HEY, THIS SCHOOL LIBRARY ISN'T WHAT IT USED TO BE: THE CHANGE PROCESS AND THE SOCIOPOLITICAL REALITIES OF IMPLEMENTING A CURRICULARLY INTEGRATED HIGH SCHOOL INFORMATION LITERACY PROGRAM

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This study sought to add to the knowledge and understanding of the organizational change process for successfully implementing an integrated information literacy program in one American high school. Participant experiences were accessed to identify and describe elements of their successful change process, barriers and supports that affected its success, and discover the relationships among key concepts. It also explored participants' beliefs about the affect of the program on student achievement and examined how these beliefs affected implementation. A qualitative naturalistic inquiry was conducted and reported in a case study format. A Delphi study identified potential high schools meeting study criteria and purposive sampling identified study participants. Primary sources were in-depth, open-ended interviews focused on participants' recollections and understandings of the change process, with additional data drawn from relevant school/state documents, a personal research journal, and relevant literature. Data were analyzed using grounded theory practices. Findings indicated that successful implementation was dependent upon six key concepts: (1) distributed leadership (core

concept); (2) effective leadership (3) open and frequent communication (4) better relationships; (5) shared aspects of teaching and learning (6) elements of the information literacy program. Conclusions were: (1) simultaneous occurrence of need, opportunity and leadership for change was essential for successful implementation; (2) distributed leadership practiced by administrators empowered the teacher-librarian and teachers to assume leadership roles; (3) teacher-librarian leadership requires access to ongoing, high quality professional development; (4) continuous high quality, staff development and teacher-librarian staff development role are essential for successful implementation; (5) full-time teacher-librarian and full-time secretary may be inadequate staffing for an integrated program; (6) teacher-librarian's open and frequent communication is key to successful implementation; (7) teachers are at different places on the institutionalization continuum; (8) most serious barriers to implementation are time constraints, heavy workload, and fear of changing one's teaching; (9) a successful program requires a combination of key supporting factors; (10) school library and teacher-librarian role changes are indicators of successful implementation; (11) improved staff relationships result from and propel successful implementation; (12) an integrated information literacy program with a central role for the teacher-librarian contributes to improved teaching and learning.

TABLE OF CONTENTS

vi

LIST OF TABLES

LIST OF FIGURES

PREFACE

During the past seven years I have worked course by course to complete my doctorate in Educational Administration. It has been a long but worthwhile journey – one that has left me a changed and decidedly richer person. I have studied with some wonderful teachers at the University of Pittsburgh's School of Education – teachers who combined high expectations with support, encouragement, and guidance. In many of my classes I was expected to play an active role in my own learning – to share my insights and questions and listen and respond to those of my classmates. In the course of my studies, I realized that this way of learning helped me to learn more deeply and enabled me to take leaps of understanding. My Pitt experience has made me a much more reflective learner and a person who now routinely questions, analyzes, and examines the implications of nearly everything. I personally experienced the power of the statement: *learning is a social activity* and this awareness now guides my own practice of teaching.

Many people have been very patient and supportive during the final phase of my doctoral journey – my dissertation. I want to thank Dr. Otto Graf and Dr. Sue Goodwin for agreeing to be members of my committee. Dr. Graf introduced me to the language of curriculum and instruction and Dr. Goodwin was a constant source of encouragement during my long year of Core classes. My study is a better one because of their guidance.

study expenses. I hope that my findings help the members of PSLA to create many more integrated information literacy programs in the schools of Pennsylvania. Finally, I want to thank my friends, Tom Schuster, Carol Sekura, Eleanor Howe, and Dr. Celeste Nalwasky who listened to my problems and responded with helpful ideas and words of encouragement.

When I started this journey my son, Sascha, was three years old and I was very uncertain if it was the right time for beginning such studies. My husband, Paul, however, was adamant that I begin because he knew and understood how much it meant to me. Sascha is now turning ten and my husband is as supportive, uncomplaining, and understanding as he was at the start. I am looking forward to not having to say, "Sorry, but I can't go to the movies (mall, science center, etc…) because I have to do Pitt work." I know that Paul will not miss reading my endless drafts, explaining the intricacies of grammar and punctuation, and challenging my right to make certain statements (it really does pay to marry someone that studied Latin for five years and received an "A" in his research methods class). It means so much to know that he is proud of me! I thank both of them for bearing with me through my grouchy moods, especially when I was tired and wanted nothing more than to stop working and, instead, take time for fun or sleep. I look forward to having time – time to spend enjoying their company and sharing their interests. Lastly, I am happy that I will now have time to continue my personal journey -- taking what I have learned and putting it to use for the benefit of students and their teachers.

1.0 INTRODUCTION TO THE STUDY

1.1 BACKGROUND

It is a trip weighted with shock and nostalgia. I am driving east on Second

Avenue in Pittsburgh, heading out of the city and up the Monongahela

River. Behind me stand the eminences of steel and glass, bunched in the

heart of the city, where management makes decisions for its far-flung steel

empire. Ahead lie the mill towns and steel plants, strung along the winding

river artery, where labor produces molten iron and steel and finished steel

products. Once vital parts of Andrew Carnegie's wondrously profitable

linkage of mines and mills, most of these plants now sit idled and empty,

soon to be churned into rubble. (p. 1)

Labor journalist John P. Hoerr opened his 1988 book, *And the wolf finally came:*

The decline of the American steel industry, with this paragraph. His passage describes

the extent of the collapse of the steel industry in Pittsburgh, Pennsylvania in 1982. It

serves as a rich symbol for change. Technological change pushed Pittsburgh, and other

regions of the United States, out of the Industrial Age and into the Information Age.

Technology changed the work that people do – opening economic opportunities to some and closing opportunities to others. It also profoundly changed the way that we communicate, play, think, teach, study, participate in democracy, and access and use information (American Library Association Presidential Committee on Information Literacy, 1989; Barron & Bergen, 1992; Breivik & Senn, 1994; Craver, 1995; Doyle, 1994a; Lumley, 1994; United States National Commission on Excellence in Education (USNCEE), 1983).

Many besides Hoerr noticed the country's diminished capacity to compete in a global marketplace (Barron and Bergen, 1992). Politicians, government officials, business leaders, and parents were concerned that "America's economic, cultural and spiritual role in the world was being threatened by lax standards and misguided priorities in the schools" (Fiske, 1983, p. A1). Secretary of Education T. H. Bell appointed a commission in 1981 to examine the quality of education in the United States and to address "the widespread public perception that something is seriously remiss in our educational system" (USNCEE, 1983, p.1). In 1983, a year after the events described in Hoerr's passage, the commission issued its report, *A Nation at Risk: The imperative for educational reform*. It was a devastating report (Craver, 1986) that described a "nationwide educational catastrophe" (Botstein, 1983, p. SM58) and recommended changes in the content, standards, expectations, time usage, teaching, leadership and fiscal support of American schools (USNCEE, 1983). Their report also emphasized the importance of literacy, information, *higher order* intellectual skills, and lifelong learning for preparing students and future workers for the changes that lay ahead. "In a world of

17

ever-accelerating competition and change in the conditions of the workplace, of ever-greater danger, and of ever-larger opportunities for those prepared to meet them, educational reform should focus on the goal of creating a Learning Society" (USNCEE, 1983, p. 13).

The publication of *A Nation at Risk* unleashed a torrent of criticism of the American education system and spawned numerous reform measures (Barron and Bergen, 1992; Goodlad, 2002). Educators answered the calls for school reform with their own wave of documents. Although the writers of *A Nation at Risk* made no mention of the role of school libraries or information resources in their discussion of the state of K-12 education (Eisenberg, Lowe, & Spitzer, 2004) the library community examined its core beliefs and habitual practices and prepared to respond. Those charged with crafting the profession's response understood the relationship between the concept of information literacy and the four elements emphasized by the commission (literacy, information, *higher order* intellectual skills, and lifelong learning). Information literacy would be at the heart of their response and their primary reason for recommending a shift in the instructional roles of the school library and the teacher-librarian (also known as a school librarian; see pages 23-24 for a more detailed definition of this term).

1.2   INFORMATION POWER 1 AND 2 AND THE FINAL REPORT

In 1988 the American Association of School Librarians (AASL) and the Association for Education Communications and Technology (AECT) released

Information power: Guidelines for school library media programs (*Information Power*

1). The opening sentence of *Information Power 1* stated "The mission of the library

media program is to ensure that students and staff are effective users of ideas and

information" (p. 1). The writers called on schools to move educational and information

technology from the periphery of instruction and learning into the heart of curriculum

(AASL & AECT, 1988; Barron and Bergen, 1992). They also called on the teacher-

librarian to perform the separate and overlapping roles of information specialist, teacher,

and instructional consultant. This was a major role shift for the teacher-librarian from

being primarily a reactive "keeper of the books" to being an interactive participant in the

instructional program of the school (AASL & AECT, 1988; Callison, 1986; Eisenberg et

al, 2004; Loertscher & Woolls, 2002; Lumley 1994; Stripling, 1999).

A year later, in January 1989, the American Library Association (ALA)

Presidential Committee on Information Literacy released its final response to *A Nation at*

Risk. Their document, known simply as the *Final Report*, provided one of the earliest

definitions of information literacy (Loertscher & Woolls, 2002; Plotnick, 2000; Stripling,

1999). The committee defined information literacy in terms of requisite skills and made

the concept of information literacy accessible to a wider audience (Eisenberg et al.,

2004). Their definition serves as the basis for most subsequent definitions of information

literacy (Eisenberg et al., 2004; Plotnick, 2000).

> To be information literate, a person must be able to recognize when
>
> information is needed and have the ability to locate, evaluate, and use
>
> effectively the needed information. Ultimately, information literate

people are those who have learned how to learn. They know how to learn

because they know how knowledge is organized, how to find information

and how to use information in such a way that others can learn from them.

(ALA Presidential Committee, 1989, p. 1)

Their definition emphasizes the "difference between learning to find information and

learning to use it effectively" (Byerly & Brodie, 1999, p. 56).

One of the most important accomplishments of the *Final Report* was that it

"precipitated the dissemination of the concept of information literacy beyond the field of

library science" (Eisenberg et al., 2004, p. 14). The *Final Report* also led to the

formation of the National Forum on Information Literacy (NFIL). This coalition of more

than 65 national business, government, and educational organizations (Plotnick, 2000)

was charged with increasing awareness and understanding that information literacy is the

"critical literacy for the twenty-first century" (Bruce, 2002, p. 1) (Eisenberg et al, 2004;

Loertscher & Woolls, 2002; NFIL, 1998; Plotnick, 2000). Many view the publication of

the *Final Report* as a landmark event in the development of the concept of information

literacy (Eisenberg et al., 2004; Loertscher & Woolls, 2002; Plotnick, 2000).

