staff uses the online resources more than the public uses them." (*Rupert Loomis*, Heron PL)

". . . people using the computer from home saves us space, but people coming in to use our computers take up a lot more space in the library building." (*Justin Sedlak*, Sandpiper PL)

Renovating facilities

"We're planning on renovating the children's room. We allocated $[dollar amount] from the foundation and $[dollar amount] from the city to do this. Well, the bid is coming in to be $[dollar amount] so . . . and we only got one bid. The foundation decided to kick in another $v provided the city kick in $[dollar amount] more. . This morning before you came he emailed me a resolution that he worked out to present to the city council to get this money. That's the first time that's happened to me. Most city administrators would say "well that's too bad."" (*Rupert Loomis*, Heron PL)

Self-check out machines

"Now we still have check outs because the way we do our DVDs & CDs they still have to come to us to get those put in the packaging." (*Edward Langford*, Wren PL)

State ILL via mail

"We do have a good interlibrary loan system here in the state, which is sponsored by the state libraries so that helps." (*Edward Langford*, Wren PL)

Training of patrons

"I teach classes out at the senior center and always introduce the library's databases and things out there so they are aware they can go online and get to our site and find information that way. That starts making them feel more comfortable so they are not afraid when they come in here. Okay, let's go see if they have this author type of thing." (*Ana Miller*, Owl PL)

Under 19 Parental permission

"We allow My Space but they have to be on the email computers. They have to have parental permission if they are under 19, signed parental permission, and only the email computers can get My Space it is blocked from all the rest of them. So if a kid comes in and their parent hasn't signed a permission slip they aren't getting on My Space." (*Ana Miller*, Owl PL)

WiFi

"Now if you go down there you will see that everything is around our pillars until we recently got wireless access but wireless is not directly connected to our Horizon server. . ." (*Lorraine Mallory*, Owl PL)

"We did that a year and a half ago, probably. And we don't even password it. We haven't had any trouble with anybody that we're aware of. Some people come and stay four or five hours but they're doing whatever it is they're doing. They're not bothering anybody and no ones complained that they've seen something on the screen that was

inappropriate, so we just kind of let them do their thing, come and go." (*Edward Langford*, Wren PL)

"Need in that they may not know they need it but we had wireless access here probably five months before anybody started figuring out we had it. We had signs up, we put a newspaper article out, but now we are getting calls and visitors who come in "oh you are a hot spot, oh."" (*Jenny Lind*, Owl PL)

APPENDIX B

PSEUDONYMS OF LIBRARIES AND STAFF

Library	Director
Eagle Public Library	Victor Higgins
Eagle Public Library	Lynette Pucci
Eagle Public Library	Susan Vinton
Falcon Public Library	Lisa Blaine
Heron Public Library	Rupert Loomis
Heron Public Library	Michelle Coyle
Sandpiper Public Library	Justin Sedlak
Sandpiper Public Library	Peter Vegas
Cardinal Public Library	Amber Bright
Cardinal Public Library	Katrina Quinn
Wren Public Library	Edward Langford
Wren Public Library	Heather Smith
Finch Public Library	Mark Williams
Finch Public Library	Steve Boyer
Finch Public Library	Tasha Delany
Finch Public Library	Trudy Young
Owl Public Library	Lorraine Mallory
Owl Public Library	Jenny Lind
Owl Public Library	Ana Miller
Hawk Public Library	Blythe Vance
Hawk Public Library	Juliette Lord
Hawk Public Library	Nicole Rodriguez
Hawk Public Library	Bernard Hemphell
Osprey Public Library	Ethel Bourdeaux
Osprey Public Library	Ellyn Jansen
Osprey Public Library	Maria Garcia
Condor Public Library	Jack Taylor
Condor Public Library	Elizabeth Book
Kestrel Public Library	Arabella Clement
Kestrel Public Library	Max Norwood
Egret Public Library	Mary Adams
Egret Public Library	Delores Gloss
Crane Public Library	Violet Ghent
Crane Public Library	Mavis Jordan
Crane Public Library	Rex Moyer

APPENDIX C

SEMI-STRUCTURED INTERVIEW QUESTIONS

1. How long have you worked for the library?

2. In what capacity?

3. What is the parent organization responsible for funding the library? A city? County?

4. What has been your role in regards to public access computers?

5. Culture is defined in many different ways. For the purposes of the next question, culture is the environment at the library that the staff encounters on a day to day basis and how everyone works together. How has the public library culture changed since the introduction of computers for patron usage?

6. What has been needed to deal with the influx of computers and other technology in your public libraries? This can include staffing changes, infrastructure improvements to the building, increased funding, increased training, reallocations of resources, etc.