Ten years after *Information Power 1*, AASL and AECT issued their new standards

for school libraries, *Information Power: Building Partnerships for Learning*

(*Information Power 2*). Their document begins this way:

Information literacy – the ability to find and use information – is the

keystone of lifelong learning. Creating a foundation for lifelong learning is

at the heart of the school library media program. Just as the school library

media center has moved far beyond a room with books to become an active,

technology-rich learning environment with an array of information

resources, the school library media specialist today focuses on the process

of learning rather than dissemination of information. (1998, p. 1)

A core belief of the writers of *Information Power 2* is that the focus of instruction must

shift to include an emphasis on learning processes as well as learning content (Kuhlthau,

2001). Borrowing from cognitive psychology, they define learning as "the active

building of knowledge through dynamic interaction with information and experience"

(AASL & AECT, 1998, p. 2). They also stress the importance of students having the

opportunity to engage in authentic learning, "to construct meaning from the sources they

encounter and to create products that shape and communicate that meaning effectively"

(p. 2). The pedagogy advocated by the writers of *Information Power 2* is akin to the

authentic pedagogy promoted by the researchers at the Center on Organization and

Restructuring of Schools (CORS). They define authentic pedagogy as assessments and

tasks in which students are asked to construct knowledge, engage in disciplined inquiry,

and take part in learning experiences that have a value beyond school (Newmann &

Wehlage, 1995). All of these ideas are central to the concept of constructivism which

"places the learner at the center of a dynamic learning process" and holds that "the

learner constructs knowledge rather than passively absorbing it" (AASL & AECT, 1998,

p. 173). Stripling (1995) notes that a constructivist notion of learning theory pervades the

entire framework of information literacy. Loertscher and Woolls comment in their book,

Information Literacy: A Review of the Research, that "the philosophical concept of

constructivism has become the foundation of the new national standards" (2002, p. 69).

Since the writers of the new guidelines believe that information literacy "is the keystone to lifelong learning" and "lifelong learning is at the heart of the school library media program" (AASL & AECT, 1998, p. 1), this constructivist foundation is no surprise.

The new standards expand the teacher-librarian's role to a four-pronged role of interwoven responsibilities: teacher, instructional partner, information specialist, and program administrator (AASL & AECT, 1998; Kuhlthau, 1999). Collaborating, leading, and using technology are central to the performance of each of these roles (Zimmerman, 1998) and are "integral components of a library media program that provide support for and contribute to the larger learning community" (Pasco, 2003, p. 192).

According to the writers of *Information Power 2*, the goal of the school library program is to enable all students to become "active and creative locators, evaluators, and users of information to solve problems and to satisfy their own curiosity" (AASL & AECT, 1998, p. 2). To facilitate this type of learning they believe, as the authors of the previous guidelines had, that it is essential that school libraries and teacher-librarians move from the periphery of curriculum and instruction to the center of the teaching and learning (AASL & AECT, 1988, 1998; Eisenberg et al., 2004). Their view is backed up by a growing body of information literacy research that has found that information literacy is a process with levels and that it is best learned by engaging in meaningful, real-world research (Breivik & Senn, 1994; Bruce, 2002; Eisenberg et al, 2004; Kuhlthau, 2004; Plotnick, 2000; Thompson & Henley, 2000; Todd, 1999). As Bruce deftly explains it, "Learning to be information literate…involves becoming aware of different ways of

experiencing information use through engaging in relevant information practices and reflection" (2002, p. 3). The writers of *Information Power 2* again ask educators to integrate information literacy skills throughout the curriculum and to collaborate with teacher-librarians so that students can move beyond merely absorbing information to finding it, evaluating it and applying it (Breivik & Senn, 1994). To "nurture authentic student learning within and beyond the curriculum" (AASL & AECT, 1998, p. 49), the new standards go further than those of *Information Power 1* and call for a paradigm shift in the way that schools approach teaching and learning. They press educators to move away from a teacher-centered and textbook approach to teaching and learning and move toward a student-centered and information/resource/inquiry-based approach (AASL & AECT, 1998; Eisenberg et al., 2004).

To help teacher-librarians and teachers better assess the information literacy competencies of their students *Information Power 2* includes, for the first time, a list of standards that specify "the abilities needed to access, evaluate, and use information critically and wisely" (Thompson & Henley, 2000, p. 6). They are known as *The Nine Information Literacy Standards for Student Learning* (AASL & AECT, pp. 8-9. These standards emphasize the important relationship that information literacy has to independent learning and social responsibility (Bruce, 2002). (A copy of *The AASL/AECT Nine Information Literacy Standards* can be found in Appendix A).

1.3   INFORMATION LITERACY

The term "information literacy was first used in 1974 by Paul Zurkowski, then president of the Information Industry Association, in a proposal submitted to the National Commission on Libraries and Information Science (NCLIS) (Doyle, 1994a, 1994b; Eisenberg et al, 2004; Loertscher & Woolls, 2002; Plotnick, 2000). Although they had not coined the term, librarians eagerly adopted the concept of information literacy. Teacher-librarians were among the first educators to acknowledge that information was growing at an exponential rate and to understand the potential implications of this phenomenon. They foresaw that it would be increasingly "difficult to negotiate the complex world of information" (Eisenberg et al., 2004, p. 4) and misinformation.

During the 1990s information literacy was incorporated as a major role of the school library program (Kuhlthau, 2004). In fact, teacher-librarians paid more attention to information literacy than they had to any other concept (Loertscher and Woolls, 2002). In the ten plus years since leaders in the profession first introduced it to teacher-librarians (Loertscher & Woolls, 2002), the concept of information literacy has evolved. It was first understood as library skills (which stressed the location of sources), then it shifted to information skills (which stressed strategies for using information), and finally to information literacy as a reiterative process with levels (Kuhlthau, 1999). Kuhlthau believes that information literacy "incorporates both library skills and information skills, but adds the critical component of understanding the process of learning in information-rich environments" (1999, p. 11). Some of the many skills that it encompasses are organization, critical thinking, recognizing patterns, evaluation, understanding

relationships, analysis, problem solving, creative thinking and transferring knowledge from one area or setting to another (Thompson & Henley, 2000). In 1994 McClure (as cited in Loertscher & Woolls, 2002) published a helpful model that illustrates the relationship between information literacy and other types of literacy (see Figure 1). "Taken together…[these views] reveal the richness of the information literacy experience as it is understood by educators that have been working with the concept" (Bruce, 2002, p. 3).

Information Literacy is the intersection of these literacies

Information Problem-Solving Skills

Traditional Literacy

Network Literacy

IL

Computer Literacy

Media Literacy
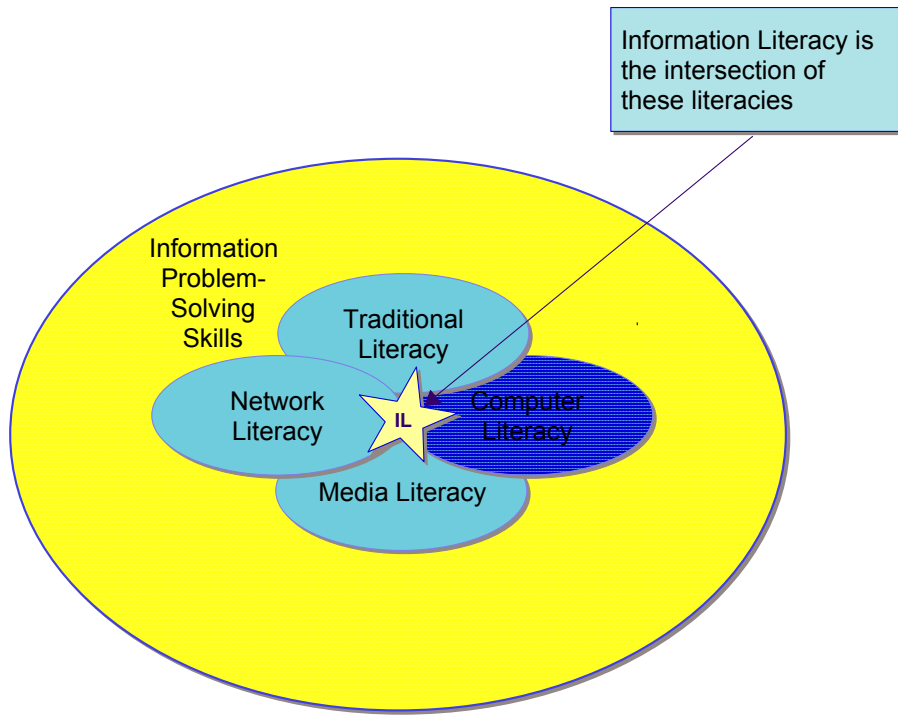
In this model McClure views information literacy from a problem-solving perspective and presents information literacy as a means to an end (reprinted with permission from Charles R. McClure, as found in Loertscher & Woolls, 2002, p. 111).

Figure 1. McClure's Information Literacy Typology

Three predominant themes have emerged from the worldwide body of research on this concept: information literacy is "a process….requiring subject content; it needs to be integrated with the school curriculum; it is vital to success in school and life" (Plotnick, 2000, p. 29). Bruce's examination of the extensive research and practice information about information literacy led her to conclude that a Best Practice list would include those approaches which:

- interpret information literacy as integral to the learning process

- bring learner centered, experiential, and reflective approaches to the information literacy education process

- bring collaborative approaches to program implementation

- establish partnerships within and between organizations (2002, p. 6)

1.4   EFFICACY OF INFORMATION LITERACY EDUCATION

School library researchers have conducted and published numerous quantitative and qualitative studies that document a relationship between levels of student achievement and the type of role and function played by the school library program (Bruce, 2002; Lance & Loertscher, 2001, 2002; Lance, Hamilton-Pennell, & Rodney, 2000; Lance, Rodney, & Hamilton-Pennell, 2000a, 2000b). The findings of some studies have shown evidence that schools can better serve the educational needs of learners and teachers by moving the school's library information program from the periphery of their curriculum and integrating it into the center (Bruce, 2002; Lance & Loertscher, 2001, 2003; Todd,

1995). Other research findings have documented a relationship between levels of student achievement and the extent to which information literacy is integrated into the curriculum and instruction of a school (Bruce, 2002; Lance & Loertscher, 2001, 2003).

1.5   THE PROBLEM OF THE STUDY

To prepare learners for a culture of change schools have been asked to better develop their students' literacy, information, *higher order* intellectual, and lifelong learning skills (USNCEE, 1983). To this end, new roles and functions have been proposed for teacher-librarians and school libraries. Some schools have responded positively by implementing integrated, collaborative, process approaches to information literacy instruction (Donham, Bishop, Kuhlthau, & Oberg, 2001; Farwell, 1998; Lumley, 1994; Mancall, Lodish, & Springer, 1992; Whelan, 2004; Whelan & Minkel, 2002; Willeke & Peterson, 1993). However, many schools have remained unchanged and persist in fostering programs that are isolated from the curriculum and are inherently location and source-based in their approaches to library skills instruction (Whelan & Minkel, 2002). Many high school libraries still look like Lumley's description of unchanged elementary libraries-- they are "understaffed, underused, unintegrated with [meaningful] technology [use], and generally peripheral to the curriculum, instruction, culture, and mission of the school" (1994, p. 11). The integrated, process approach to information literacy education advocated by the new standards needs to move from being an educational innovation to being standard practice.

How can educators effect this change? An examination of the literature reveals that very little is known about the change process used by American high schools that have successfully initiated and implemented the type of information literacy program discussed here (Lumley, 1994). (My research-based criteria for a "successful" program can be found in Appendix B.) What are the elements of a successful change process for implementing an integrated, collaborative, and process approach to information literacy in an American high school? According to those who experienced it – what was the process followed to initiate, implement, and continue this successful program? What factors affect the success of the program?

1.6   STATEMENT OF INTENT

This study seeks to add to the knowledge and understanding of the organizational change process for implementing effective information literacy programming in an American high school by accessing the experiences of participants in order to identify and describe the elements of a successful change process and the barriers and supports that affect its success, and to discover how the elements are interrelated.

1.7   GUIDING RESEARCH QUESTIONS

1. Why and how was an integrated approach to information literacy initiated and implemented in the school library program?

2. Do participants believe that the changes in the school library program have been or will be institutionalized? If so, how or why?

3. What factors supported or impeded the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?

4. What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships between the various participants?

5. How have the changes in the school library program impacted student learning?

1.8   SIGNIFICANCE OF THE STUDY

Several studies have focused on the successful change process pursued by elementary schools that have adopted and implemented such approaches to information literacy instruction (Farwell, 1998; Lumley, 1994; Oberg, 2001). Some studies have focused on the principal's role in facilitating the change required to implement a flexibly scheduled integrated library information program (McGregor, 2002; Oberg, 2001). Other studies have explored the attitudes of high school teachers and administrators toward the teacher-

librarian or toward such a role shift for the teacher-librarian (Hay & Henri, 1995;

Kolencik, 2001; Oberg, 1996; Oberg, Hay, & Henri, 2000). Very little research,

however, was found that deals with the change process taken to successfully initiate and

implement an integrated, collaborative, process approach to information literacy

instruction in an American high school (Lumley, 1994).

Information obtained from this study will add to the contextual knowledge base on

how to successfully enact change that results in an integrated, collaborative, and process

approach to information literacy instruction. Such information will be helpful to teacher-

librarians, administrators, teachers, and experts in the field who want to successfully

implement a similar program.

This study grows out of the researcher's professional frustrations with these issues

and personal need to better know and understand how best to go about effecting the

personnel, educational, and organizational changes that are needed to foster and develop

students' abilities to be independent seekers and consumers of information throughout

their lives.

1.9   DEFINITION OF TERMS

Change process: A three-stage understanding of the process of educational change

consisting of initiation, implementation, and institutionalization or continuation. Specific

outcomes in the areas of student learning and organization capacity are also associated

with this process (Fullan, 2001b).

Flexible schedule: An approach to scheduling the school library that allows students, teachers, and classes to consult with the teacher-librarian and use the library's resources and facilities as the need arises (Jay, 1989).

Fixed schedule: An approach to scheduling the school library in which "students attend a regularly scheduled class in the library, usually on a weekly basis" (Donham van Deusen & Tallman, 1994). Typically during such a class specific library, information, or study skills are taught to students as a stand-alone subject. Often during these scheduled classes the library's facilities and services are unavailable to other students, teachers, and classes.

Information literacy: "[T]he ability to learn or to derive meaning from information, to think, and to reason. People who are information literate recognize an information need, know where and how to find information, evaluate and select relevant information, organize their findings to suit their needs, and use this new information effectively" (Thompson & Henley, 2000, p. 13).

Information Search Process (ISP) Model: A research process model (often inquiry-based) that is used for guiding students through the research process. (Most models incorporate the basic activities of identifying, accessing, evaluating, and using information and have slightly different approaches to pre- and post-search activities) (Kuhlthau, 2001; Thompson & Henley, 2000). (ISP Models can be found on pages 95-97 and Appendices C and D.)

*Integration***:** A deliberately planned process by which all aspects of the school library program (personnel, information literacy education, print and nonprint resources,

services, technologies, and facilities) are interwoven into the curriculum and instruction of the school. In this way, students are given many carefully planned opportunities to access, evaluate, interpret, and use a wealth of information resources in all subject areas and in a variety formats (AASL & AECT, 1998; Lumley, 1994).

Process approach to information literacy: Teacher-librarians and teachers who practice this approach understand "the dynamic process of learning from information and incorporate that awareness into all aspects of intervening with users" (Kuhlthau, 2004, pp. 203-204). This approach emphasizes the processes involved in doing information-based projects, i. e., projects are taught and graded as a process, not just a product. Thus, an effective research strategy and appropriate and diverse resources are considered important parts of the process (Mancall et al., 1992). There are three important elements to this approach:

- Acknowledgement of the stages in the information search process, i. e., it conceptualizes and articulates for the student the typical experience of a person engaged in an extensive search for information.

- Establishment of dialog as an instructional strategy, i.e., it recognizes the need for a student to discuss and talk about his research topic and process in order to facilitate his formulation of a research topic and promote his use of more conceptual search strategies.

- Identification of a zone of intervention, i.e., it identifies when a student needs intervention and determines the level of intervention required (Kuhlthau, 2004) to help the student to successfully complete the task.

Kuhlthau's Model of the Information Search Process (see Appendix C) is a good

model for implementing a process approach to information literacy.

Resource-based learning: This approach uses a variety of information resources.

However, the focus of this approach is on the students and what they are doing with the

resources to facilitate their own learning. It "emphasizes the inquiry approach to

learning, with the teacher taking on the role of facilitator" (Eisenberg et al, 2004) or

coach and the learner placed squarely in the center of the learning experience.

Resource-based teaching: In this approach a teacher uses a variety of resources (a

specific database or website, journal articles, books, and or newspapers) in addition to the

textbook to facilitate and support their teaching (Eisenberg, Lowe, & Spitzer, 2004;

California Media and Library Educators Association, 1994).

School library: The instructional facility within the school where the teacher-librarian

and the school library program are based. User services and facilities originate from this

physical location and the print and nonprint resources, equipment, computers, and other

forms of technology are also housed at this location. It is also known as the ***school***

library media center (SLMC), ***media center***, and ***library media center (LMC)***.

School library program: The school library's personnel, information literacy instruction,

activities, services, information resources, technologies, equipment, and spatial resources

which support the educational program of the school and the information needs of its

users.

Teacher-librarian: A certified professional educator also known as a ***school librarian***,

school library media specialist, ***library media specialist (LMS)***, or ***information***

specialist. This person serves as a teacher of information literacy and intermediary between users (students and teachers) and the resources, facilities, and services of the school library program. This person is responsible for performing the roles of teacher, instructional partner, information specialist, and program administrator as recommended in *Information Power 2* (AASL & AECT, 1998).

2.0   REVIEW OF RELATED LITERATURE

Imagining something may be the first step in making it happen,
but it takes the real time and real efforts of real people to learn things,
make things, turn thoughts into deeds or visions into inventions.
(Fred Rogers, 2003, p. 99)

This chapter will examine the literature related to real teachers turning educational thoughts into deeds in American schools. The thoughts come from information literacy research: student achievement levels are positively impacted by the extent to which information literacy instruction is integrated into a school's curriculum (Bingham, 1993; Bruce, 2002; Lance & Loertscher, 2001, 2002; Lance, Hamilton-Pennell, & Rodney, 2000; Lance, Rodney, & Hamilton-Pennell, 2000a, 2000b; Todd, 1995). The deeds come from the educational change literature: exploring what is known about the successful implementation of effective educational innovations in American schools.

2.1   A DEEPER UNDESTANDING OF INFORMATION LITERACY

As a result of the research literature of library and information science, experts in the school library field have called for a new model for the school library – an *Information*

Power model with information literacy at its core. (Hereafter the term "new model" will be used to refer to this type of school library program.) This new model shifts the focus from seeking and gathering information to teaching students how to evaluate, interpret, and use information to create knowledge. To better understand and appreciate just how radical an innovation integrated information literacy is, it would be helpful to examine its philosophical background.

In a 1995 article that pondered the philosophical framework of information literacy, Todd explores the answers to the question, "What is information?" One answer defines information as a "thing" and another defines information as an "effect". Todd then relates each perspective to a philosophy of learning and specific instructional practices.

In his first definition Todd presents information as a "thing", i.e., as something constant and unchanging, something objective that is out there waiting to inform people.

> Information is thus quite detached from people, who are seen as passive recipients. The focus is on the task of delivering information, and being informed is seen to ensue directly from its delivery. Such a view of information is characteristic of traditional library skills programs where the focus is on types of information resources, and on understanding the intricacies of classification and indexing schemes, and often limited to a specific library or system (Todd, 1995, pp. 55-56).

Knapp found that in the old model, one that focused on traditional library skills, students "have a basic misconception of the function of information inquiry, that they

look for and expect to find 'the answer to the question' instead of evidence to be

examined" (as cited in Kuhlthau, 2004, p. 10). This is because, in the old model, students

are encouraged to concentrate on locating sources, finding 'correct answers', and

gathering data. They are not prompted to critically examine the data that they have

gathered or to focus on the other underlying intellectual processes that are involved in the

retrieval and use of information and ideas. Kuhlthau notes, "The concept of teaching

library resources as evidence to be examined for shaping a topic rather than finding a

quick answer to a question is the key idea behind learning how to learn in the library

(2004, p. 11).

When Todd (1995) discusses information as an "effect", he links it to the process

of making sense of information and to the idea of information as something personal and

subjective. As he sees it, this perspective is faithful to the Latin roots of the word

information – in = within, *formere* = to shape or form (Trumble & Stevenson, 2002).

Thus, information is a process of *inward forming*, a process of making meaning.

> In this view of information, the emphasis is on the recipient and not the
>
> source: sense making, and this is what information literacy is all about.
>
> Conceptualizing information as it is internalized by people rather than as an
>
> objective product destined for passive recipients is a fundamental element
>
> of effective information literacy instruction. It shifts the focus of
>
> instruction from a concern for transmitting information to a concern for
>
> understanding where people are, what their learning needs and goals are,
>
> and the cognitive and physical processes by which they can move from

their initial state of knowledge to their goal. It also shifts the focus beyond

the use of libraries to abilities of people to define, analyze, synthesize,

organize, present, and evaluate information. Information skills are tools for

constructing meaning, the skills that enable learners to add to their existing

knowledge. (Todd, 1995, p. 56).