7. Has there been resistance to change? If there has been resistance to change, has it been on an individual level or organizationally?

8. Do you believe there is a vision present for the library? If so, how is technology (especially PACs) incorporated into that vision?

9. What has the leadership of the public library done to provide a vision of incorporating new technologies for patron usage? How have external stakeholder viewed the impact of technology on the organization?

10. Information technology and organizations have become wedded in the minds of many organizational theorists. How has information technology impacted your organizational culture?

11. How has the organizational structure changed over the last 10 years? In what way? Why or why not have the changes occurred?

12. What has been the biggest impact to organizational culture that you believe information technology has had?

13. Did your library participate in the original Gates Foundation grants for computer hardware and software? Why or why not?

14. Is your library participating in the current round of Gates Foundation grants for upgrades to the initial computer hardware and software? Why or why not?

15. Does your library participate in e-rate? Filtering? CIPA?

APPENDIX D
TELEPHONE SCRIPT TO OBTAIN INTERVIEWS FROM PUBLIC LIBRARY DIRECTORS AND THEIR STAFF:

I am a doctoral candidate at the University of Missouri-Columbia conducting research on technologies impact and influence upon organizational culture on public libraries particularly as it pertains to public access computers. These interviews are being done in connection with my dissertation research.

I would like to conduct the interviews with two people including you (the director) and one other person who has been at your library at least 10 years who would have information regarding any changes that has occurred at your library regarding changes in technology that has occurred in the last 10 years at your library and ask 5 to 6 questions related to my research questions which are:

1. What drove the introduction of public access computers in public libraries?

2. How has the public library culture and organization changed since the introduction of computers for patron usage?

3. What arrangements have been needed to deal with the influx of computers and other technology in the public libraries?

4. What has the leadership and decision makers of the public library done to provide a vision of incorporating new technologies for patron usage?

5. How has public access computers changed the way the library is organized and how it is staffed?

6. How has funding from the Bill and Melinda Gates Foundation impacted public library organizations?

The intention behind the questions is to find out how public access computers in particular have impacted organizational change and culture in public libraries. The interviews would be conducted at your convenience at your library and would take approximately one hour to 90 minutes. The interviews would be audio taped. All information regarding the participants and the library would be kept confidential. In the results reported in my dissertation all information would be disguised by using code names for the participants and the library.

Additionally, I would need to obtain some documents dating from 1994 to present from the library in order for me to compare the progress of the library in regards to information technology and organizational change. The documents would include:

1. Organizational charts
2. Mission statement
3. Goals and objectives
4. Job descriptions
5. Reclassification of jobs
6. Organizational restructuring
7. Formation of new departments
8. Budgets with line item detail
9. Financial statements
10. Strategic plans
11. Board meeting minutes

Would you and your library be interested in participating in the research?

[Whatever the outcome, yes or no]
[Yes, they are interested.]

If the answer is yes, they will participate:

When is a convenient time and day for you and whoever else will be participating in the interview?

[Answer]

Great.

Please remember to have the documents requested available and I will see you on DAY and TIME.

Thank you for agreeing to participate in the research. Hope you have a great day.

If the answer is no, they will not participate.

Thank you listening to my information. Hope you have a great day.

APPENDIX E
EMAIL SCRIPT TO CONFIRMING INTERVIEWS TO PUBLIC LIBRARY DIRECTOR OF [NAME OF LIBRARY]:

This email will confirm the telephone conversation between me and [Name of the Director] regarding the research I will be conducting on technologies impact and influence upon organizational culture on public libraries particularly as it pertains to public access computers.

Interviews will be conducted between the library director, [names], and me on [Day], [Month Day, Year] at [time]. Additionally, [name of employee] will be interviewed as well on the same day at [time].

As discussed I need to obtain copies of the following documents from 1994 to present:

1. Organizational charts
2. Mission statement
3. Goals and objectives
4. Job descriptions
5. Reclassification of jobs
6. Organizational restructuring
7. Formation of new departments
8. Budgets with line item detail
9. Financial statements
10. Strategic plans
11. Board meeting minutes

Thank you in advance for agreeing to participate in my dissertation research. I appreciate the time that you and [names] will be taking to answer my questions. If you have any questions, please do not hesitate to contact me by email at dlvwcc@mizzou.edu or via my cell phone at 573-356-8107.

Diane Velasquez
Doctoral Candidate
University of Missouri – Columbia
School of Information Resources & Learning Technologies (SISLT)
111 London Hall
Columbia, MO 65211

**EMAIL SCRIPT TO OBTAIN INTERVIEWS FROM PUBLIC LIBRARY
DIRECTORS AND THEIR STAFF**:

I am a doctoral candidate at the University of Missouri-Columbia conducting research on technologies impact and influence upon organizational culture on public libraries particularly as it pertains to public access computers. These interviews are being done in connection with my dissertation research.