Authentic learning, inquiry learning, resource-based learning, and making the

information search process conspicuous to students are all integral parts of the new

model. Another characteristic is that students are given many opportunities to use,

interpret, learn from information, and develop and reflect on their search processes. One

goal of this model is to cultivate students' "abilities to use complex information from a

variety of sources to develop meaning or solve problems" (Kuhlthau, 1999, p. 11).

Another is to unite "the processes of gathering information with the uses of information"

(Lindgern as cited in Kuhlthau, 2004, p. 11).

The new model uses inquiry learning to make the connection between information

gathering and information use more explicit for students. In an inquiry approach teachers

provide engaging problems or questions for students to explore or students select their

own. Teachers then guide students as they develop solutions -- making the resources

needed for solving problems or constructing answers available to them (Donham 2001;

Kuhlthau, 2001, 2004; McGregor, 1999). By engaging students in inquiry learning

teacher-librarians and teachers prepare "them to apply their knowledge to the information

tasks in their lives" (Kuhlthau, 2004, p. 11). The new model pairs resource-based

learning with inquiry learning so that students have the opportunity to learn from their

interactions with a variety of learning resources rather than merely memorizing the predigested information found in class texts (Breivak & Senn as cited in Eisenberg et al, 2004). The new model also embeds information literacy in authentic learning – learning "that requires students to think, to develop in-depth understanding, and to apply academic learning to important, realistic problems" (Newmann & Wehlage, 1995, p.3). It seeks to weed out student assignments that "require little more than the presentation of the work of others" (Credaro, 1999-2003, p. 25). It replaces such assignments with projects that require students to explore essential questions, to construct personal meanings, and to create a product that shares what they have learned with others. Finally, teacher-librarians and teachers interweave an information search process (ISP) model into these approaches to support and guide students throughout the search process. Thus, "the project is taught and graded as a process, not just a product" (Mancall et al, 1992, p. 528). (Brock's ISP model can be found on pages 95-97 of this chapter and several other models can be found in Appendices C and D.)

Why does the new model incorporate the educational approaches discussed above? "Successful information literacy programs do not only focus on teaching information skills, they focus on designing learning experiences that require the use of information skills" (Bruce, 2002, p. 14). These approaches provide learning experiences that increase students' understanding of how information is organized and teach them intellectual skills that can be used in other situations (Bingham, 1993; Bruce, 2002; Kuhlthau, 1999; Lumley, 1994; Todd, 1995). They enable students to become flexible thinkers and independent learners (Bruce, 2002; Doyle, 1993; Lumley, 1994; Mancall et al, 1992) and

to learn subject content at greater and deeper levels (Bruce, 2202; Doyle, 1993; Limberg as cited in Bruce, 2002; Todd, 1995). They also show students that information inquiry is a recursive process (Cooper as cited in Credaro, 1999-2003) and increase the likelihood that they will learn how to learn and become lifelong learners (Bruce, 2002; Doyle, 1993; Kuhlthau, 2004; Lumley, 1994).

Using an ISP model is critical for cultivating and extending students' information literacy skills and for developing an effective school-wide information literacy program (Bishop, 2001; Donham, 2001; Thompson & Henley, 2000). The ISP model is a framework that supports students as they gather, evaluate, and make meaning from the information that they encounter. It also supports students as they integrate information from different sources together and work at reconciling new ideas with old ideas. An ISP model helps students to go beyond the information encountered and create what Bruner calls "products of mind" (Kuhlthau, 2004). Doyle explains the information to knowledge process this way: "The process that is conducted to answer the question is the point at which information becomes knowledge. It is where the facts are internalized into personal meaning by the learner" (2004, p. 8). When teachers and teacher-librarians teach collaboratively and combine actively guiding students in the information search process with the instructional approaches discussed earlier, students are more likely to become information literate (Bishop, 2001; Donham, 2001; Kuhlthau, 2004; Thompson & Henley, 2000).

To help students to progress from finding quick answers to learning how to examine evidence and shape a topic is at the heart of why schools are being asked to

41

implement an integrated, process approach to information literacy instruction. Authentic

learning, inquiry learning, resource-based learning, and an ISP model are integral to this

task. At the end of this chapter more will be said about how the new model impacts

teaching practices by possibly requiring teachers to modify their teaching techniques,

resources, and beliefs.

2.2   THE LACK OF INFORMATION LITERACY PROGRAMS

There seems to be a disconnect between the new school library model advocated in the

standards and research literature and the school library programs that one is likely to find

in many American schools. Kolencik (2001) reflected on this situation in the conclusion

of her study: "The implementation of information literacy process models such as

Eisenberg and Berkowitz's Big6 and Kuhlthau's Information Search Process as described

in the literature appears not to be occurring" (p. 119). (Their models can be found in

Appendices C and D.) Many schools have been unable to effectively implement any of

the changes that have been discussed (Kolencik, 2001; McCracken, 2001; Whelan, 2003).

According to a recent survey of teacher-librarians conducted by *School Library Journal*

the most often cited barrier to information literacy instruction is the lack of buy-in from

teachers and the second most cited is a lack of understanding about what information

literacy is and why it is important (Whelan, 2003). This lack of knowledge may explain

why in some schools teacher-librarians remain at the periphery of the instructional

program and are still primarily thought of as the "keepers of the books", babysitters, or

study hall monitors (Bingham, 1993; Kolencik, 2001; McCracken, 2001; Whelan, 2003). Although an extensive research base documents the efficacy of integrating information literacy into the curriculum, it, like most school library research, does not often appear in the mainstream educational literature (Hartzell, 1994, 2003; Peterson, 1999).

2.3   THE SOCIOPOLITICAL REALITIES OF IMPLEMENTING INFORMATION LITERACY

Some have called for more research on the change process used by American schools that have successfully implemented integrated information literacy programs (Bingham, 1993; Lumley, 1994: McCracken, 2001). However, certain helpful information is already available as evidenced in the following two tables that I compiled (Tables 1 and 2). The data presented were obtained by searching school library professional and research literature for resources that directly or indirectly discuss the educational change process involved in implementing information literacy or other innovations closely associated with information literacy. Lumley's (1994) study, which focused specifically on the change process related to the implementation of information literacy in an American elementary school, was particularly helpful. Although set in an elementary school, many of the organizational and educational circumstances described in this study are relevant to a high school setting. Other studies, monographs and articles were included if they explored information literacy related topics, e.g. an expanded curricular or instructional role for teacher-librarians, teaching information literacy

effectively, implementing inquiry learning, resource-based learning, or authentic learning, flexible library scheduling or teacher/teacher-librarian collaboration. Many relevant supports and barriers to implementation of the new model were discovered during this literature search.

Table 1 Factors supporting the implementation of a curricularly integrated information literacy program

Category	Support	Library research
Initiation	Stakeholders perceive a need for a change	Lumley, 1994; Willeke & Peterson, 1993
Initiation	There is a vision of what the change should produce	Lumley, 1994; Willeke & Peterson, 1993
Initiation	Success is more likely if the idea for implementing the new model originated in the building	Lumley, 1994
Initiation	Support of central office administrators is essential (for money, time, site-based staff development, subtle guidance, supportive policies (e.g., not allowing library time to be teacher release time))	Lumley, 1994; Thompson & Henley, 2000; Peterson, 1999; Willeke & Peterson, 1993
Initiation	Conduct a self-study of the strengths & weaknesses of the current library program that leads to self-recommendation for implementation of the new model (This information will be useful in making the case for change with central administrators & enlisting the help of outside change agents)	Lumley, 1994; Willeke & Peterson, 1993
Initiation	Support & buy-in of the teacher-librarian is essential	Callison, 1986; Lumley, 1994; Oberg, 2001
Climate	A climate of openness, i.e., teacher education, gathering support, listening to concerns, giving feedback	Donham, 1999; Farwell, 1998; Lumley, 1994

Table 1 (continued)

Category	Support	Library Research
Climate	Open communication between the teacher-librarian and the superintendent	Haycock, 1995
Climate	Fostering a climate of teacher decision-making, high expectation of faculty participation in the innovation, experimentation, & risk-taking	Lumley, 1994; McGregor, 2002; Oberg, 2001
Climate	Teachers who are open to collaborating	Donham, 1999, 2001; Lumley, 1994; Oberg, 2001; Peterson, 1999
Climate	Faculty history of successful change	Oberg, 2001
Climate	Faculty support for change	Bishop, 2001; Lumley, 1994
Climate	Take an evolutionary & not a revolutionary approach	Donham, 2001; Farwell, 1998; Lumley, 1994
Climate	Promote a culture of collaboration – it must become the norm – especially teacher and teacher-librarian collaboration	Bishop, 2001; Donham, 1999, 2001; Kuhlthau, 2001; Lumley, 1994; Muronaga & Harada, 1999; Oberg, 2001; Peterson, 1999; Thompson & Henley, 2000
Leadership	Identify teacher leaders & teach them about the change process; share power with them; teachers influencing teachers	Bell & Totten, 1992; Donham, 2001; Lumley, 1994; Oberg, 2001; Peterson, 1999; Willeke & Peterson, 1993
Leadership	Teacher-librarian must assume a leadership role	Donham, 2001; Haycock, 1995; Lance & Loertscher, 2002; Lumley, 1994; Muronaga & Harada, 1999; Oberg, 2001; Peterson, 1999; Thompson & Henley, 2000; Willeke & Peterson, 1993

Table 1 (continued)

Category	Support	Library Research
Leadership	Not ignoring dissenters; working early to identify & neutralize inhibitors by listening & addressing their concerns	Lumley, 1994; Peterson, 1999; Willeke & Peterson, 1993
Leadership	Strong leadership to guide the change process	Donham, 2001; Haycock, 1995; Lumley, 1994; McGregor, 2002; Oberg, 2001; Willeke & Peterson, 1993
Principal	Support of building principal	Donham, 1999, 2001; Farwell, 1998; Hartzell, 2002b, 2002c; Haycock, Lance & Loertscher, 2002; 1995; Lumley, 1994; McGregor, 2002; Oberg, 2001; Peterson, 1999; Willeke & Peterson, 1993
Principal	Principal shares leadership with building leaders and central office change agents	Lumley, 1994; McGregor, 2002; Oberg, 2001; Peterson, 1999; Willeke & Peterson, 1993
Principal	Principal shares leadership with building leaders and central office change agents	Lumley, 1994; McGregor, 2002; Oberg, 2001; Peterson, 1999; Willeke & Peterson, 1993
Principal	Principal supports the teacher-librarian having an active curricular role	Donham, 1999; Hartzell, 2002c; Haycock, 1995; Lumley, 1994; Oberg, 2001
Capacity	Use "knowledge sharing"; provide opportunities for staff to share what they've learned & tried (e.g., study groups, presentations, visitation, observation, & one-on-one contact	Donham, 1999, 2001; Lumley, 1994; Muronaga & Harada, 1999; Oberg, 2001; Thompson & Henley, 2000
Capacity	Give teachers the background knowledge as to why the change is good for students & their own teaching	Donham, 2001; Lumley, 1994; Oberg, 2001

Table 1 (continued)

Category	Support	Library Research
Capacity	Provide assistance as they attempt to modify & change teaching styles in the form of observation, feedback, modeling, visitation opportunities, & sharing of successful class plans	Donham, 2001; Lumley, 1994
Capacity	Teacher-librarian understands the inquiry process & how to facilitate student learning in the process	Kuhlthau, 2004
Capacity	Mutually held constructivist view of learning	Kuhlthau, 2001
Capacity	Provide continuous high-quality site-based staff development	Bishop, 2001; Donham, 2001; Haycock, 1995; Lumley, 1994; Willeke & Peterson, 1993
Goal Setting	Creating a plan for curricularly integrated units by teacher, grade level, and across grade levels (in an elementary setting). In a high school setting units could be done by course (e.g., different teachers teaching the same Psychology course), by grade level (e.g., 9th grade English classes), or cross-curricularly (e.g., English & Social Studies classes doing a Renaissance Unit)	Bishop, 2001; Donham, 1999, 2001; Lumley, 1994; Oberg, 2001
Goal Setting	Setting a first year implementation goal for teachers e.g., co-planning and teaching one curricularly integrated unit with the teacher-librarian during the first year	Bishop, 2001; Donham, 2001; Lumley, 1994; Oberg, 2001

Table 1 (continued)

Category	Support	Library Research
Resources	Facility that is large enough to accommodate 2 classes and additional students	Bishop, 2001
Resources	Large & current collection	Bishop, 2001; Lance & Loertscher, 2002; Willeke & Peterson, 1993
Resources	Facility that is attractive to students & teachers	Bishop, 2001
Resources	Essential resources (time, facilities, learning resources, budget) must be provided	Farwell, 1998; Hartzell, 2002c, 2003; Lance & Loertscher, 2002; Peterson, 1999
Resources	Minimum library staff levels are one full-time teacher-librarian & one full-time paraprofessional per school	Lumley, 1994; Thompson & Henley, 2000
Resources	Sufficient time for collaborative planning between the teacher-librarian & teachers	Bishop, 2001; Donham, 2001; Kuhlthau, 1989, 2001; Lumley, 1994; Oberg, 2001; Peterson, 1999
Resources	Sufficient time for students to work through the research process	Bishop, 2001; Kuhlthau, 1989, 2001, 2004
Curriculum & Instruction	Selection & use of an Information Search Process (ISP) model to guide & support student research	Bishop, 2001; Donham, 2001; Kuhlthau, 2004; Thompson & Henley, 2000
Curriculum & Instruction	Development of an articulated curriculum for information literacy instruction in a process-based and inquiry learning environment	Donham, 2001
Curriculum & Instruction	Adoption of an inquiry process	Bishop, 2001; Donham, 2001; Kuhlthau, 2001, 2004
Curriculum & Instruction	Actively guiding students in the information search process	Kuhlthau, 2004; Thompson & Henley, 2000

Table 1 (continued)

Category	Support	Library Research
Curriculum & Instruction	Well designed student assignments	Kuhlthau, 2001
Curriculum & Instruction	Teachers using resource-based and authentic learning	Thompson & Henley, 2000
Policy	Flexible scheduling of the school library	Donham van Deusen, 1993; 1995; Donham van Deusen & Tallman, 1994; Lumley, 1994; Oberg, 2001; Peterson, 1999; Thompson & Henley, 2000; Willeke & Peterson, 1993
Policy	Establishing policies & guidelines that direct & support information literacy education and support the instructional role of the teacher-librarian	Bishop, 2001; Bruce, 2002; Haycock, 1995; Oberg, 2001
Policy	Participative collection development (active teacher input)	Bishop, 2001
Attitude	Collaborative partners & groups share an understanding & respect for each other	Peterson, 1999
Attitude	Collaborative partners & groups are flexible in the way that they organize & accomplish their work	Peterson, 1999
Attitude	Clarification of teacher and teacher-librarian roles	Kuhlthau, 2001

Table 2 Factors impeding the implementation of a curricularly integrated information literacy program

Category	Barrier	Library Research
Initiation	Lack of teacher buy-in & support for information literacy	Whelan, 2003
Initiation	Lack of support & buy-in of the teacher-librarian regarding the importance of information literacy	McCracken, 2001; Whelan, 2003
Climate	Norms of teacher self-containment & isolation; teachers used to planning & teaching autonomously; self-contained teaching styles; teachers do not believe that collegiality has benefits	Henri, 1998; Kolencik, 2001; 2001; Lumley, 1994; Peterson, 1999
Leadership	Lack of principal and other administrative support for information literacy	Henri, 1998; Henri, Hay & Oberg, 2002; Kolencik, 2001; McCracken, 2001; Whelan, 2003
Principal	Lack of curricular leadership by the principal	Kolencik, 2001
Principal	Principal does not see a leadership role for the teacher-librarian	Hartzell 2002c; Kolencik, 2001
Principal	Principal does not believe that the teacher-librarian has much to offer	Henri, 1998
Capacity	Lack of knowledge on the part of the principal regarding what information literacy is & how to develop it	Kolencik, 2001
Capacity	Lack of knowledge on the part of teachers regarding what it means to be information literate (i.e., they confuse it with information access)	Whelan, 2003

Table 2 (continued)

Category	Barrier	Library Research
Capacity	Lack of experience with or knowledge of technology & how to use technology to support learning	Bruce, 2002; Cohen, 1995
Capacity	Lack of adequate teacher-librarian training and educational knowledge	Haycock, 1996; Henri, 1998
Capacity	Teacher-librarian & teachers do not have a sufficient understanding of the underlying process of learning through research	Kuhlthau, 2004
Capacity	Previous experience with a traditional library skills program (especially in reference to teachers new to building after initiation)	Lumley, 1994
Resources	Lack of a full-time teacher-librarian	Henri, 1998; McCracken, 2001; Zimmerman, 1998
Resources	Lack of a full-time clerk in the library	Henri, 1998; Kolencik, 2001; Lumley, 1994; McCracken, 2001
Resources	Lack of space to accommodate classes and additional students	Kolencik, 2001
Resources	An already heavy workload	Henri, 1998; Lumley, 1994
Resources	Principal, teacher, or teacher-librarian turnover	Bishop, 2001; Lumley, 1994
Resources	Lack of time to plan & practice the components of the new model (e. g., collaborative planning & teaching, inquiry or resource-based learning)	Farwell, 1998; Henri, 1998; Henri et al, 2002; Kolencik, 2001; Kuhlthau, 2001; Lumley, 1994; McCracken, 2001; Peterson, 1999; Whelan, 2003

Table 2 (continued)

Category	Barrier	Library Research
Resources	State mandated tests result in teachers not wanting to take time in the library because of needing time to get students ready for tests	Henri et al, 2002; Whelan, 2003
Resources	Lack of money for collection development	Bishop, 2001; Henri, 1998; Kolencik, 2001; McCracken, 2001; Zimmerman, 1998
Resources	Lack of money for professional development about information literacy	Henri, 1998; Henri et al, 2002
Curriculum & Instruction	Failure to select & use an Information Search Process (ISP) model (for continuation of the initiative after staff turnover)	Bishop, 2001
Curriculum & Instruction	Lack of an articulated curriculum for information literacy instruction	Bishop, 2001
Curriculum & Instruction	Views of learning that conflict with the constructivist views inherent in information literacy	Bruce 2002
Curriculum & Instruction	Individual teaching styles that are not conducive to resource-based learning, curriculum integration, & co-planning & team teaching	Bruce, 2002; Cohen, 1995; Kolencik, 2001; Lumley, 1994
Curriculum & Instruction	Poorly designed assignments	Donham, 2001
Policy	Fixed library schedule	Cohen, 1995; Donham van Deusen & Tallman, 1994; Henri, 1998; Kolencik, 2001; McCracken, 2001; Willeke & Peterson, 1993

Table 2 (continued)

Category	Barrier	Library Research
Policy	Existing policy & scheduling that requires teacher-librarians to provide teacher release time	Henri, 1998; Lumley, 1994
Policy	Lack of school policy or guidelines regarding information literacy	Henri et al, 2002
Attitude	Teacher-librarian views herself as a "support person" & does not see her curricular role	Lumley, 1994
Attitude	Teacher-librarian does not see herself in an instructional role	Cohen, 1995
Attitude	Teacher-librarian prefers working in isolation; self-contained teaching style	Henri, 1998; Lumley, 1994
Attitude	Teacher-librarian does not agree that teaching information literacy is a top priority, i.e., traditional librarian skills are seen as more important	McCracken, 2001; Whelan, 2003
Attitude	Teachers do not believe that process is important	Henri, 1998
Attitude	Teachers are afraid of the lack of privacy inherent in the new model	Lumley, 1994
Attitude	Stereotypical view of the role of the teacher-librarian by teachers and/or the principal	Hartzell, 2002c; Kolencik, 2001; Lumley, 1994; McCracken, 2001
Attitude	Stereotypical view of the role of the school library by teachers and/or the principal	Hartzell, 2002c; Kolencik, 2001; Lumley, 1994
Attitude	Low status of the teacher-librarian – she is not a "real" teacher but a "mere" librarian; principal & teachers do not see an instructional role for her	Hartzell, 2002c; Credaro, 1999-2003; Kolencik, 2001

Table 2 (continued)

Category	Barrier	Library Research
Attitude	Role conflict, i.e., some teachers feel that an instructional role for the teacher-librarian impinges on their role as a classroom teacher. (This was found to be a significant factor for the low participation of certain teachers)	Cohen, 1995; Donham, 2001; Lumley, 1994
Attitude	Teachers uncomfortable with having to schedule their classes into the library	Lumley, 1994
Attitude	Concerns about student behavior & discipline when going to & from the library on their own	Lumley, 1994

2.4 RESOURCES FOR CHANGE

Much of the existing literature about the need for a new approach to information literacy instruction is directed at teacher-librarians and school library experts (Hartzell, 1994, 2002c, 2003). However, the change needed to undertake and implement this innovation requires establishing wider relationships among teachers, administrators, parents, and students in order to solicit their input and support (Breivik & Senn, 1993; Bruce, 2002; Credaro, 1999-2003; Deal, 1990; Fullan, 2001a, 2001b; Lumley, 1994; Peterson, 1999). Teacher-librarians and the administrators who support them need to acquire a deep understanding of the educational change process if they are to learn how to initiate and guide this change and create the working conditions that will support its successful implementation and sustain its continuation. (Elmore 2000; Fullan 1993a, 2001a, 2001b).