I would like to conduct the interviews with two people including you or some other administrator and one other person who has been at your library at least 10 years who would have information regarding any changes in technology that has occurred in the last 10 years at your library and ask 5 to 6 questions related to my research questions which are:

1. What drove the introduction of public access computers in public libraries?

2. How has the public library culture and organization changed since the

    introduction of computers for patron usage?

3. What arrangements have been needed to deal with the influx of computers and

    other technology in the public libraries?

4. What has the leadership and decision makers of the public library done to provide

    a vision of incorporating new technologies for patron usage?

5. How has public access computers changed the way the library is organized and

    how it is staffed?

6. How has funding from the Bill and Melinda Gates Foundation impacted public

    library organizations?

The intention behind the questions is to find out how public access computers in particular have impacted organizational change and culture in public libraries. The interviews would be conducted at your convenience at your library and would take approximately one hour to 90 minutes. The interviews would be audio taped. All information regarding the participants and the library would be kept confidential. In the results reported in my dissertation all information would be disguised by using code names for the participants and the library.

Additionally, I would need to obtain some documents 1994 to present from the library in order for me to compare the progress of the library in regards to information technology and organizational change. The documents would include:

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2. Mission statement
3. Goals and objectives
4. Job descriptions
5. Reclassification of jobs
6. Organizational restructuring
7. Formation of new departments
8. Budgets with line item detail
9. Financial statements
10. Strategic plans
11. Board meeting minutes

Would you and your library be interested in participating in the research? If yes, I would follow up with a phone call at your convenience.

Diane Velasquez
Doctoral Candidate
University of Missouri – Columbia
School of Information Science & Learning Technologies
111 London Hall
Columbia, MO 65211
Cell: 573-356-8107
Email: dlvwcc@mizzou.edu or dlvelasquez@hotmail.com

Consent Form for Participation in a Research Project
University of Missouri – Columbia

Student Researcher: Diane L. Velasquez
Study Title: The Technological Influence and Impact upon Organizational Change in Public Libraries
Invitation to Participate: You are invited to participate in the semi-structured interviews in this study.

Purpose: The purpose of the study is to research technological influences upon organizational change in public libraries for a dissertation. The focus of the dissertation is on library directors, administrators, and other staff members...

Description and procedures: The procedure for the semi-structured small group interview is to ask questions related technology and organizational change. The researcher will send copies of the transcript(s) for the participant to read and review. The review of the transcripts will allow the participant to make any comments or questions.

Risks and inconveniences: There are no risks. Inconvenience is one of using up time of the respondents.

Benefits: To further research public libraries and to gain information about information technology and organizational change.

Confidentiality: All library directors and other staff members choosing to be interviewed will have their names and place of employment be held in confidence and private. When describing the findings from the interview data all names of people and places will be changed to protect them.

Voluntary Participation: All participation in this study is voluntary. If you do not want to be in this study you do not have to be. If you agree to be in the study but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide you do not want to participate in this study.

Do you have any questions?

Take as long as you like before you make a decision. I will be happy to answer any questions you have about this study. If you have questions regarding your rights as a research participant, please contact the University of Missouri-Columbia Campus Institutional Review Board at 573-882-9585. You may reach the student researcher, Diane Velasquez, by calling 573-356-8107 or by emailing me at dlvwcc@mizzou.edu.

My dissertation supervisor, John M. Budd, will also be available for questions by calling 573-882-3258 or by emailing him a buddj@missouri.edu.

Authorization:

I have read this form and decided that _____ will
(*name of subject*)
Participate in the project described above. Its general purposes, the particulars of

involvement and possible hazards and inconveniences have been explained to my

satisfaction. My signature also indicates that I have received a copy of this consent form.

Signature: _____

Title: _____

Date: _____

_____
Signature of Person Obtaining Consent

APPENDIX H

TRANSCRIPT EMAIL #1

Dear [Insert Participant's name here]:

Attached please find the transcript of our interview from [Date], 2007. Please review the interview and let me know if there are any corrections or changes that need to be made. I would appreciate it if all corrections were returned no later than [day of week], [Date], 2007.

As part of the consent agreement, I will be keeping all names of the participants and libraries confidential. As such, I will need to use an alias for your name in case I use a quote from your transcript. If you would like to come up with an alias for yourself, I would be happy to use that for my research. Please submit the alias when the transcript is returned with corrections or if there are no corrections, let me know that by [day of week], [Date], 2007.

If you have any questions, please do not hesitate to contact me.