Michael Fullan's writings provide the framework for my discussion of the generic

educational change literature. Fullan has studied educational change and leadership for

over twenty-five years (Fullan, 2001b) and is "one of the most visible theoreticians

applying organizational learning to schools as whole systems. His subject is hope:

warranted or unwarranted optimism, even in the face of uncertainty.…Fullan shows

how." (Lucas as cited in Smith & Lucas, 2000, p. 301). His writings draw upon his own

research and clinical experiences in schools and districts and his study of the work of

other researchers and theorists in the areas of educational change and leadership and

business change and leadership (Fullan, 2001b). An examination of his writings reveals a

scholar whose ideas have evolved and changed in response to findings that have

challenged his previously held assumptions about educational change. Into this Fullan-

based framework, I shall weave the concepts, research findings, and reflections of other

experts of educational change and leadership.

2.5 AN INTRODUCTION TO EDUCATIONAL CHANGE

Fullan (1985, 2001b) identifies three broad phases to change: initiation (or mobilization

or adoption), implementation (or initial use), and continuation (or institutionalization,

incorporation, or routinization). *Initiation* is the first phase of the educational change

process that leads up to and includes the decision to proceed with implementation of the

change (Fullan, 2001b). *Implementation* is the second phase of the change process that

"consists of the process of putting into practice an idea, program, or set of activities and

structures new to the people attempting or expected to change" (Fullan, 2001b, p. 69).

Finally, *continuation* is the third phase of the process during which a decision is made

about continuing or institutionalizing an educational innovation or change (Fullan, 2001).

To stop here, however, would leave one with a very simplistic view of educational

change.

Experts in educational change caution that change is a complex and

multidimensional process (Deal, 1990; Fullan, 1992, 1993a, 2001a, 2001b, 2005; Fullan,

Bertani, & Quinn, 2004; Glickman, 1991) and, as such, it cannot be reduced to a series of

stages, guidelines, or *cookie cutter* solutions that can be slavishly followed (Fullan, 1992,

1993a, 2001a; Glickman, 1991; Meier, 1995; Sergiovanni, 1994). This means that it is

not enough to simply have a good instructional idea or solution (Deal, 1990; Elmore,

2000; Fullan, 1992, 1993a, 2001a, 2001b, 2002a; Fullan, et al., 2004; Meier, 1995), i. e.,

it is not a matter of proposing a change and following steps A, B, and C in order to have

teachers gladly and successfully implement it. The change literature stresses that having

a good idea is merely the starting point for change (Fullan, 1992, 1993a, 2001a, 2001b;

Glickman, 1991, Meier, 1995). Educators still must figure out how to successfully lead

the change process in their particular school or district (Elmore, 2000; Fullan, 2001a,

2001b, 2002a). Fullan's 25/75 rule succinctly explains the conundrum of educational

change: "Twenty-five percent of the solution is having good directional ideas; 75% is

figuring out how to get there in one local context after another" (2001b, p. 268).

Educational change is messy because it is wrapped up in context – timing, people, past

and present relationships, and a whole previous history of change attempts (Deal, 1990; Fullan, 2001a, 2001b).

It is a mistake to gloss over or ignore the complexity, multidimensionality, and messiness of change and the real demands that it makes on the teachers and administrators who are expected to implement the changes being suggested or mandated (Fullan, 2001b; Meier, 1995). Having an over simplified view of the change process invites failure (Fullan, 2001b). In fact, most attempts at educational change do fail (Fullan, 2001a). In order not to fail, the task for educators, then, is to figure out how to successfully implement an innovation in their school and, if it is effective, to help it spread to other schools in their district (Elmore, 2000; Fullan, 1993a, 2001b).

2.6   LEADERSHIP FOR CHANGE

Learning about leadership is an important aspect of learning about change since effective leadership is essential for successfully guiding the implementation of good instructional ideas (Fullan, 1993a, 2001a, 2001b). Elmore links leadership to change when he defines leadership as "the guidance and direction of instructional improvement" (2000, p.13). Sergiovanni also acknowledges the relationship between leadership and change when he defines leadership as: "the exercise of wit and will, principle and passion, time and talent, and purpose and power in a way that allows the group to increase the likelihood that shared goals will be accomplished" (1994, p. 170).

In his recent writings, Fullan discusses the five qualities of leadership that he believes are key to developing the kind of school leaders who can lead complex change. These qualities are moral purpose, understanding change, relationship building, knowledge creation and sharing, and coherence making (Fullan 2001a, 2002a). For Fullan these "five components of leadership represent independent but mutual reinforcing forces for positive change" (Fullan, 2001a, p. 3). He stresses that it is only by working on each of these five qualities that school leaders can develop the mindset that they need to create the type of environment required to foster deep and lasting educational change (Fullan, 2001a, 2002a). In the sections that follow, I will discuss the meaning and significance of each component and its relationship to the change process.

2.6.1   Moral purpose

In the first chapter of his book, *Change Forces,* Fullan writes, "Scratch a good teacher and you will find moral purpose" (1993a, p. 10). He relates this statement to a 1992 study by Stiegelbauer that examined students' reasons for becoming teachers. Although Stiegelbauer's study revealed different motivations for entering teaching, the most common student motive was the desire to make a difference – students entered teaching in order to have a positive impact on children's lives or to contribute to building a better society (1993a, 1993b). Fullan wonders why it is that as teachers progress through their careers, many become disheartened and no longer see teaching as socially meaningful. Both he (1993a, 1993b) and Meier (1995) blame the experience of teaching -- teacher preparation and induction programs and working conditions for causing many teachers to

dampen, extinguish, or not develop their sense of moral purpose. "Those with a non-existent or limited sense of moral purpose are never called upon to demonstrate their commitment. Those with moral potential, however, inchoate, are never developed. Those with a clearer sense of purpose are thwarted" (1993a, p. 11).

Fullan defines moral purpose as "social responsibility to others and the environment" (2002a, Moral Purpose section, ¶ 1) and asserts that it "keeps teachers close to the needs of children and youth." (1993b, p. 12). Moral purpose is concerned with *making things better*. When schools and districts do not attend to the moral purpose that underlies teaching, they miss the opportunity to link the personal moral commitment of their teachers (i. e., their desire to make a difference) to a schoolwide (or districtwide) collective moral purpose (Fullan, 1993a; Fullan, et al., 2004). The goal of this purpose should be making a difference in the lives of *all* students (Elmore, 2000; Fullan, 1993a, 2002a, 2002b; Fullan, et al., 2004; Meier, 1995). In a school or district with moral purpose, everyone is focused on improving instructional practice (Elmore, 2000; Fullan, 1993a, 2002b). By harnessing the hearts and minds of teachers to a larger moral commitment -- one that goes beyond the students in an individual teacher's classroom – school leaders have the means for moving whole schools and districts along the path of positive change for *all* students (Fullan, 1993a, 1993b).

It is important that a school's or district's commitment to making a difference in the lives of *all* students be explicitly stated and known to everyone in the community (Elmore, 2000; Fullan, 2005; Fullan, et al., 2004). Such a commitment must become a part of the culture of a school or district. "Making a difference in the lives of students

requires care, commitment, and passion as well as the intellectual know-how to do something about it" (Fullan, 2001b, p. 30). All teachers and administrators should have no doubt that everyone is focused on improving instructional practice. Although reform starts with instructional improvement, Fullan cautions that it must go further if it is to lead to deep and more lasting change. To achieve this, he suggests that schools and districts publicly foster a commitment "to (1) raising the bar and closing the gap of student learning; (2) treating people with demanding respect (caring within a framework of high expectations); and (3) altering the social environment (making schools aware that all schools in the district must improve" (Fullan, 2005, p.1).

2.6.2   Understanding change

> We've all seen it happen many times. A well-meaning and talented
> principal initiates curriculum reform, the teachers come on board because
> they have no choice, and the principal micromanages the effort. Implicitly
> he says: "we're going to move forward, whether you like it or not." On the
> surface these efforts look successful because of the good things that
> happen. Change occurs, sometimes very quickly, and teachers admit that
> they learned something. But because the change is mandated, the teachers
> don't feel they own it; it isn't theirs. There is thus a tremendous cost.
> Teachers begin to teach "to the principal"; they prepare lessons they think
> the principal wants to see instead of what the students need. As the
> teachers close their doors, morale and innovation decline along with

communication. Ironically, some of these principals are unbelievable

educators, however the systemic consequences of their forceful influence as

managers leads to the opposite of good education (Senge, 2000, pp. 91-92).

So, how do educational leaders deal with the unintended negative consequences of

imposed change? How do leaders avoid mandated change or quickly transition from

mandated change if it is unavoidable? Or, most importantly, how do leaders work

through the complexities of change and get to shared meaning and commitment and the

substantial improvement that they harbinger (Fullan, 2001b)? In *The Once and Future*

King, Merlyn advises Wart: "There is only one thing for it then – to learn. Why the

world wags and what wags it…. Learning is the thing for you" (1987, p. 182). His

advice is also appropriate for educators. To find the answers to the above questions, or

perhaps to understand that there are no easy and fast answers to any "change questions",

one must become a student of change. Fullan's six-item list, Understanding the Change

Process, provides a framework for beginning one's study of educational change. His six

items are:

1. The goal is not to innovate the most.

2. It is not enough to have the best ideas.

3. Appreciate the implementation dip.

4. Redefine resistance.

5. Reculturing is the name of the game.

6. Never a checklist, always complexity. (Fullan, 2001a, p. 34)

In the sections that follow, I will discuss the meaning and significance of each item.

2.6.2.1 Understanding change: the goal is not to innovate the most Fullan advises school leaders to innovate selectively and coherently and cautions that "The organization or leader who takes on the sheer most number of innovations is not the winner" (Fullan, 2001a, p. 35). Researchers refer to schools that innovate indiscriminately and superficially as "Christmas tree" schools and they describe them as suffering from a "severe case of "projectitis" or meaninglessness" (Fullan, 2001b, p. 21). "These schools glitter from a distance – so many innovations, so little time – but they end up superficially adorned with many decorations, lacking depth and coherence" (Fullan, 2001a, p. 36). Because a multitude of outside sources (federal and state agencies, business, professional, non-profit, foundation, and university groups) are sponsoring an ever expanding number of educational innovations, it is becoming harder to sort through and select those that are promising and fit with programs that are already under way (Fullan, 2001b).

What motivates school leaders to take on every new idea that comes along? Sometimes they adopt innovations in order to obtain the resources that accompany them. "Districts welcome external funds and / or policies either as an opportunity to obtain extra resources (which they use for other purposes and / or which represent a symbolic act of appearing to respond to a given need) or as a chance to solve particular local problems" (Fullan, 2001b, p. 63). At other times leaders engage in "policy churn" -- i.e., they advance reform ideas to please their electoral constituencies. By doing so, they can take credit for initiating reform. However once an innovation is selected they pay no

attention to its implementation or continuation because they are already looking for their

next reform (Elmore, 2000). Finally, Pincus found that some districts just want to appear

avant-garde. Thus, they adopt "whatever is popular among leading professional peers"

with little thought about educational merit, time, or coherence (as cited in Fullan, 2001b,

p. 64).

What problems can result from taking on too many innovations? First, adopting

an excessive number of innovations in too short a time period can lead to fragmentation,

overload, and exhaustion. Second, even promising-looking innovations can "turn out to

be burdens in disguise" (Fullan, 2001b, p. 24). Third, teachers and administrators can

become angered or "burnt out" by the never-ending deluge of unwanted, uncoordinated,

and / or disconnected innovations that rain down upon them. This can lead to a "this too

shall pass" or "I'll wait it out" mindset. Fourth, multiple innovations can result in

incoherence when vastly different approaches to educational reform are attempted

simultaneously (Fullan, 2001b).

2.6.2.2 Understanding change: it is not enough to have the best ideas As I discussed

earlier, having a good idea is merely the starting point for change (Fullan, 1992, 1993a,

2001a, 2001b; Glickman, 1991, Meier, 1995). "Change is learning" (Fullan, 1993, p.27).

However, leaders cannot mandate that teachers learn – at least not the kind of learning

that leads to conceptual understanding and appreciating the deeper meaning and

underlying implications of a new approach. Leaders cannot mandate sustained learning

that causes teachers to reflect on their practice and engage in deep questioning (Fullan,

1992, 2001b). Finally, leaders cannot mandate learning that helps teachers to commit to new ideas and gives them the courage to attempt innovative approaches to teaching in their classrooms (Fullan 1993, 2001a, 2002).

Change is not about having the best ideas – it is about getting the commitment of others (Fullan, 1992, 1993, 2001a, 2002a; Meier, 1995). Teachers and parents should have more input into shaping new approaches than academics and policymakers (Deal, 1990). Thus, if a leader becomes so attached to an innovation that she tries to implement it in a rigid and narrow way she jeopardizes its successful implementation (Elmore, 2000; Fullan 2001b). In the same vein, if a leader leaves no room for teachers' values, ideas, or interpretations she increases the likelihood that key teachers will resist her change efforts. (Fullan, 1992). Teachers will also resist change efforts that provide no opportunities for voicing their concerns and / or imply that their experiences are not relevant (Fullan 2001b). "People do not learn or accomplish complex changes by being told or shown what to do" (Fullan, 2001b, p. 80). An educational leader who insists on imposing her own realities on her staff may drive resistance underground (Fullan, et al., 2004) and, as a result, achieve only superficial compliance (Fullan, 2001a).

Meier staunchly opposes reform by administrative fiat. Instead she counsels a principal to lead through persuasion and respect and wryly shares that a principal's dreams will not always prevail. Meier maintains that a leader, who is initiating a new approach, needs to involve herself with her staff by collaborating, encouraging compromises, allowing teachers to employ individual variations (if educationally sound),

"raising issues, provoking reflection, inspiring people, [and] holding up standards of work and competence" (1995, p. 129).

To get teachers to entertain the idea of change, change experts recommend that school leaders model flexibility when it comes to the details of change (Deal, 1990; Elmore, 2000; Fullan, 1992, 2001b; Meier, 1995; Sergiovanni, 1994). They insist that change is an evolutionary process – a journey not an event (Fullan 2001b, Goldenberg & Gallimore, 1991). Flexibility helps the change process move ahead. As the process unfolds, ongoing learning continues and, as skills develop, other materials, approaches and beliefs come into play. All of these elements then act upon the change and reshape the way that it evolves (Fullan, 2001b). Both Meier and Fullan emphasize the importance of the experience of the change process. Meier cautions against shortchanging the change process (1995) and Fullan underscores his belief that clarity, skills, commitment, and, ultimately, ownership can only grow out of the change process (Fullan, 2001b).

In addition to flexibility, Elmore argues that administrators to need develop a model of distributed leadership for guiding change. (Distributed leadership is a model of leadership based on shared leadership; it includes all knowledgeable staff in the change effort -- teachers and others with the skills and expertise needed to implement the change) (Elmore, 2000). He does not believe that the change process can be controlled – only guided.

> "[T]he term "control" applied to school improvement is a dubious concept
> because one does not "control" improvement processes so much as one
> guides them and provides direction for them, since most of the knowledge

required for improvement must inevitably reside in the people who deliver

instruction, not in the people who manage them. Control implies that the

controller know exactly what the controllee (if you will) should do, whereas

guidance and direction imply some degree of shared expertise and some

degree of difference in the level and kind of expertise of individuals"

(Elmore, 2000, p. 14).

For Elmore, distributed leadership – i.e., tapping into the expertise of all participants – is

the only effective way for guiding change and getting to improvement.

2.6.2.3 Understanding change: appreciate the implementation dip An implementation dip

– a dip in performance and confidence is a normal and healthy sign that teachers are

trying to develop the new skills and understandings that an innovative approach requires

(Fullan, 2001a). An absence of problems usually means that not much is being attempted

(Fullan, 1993). Fullan urges administrators to look at change from the perspective of the

teachers who are expected to implement it. In the passage below he describes the

phenomenology of educational change.

Under conditions of uncertainty, learning, anxiety, difficulties, and fear of

the unknown are *intrinsic* to all change processes, especially at the early

stages. One can see why a risk-taking mentality and climate are so critical.

People will not venture into uncertainty unless they or others appreciate

that difficulties are a natural part of any change scenario. And if people do

not venture into uncertainty, no significant change will occur…(1993, p.

25, emphasis in original).

Elmore also cautions that improvement occurs in "bumps and slides" (2000, p.

13). Both he and Glickman (1991) suggest that leaders observe and confer with teachers

for the purpose of working with them to critically analyze and understand why some

actions seem to work and others do not. Elmore notes that when administrators respond

to problems of practice "with help, support, and recognition…" they increase "teachers'

perceptions of community within a school" (2000, p. 16). Thus, teachers need and

appreciate scaffolding to help them develop the new skills and understandings an

innovation requires. Some effective scaffolding techniques are: opportunities to learn

new skills and techniques by observing others who have already mastered them, training

that is organized around teachers' perceived classroom needs, and, most importantly,

working conditions that enable and push teachers to acquire a conceptual understanding

of the pedagogical processes involved in an innovation (Fullan, 1993; Goldenberg &

Gallimore, 1991).

Fullan (2001b) and Meier (1995) both agree that good change is hard work. In

order to support the teachers who are engaged in this hard work, Meier advocates for

schools to be run as sites of teacher training, "places of reflective experimentation" and

"labs for learning about learning" (p. 140). Her prescription for creating a supportive

environment for initiating, implementing, and refining new instructional approaches is to

give teachers:

- Sufficient support for risk-taking from school board members, administrators and parents.

- Money to try out ideas (even unsuccessful ones).

- Access to expertise when and for as long as they need it.

- Autonomy to not follow expert advice when they feel it is inappropriate.

- A commitment of time -- time by the day, by the week, and by the year to puzzle things out and see them through.

- Freedom to seesaw back and forth between their new way of seeing and their old way of seeing.

- Freedom to experiment and discover what works and what does not.

   (Meier, 1995)

Duckworth, like Meier, stresses that the learning of new skills and understandings needs to be supported by a school culture that fosters risk-taking and experimentation. She believes that when people examine mistakes and correct them they often gain a better understanding of a phenomenon than by not encountering mistakes and reflecting on them. She explains that:

   Exploring ideas can only be to the good, even if it takes time. Wrong ideas, moreover, can only be productive. Any wrong idea that is corrected provides far more depth than if one never had a wrong idea to begin with. You master the idea much more thoroughly if you have considered alternatives, tried to work it out in areas where it didn't work, and figured

out why it was that it didn't work, all of which takes time (1996, pp. 71-72).

The change literature cautions that when leaders fail to recognize, appreciate, and support the notion that "educational change is a *learning experience* for the adults involved" (Fullan, 2001b, p. 70, emphasis in original), they prevent deep learning and deep change from taking place. Instead, what they realize are short-term gains or superficial solutions (Fullan, 1992).

2.6.2.4 Understanding change: redefine resistance "Too often change-related problems are ignored, denied, or treated as an occasion for blame and defense. Success in school change efforts is much more likely when problems are treated as natural, expected phenomena, and are looked for" (Fullan, 1993, p. 26). Many factors, however, pressure school leaders to not face change-related problems head on. It is a natural human response for a leader to want to be with people who think as she does. It is also natural for a leader to avoid and listen sparingly to people who do not share her views. A leader must resist the urge to quash resistance and, instead, listen to Heifetz's advice to "respect those that you wish to silence" (as cited in Fullan, 2001a, p. 75). If a principal gives in to these natural responses she "will drive resistance underground and miss valuable lessons" (Fullan, et al., 2004, p. 45).

It is necessary that school leaders take the concerns of resisters seriously because it is only by working through problems that educational communities can break through to deeper understandings and real implementation (Fullan, 1993, 2001a, 2002a; Meier,

1995). Change is an uncertain and anxious time for everyone. That is why it is crucial

that leaders give teachers opportunities to talk about the emotional aspects of what they

are experiencing – a chance to voice fears, share concerns, ask questions, and express

dissent (Fullan, 1992, 1993, 2002a; Meier, 1995). School leaders need to respect

dissenters because they may have ideas that leaders missed. Maurer cautions "They may

see alternatives we never dreamed of. They may understand problems about the minutiae

of implementation that we never see from our lofty perch atop Mount Olympus" (as cited

in Fullan, 201a, p. 42). Listening to dissenters' ideas and concerns can prevent bad

mistakes and not listening can cause problems to fester and eventually impede successful

implementation (Fullan, 1993, 2001a, 2001b, 2002a).