Diane Velasquez
Doctoral Candidate
University of Missouri – Columbia
School of Information Science & Learning Technologies
111 London Hall
Columbia, MO 65211
Cell: 573-356-8107
Email: dlvwcc@mizzou.edu or dlvelasquez@hotmail.com

APPENDIX I

FOLLOW UP TRANSCRIPT EMAIL

Dear [Insert Participant's name here] :

I sent the transcript of your interview with me for my dissertation research on [Date], 2007. I have attached another copy for your files. As of [Date], 2007, I have not received the corrections. If there are no corrections that you wish to have made, I will assume if I receive no further email messages from you that the transcript is correct as written and sent to you.

If you wish to make any corrections, please send the transcript to me with all corrections in a red line format no later than [Date], 2007.

Thank you in advance for your assistance and thanks again for your participation in my research. Have a great day.

Diane Velasquez
Doctoral Candidate
University of Missouri – Columbia
School of Information Science & Learning Technologies
111 London Hall
Columbia, MO 65211
Cell: 573-356-8107
Email: dlvwcc@mizzou.edu or dlvelasquez@hotmail.com

Dear :

Attached please find a PDF copy of my final draft of my dissertation for your review. Please review the dissertation to make sure there are no errors that could identify you,

Please let me know by Friday, July 20, 2007, if there are any corrections in name, city, or state that need to be made. If I do not hear from you by July 20, 2007, I will make the assumption that everything is okay and I can proceed with submitting my dissertation to the Graduate College at the University of Missouri – Columbia.

If you have any questions at all, please call or email me immediately. Thank you in advance for your assistance and thanks again for your participation in my research. Have a great day.

Diane Velasquez
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111 London Hall
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Email: dlvwcc@mizzou.edu or dlvelasquez@hotmail.com

APPENDIX K

CENSUS REGIONS FOR 2007

Midwest	Northeast	South	West
Illinois	Connecticut	Alabama	Alaska
Indiana	Maine	Arkansas	Arizona
Iowa	Massachusetts	Delaware	California
Kansas	New Hampshire	District of Columbia	Colorado
Michigan	New Jersey	Florida	Hawaii
Minnesota	New York	Georgia	Idaho
Missouri	Pennsylvania	Kentucky	Montana
Nebraska	Rhode Island	Louisiana	Nevada
North Dakota	Vermont	Maryland	New Mexico
Ohio		Mississippi	Oregon
South Dakota		North Carolina	Utah
Wisconsin		Oklahoma	Washington
		South Carolina	Wyoming
		Tennessee	
		Texas	
		Virginia	
		West Virginia	

APPENDIX L

PERMISSION FROM WILEY

Dissertation

A01_First_Name: Diane
A02_Last_Name: Velasquez
A03_Company_Name: University of MO-Columbia
A04_Address: 118 London Hall
A05_City: Columbia
A06_State: MO
A07_Zip: 65211
A08_Country: US
A09_Contact_Phone_Number: 573-356-8107
A10_Fax:
A11_Emails: dlvwcc@mizzou.edu
A12_Reference:
A13_Book_Title: Organizational Culture & Leadership
A40_Book_or_Journal: Book
A14_Book_Author: Edgar H. Schein
A15_Book_ISBN: 0-7879-7597-4   (0787968455)
A16_Journal_Month:
A17_Journal_Year:
A18_Journal_Volume:
A19_Journal_Issue_Number:
A20_Copy_Pages: Figure 2.1, p. 26
A21_Maximum_Copies: 1
A22_Your_Publisher: University of Missouri
A23_Your_Title: Organizational Change and Technology in Public Libraries
A24_Publication_Date: 5/2007
A25_Format: CDROM
A31_Print_Run_Size: 1
A41_Ebook_Reader_Type:
A26_If_WWW_URL:
A27_If_WWW_From_Adopted_Book:
A28_If_WWW_Password_Access: No
A45_WWW_Users:
A29_If_WWW_Material_Posted_From:
A30_If_WWW_Material_Posted_To:
A42_If_Intranet_URL:
A32_If_Intranet_From_Adopted_Book:
A33_If_Intranet_Password_Access: No
A48_Intranet_Users:
A34_If_Intranet_Material_Posted_From:
A35_If_Intranet_Material_Posted_To:
A36_If_Software_Print_Run:
A37_Comments_For_Request: This request is for addition of the chart for my doctoral dissertation. Both the author and publisher would be cited in the bibliography and noted beneath the reproduced chart.
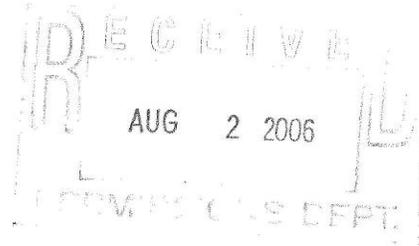
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171

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