2.6.2.5 Understanding change: reculturing is the name of the game Fullan warns school

leaders school leaders not to focus too narrowly on specific innovations – i.e., "to resist a

focus on short-term gains at the expense of deeper reform where gains are steady but not

necessarily dramatic" (2001a, p. 63). He and others insist that kind of change that

schools need transcend specific structural change, e.g., teacher evaluation and reward

systems, block scheduling, etc… (Deal, 1990; Elmore, 2000; Fullan, 2002a). Deal (1990)

refers to these types of structural changes as "first-order" changes. He and others stress

that educators need to engage in "second-order" changes -- i.e., substantive or complex

change that alters the values, mind-sets and fundamental character of schools (Deal,

1990; Elmore, 2000; Fullan 1993, 2001a, 2001b; Meier, 1995; Sergiovanni, 1994).

Fullan aptly summarizes their view in this passage: "Structure does make a difference,

but it is not the main point in achieving success. Transforming the culture – changing the way we do things around here – is the main point. I call this *reculturing*" (Fullan, 2001a, pp. 43-44).

What form should this reculturing take? For Elmore *reculturing* means schools "learning how to do new things and, perhaps more importantly, learning how to attach positive value to the learning and the doing of new things" (2000, p. 19). Fullan believes that the point of *reculturing* is for teachers to develop a collaborative work culture. This culture would be characterized by "norms of collegiality that respect individuality; norms of continuous improvement; problem-coping and conflict resolution strategies; lifelong teacher development that involves inquiry, reflective practice, collaboration, and technical skills; and restructuring initiatives" (Fullan, 1992, p. 19). Change experts and reformers see *reculturing* as a means for drastically changing and improving the cultures of schools.

2.6.2.6 Understanding change: never a checklist, always complexity There is no recipe or cookbook for change (Fullan, 2001a). So many things happen that can affect the course of change: government policies can change, key people can switch roles or leave, new technologies can debut, student populations can change, economic downturns can hit, and conflicts can erupt. Each of these altered variables can have a rippling effect on the change process -- ramifications that are not easily foreseen or understood (Fullan, 1993). This is *dynamic complexity* and it "is the real territory of change: 'when "cause and effect" are not close in time and space and obvious interventions do not produce expected

outcomes' because other "unplanned' factors dynamically interfere" (Fullan, 1993, p. 20). Unfortunately, this is normal.

In his book, *Leading in a Culture of Change*, Fullan discusses three interrelated lessons that school leaders must learn if they are to be effective in a culture of change. The lessons are: "the vital and paradoxical need for slow knowing, the importance of learning in context, and the need for leaders at all levels of the organization, in order to achieve widespread internal commitment" (2001a, pp. 121-122).

Slow knowing relates to the idea of evolutionary planning. Change plans cannot be rigid. They must be flexible so that they can be shaped and reshaped in response to reflective practice and changing variables (Fullan, 1992, 1993, 2001b; Fullan, et al., 2004; Meier, 1995). Thus, Fullan advises leaders "to start small and experiment, gradually expanding on the successful…" (1992, p. 20). Slow knowing also relates to the idea that change cannot be controlled but only guided (Elmore, 2000). It recognizes that over time people become more skilled, their ideas get clearer, shared commitment grows, and, in order to get to real implementation, new visions of change must be allowed to emerge (Fullan, 1993, 1995, 2001b; Fullan, et al., 2004; Meier, 1995).

Learning in context grows out of the notion that organizations are living organisms with a complex system of subcultures and each subculture has a story that symbolizes its way of thinking about the world (Deal, 1990; Fullan 2001a). Effective leaders seek to understand the cultures of their schools before trying to change them (Fullan, 1992). Leaders need to learn the different stories of their schools, understand what each story represents, and identify the common threads that run through stories, and, only then,

begin the process of weaving a school wide story (1990). Deal describes this process as a "trapeze-like process of letting go and grabbing on" (1990, p. 9). He and others stress how important it is that during the change process people be allowed to move between the past and the present as they work on developing the new understandings that they will need to move their school into future (Deal, 1990; Fullan 2001b; Meier, 1995). Learning in context also means understanding that effective change "requires grief work, a historical connection between past, present, and future – and celebration" (Deal, 1990, p. 9).

Fullan's third lesson, the need for leaders at all levels of an organization, corresponds to Elmore's model of distributed leadership. An effective leader builds leadership capacity at all levels of her school. Her goal is to become a leader of leaders. By fostering the leadership skills of others an effective leader expands her school's capacity for deeper learning and far-reaching change and guarantees that reculturing efforts will continue after she has gone (Fullan, 1992, 2002a, 2005).

A final quote from Fullan paints a vivid picture of the many unknown variables alluded to in the phrase, *never a checklist, always complexity*. "I think of the group [of teachers] in the Maritimes in Canada with whom we were working who defined change as 'likened to a planned journey into uncharted waters in a leaky boat with a mutinous crew'" (1993, p. 24).

2.6.3   Relationship building

Early in his book, *Leading in a Culture of Change*, Fullan links successful change initiatives to improving relationships: "If relationships improve, things get better. If they remain the same or get worse, ground is lost" (2001a, p. 5). Why is it so important that leaders be "consummate relationship builders" (2001a, p. 5)? What exactly is at work here?

Sergiovanni asserts that the process of creating community is key to achieving reforms. He also directly links school improvement to creating and nourishing relationships or community among teachers, students, administrators, parents, and all others who are involved in a school (1994). Sergiovanni shares this definition of community:

> [C]ommunities are collections of individuals who are bonded together by natural will and who are together binded to a set of shared ideas and ideals. This bonding and binding is tight enough to transform them from a collection of "I's" into a collective "we". As a "we", members are part of a tightly knit web of meaningful relationships. This "we" usually shares a common place and over time comes to share common sentiments and traditions that are sustaining (1994, p. xvi).

Moral purpose, relationships, and organizational success are closely intertwined in schools (Fullan, 2001a). Lewin and Regine (as cited in Fullan, 2001a, p. 52) state "Actually, most people want to be a part of their organization; they want to know the organizations' purpose; they want to make a difference." However, this cannot happen in

schools with strong norms of isolation and autonomy. (This is why principals need to

foster relationships and collaboration in their schools.) Schools dominated by norms of

isolation and autonomy are characterized by ambiguous goals, no shared technology of

teaching, and a lack of agreement among teachers and administrators about what

constitutes desirable outcomes and how best to achieve them (Elmore, 2000). Whereas,

schools with collaborative norms are "characterized by an emphasis on collaboration and

continuous improvement" (Elmore, 2000, p. 15). In such schools "seeking or giving

collegial advice is not a gauge of relative competence, but rather a professional action

viewed as desirable, necessary, and legitimate in the acquisition of new skills" (Elmore,

2000, p. 15). In successful schools principals tap into their teachers' desires to belong,

share a purpose, and make a difference by cultivating respectful, caring, authentic, and

honest relationships among their staff. This means that they accept all the meaningful,

emotional, and messy things that come with relationships (Sergiovanni, 1994). Effective

principals even work at forging positive relationships among disconnected or resisting

teachers. Such relationships can have a profound effect on the overall climate of a school

(Fullan, 2002a).

Fullan links the creation and sharing of knowledge that accompany improved

relationships to the development of better teachers. This is why he insists that "Well-

established relationships are the resource that keeps on giving" (Fullan, 2002a, Improving

Relationships section, ¶ 2). Meier also links better relationships to developing better

teachers: "It turned out that although trust took a long time to build – sometimes years –

it was the most efficient form of staff development" (1995, p. 130). She believes that

improved teaching and learning are fostered by creating a school culture where respect

for students and respect for teachers are at the heart of all school relationships.

2.6.4   Knowledge creation and sharing

In a school or district with moral purpose everyone is committed to making a difference

in the lives of all students and everyone is focused on improving instructional practice.

Elmore maintains that "improvement is more a function of learning to do the right things

in the setting where you work than what you know when you start to do the work" (2000,

p. 25). Thus, improving instructional practice is not a matter of simply accessing the

right information (in a book, at a workshop, or embodied in a consultant). "Information,

of which we have a glut, only becomes knowledge through a social process" (Fullan,

2002a, Knowledge Creation and Sharing section, ¶ 1). Learning to improve instructional

practice can only happen in context because information in and of itself is not valuable.

Information becomes valuable when people understand what the information might mean

to them and why it matters. (That is why it is not enough to merely have the best ideas).

In their statements both Elmore and Fullan are hinting at the difference between explicit

knowledge (knowledge found in words, numbers, data, and information) and tacit

knowledge (invisible knowledge that is hidden in skills, beliefs, understandings, insights

and intuitions) (Fullan, 2001a).

Schools have stores of both kinds of knowledge. But are schools aware of what

they know? And, more importantly, do schools know how to access the tacit knowledge

of individual staff members and convert it into explicit knowledge so that it can be shared with other members?

Elmore's distributed leadership model is a way for principals to distribute knowledge throughout their schools. His model recognizes that different individuals have varied levels and kinds of expertise. In order to tap into this expertise school leaders must understand "how individuals vary, how the particular knowledge and skill of one person can be made to complement that of another, and how the competencies of some can be shared with others" (Elmore, 2000, p. 15). In successful schools, principals make use of the expertise, talent, and care of teachers and they are not "threatened by the wisdom of others; instead, they cherish it by distributing leadership" (Glickman, 1991, p. 8). When knowledge is needed that does not exist in their schools principals need to tap into district or outside sources of knowledge. However, knowledge cannot be distributed unless teachers have extended periods of time to meet with other teachers or consultants for the purpose of creating, sharing, or acquiring knowledge (Fullan, 2001a; Goldenberg & Gallimore, 1991).

In addition to distributed leadership, specific elements of school climate can foster knowledge creation and sharing:

> Constructive and helpful relations enable people to share their insights and
> freely discuss their concerns. They also enable, microcommunities, the
> origin of knowledge creation in companies, to form and self-organize.
> Good relationships purge a knowledge-creation process of distrust, fear,
> and dissatisfaction, and allow organizational members to feel safe enough

to explore…unknown territories…(Von Krough et al., as cited in Fullan, 2001a, p. 82).

Teachers also need venues for creating and sharing knowledge: observing one another and discussing what they learned or could learn from each other, peer coaching, group problem-solving sessions or curriculum work (Glickman, 1991), staff development that relates to teachers' perceived classroom needs (Goldenberg & Gallimore, 1991), opportunities to engage in regular discussions about teaching and learning, opportunities to engage in collaboration (Fullan, 2001b), observing demonstration lessons, and groups of teachers visiting another school (with their principal) in preparation for developing a new instructional practice (Fullan, 2001a).

Fullan admonishes his readers that "it is when we are learning in context that knowledge becomes specific and useable" (2001a, p. 104) and Elmore reminds his that "Improvement occurs through organized social learning" (2000, p. 25). The knowledge bases of schools need to grow but cannot grow without people sharing. (That is why relationships and professional learning communities are so crucial for improving schools!) Fullan believes that "A norm of sharing one's knowledge with others is the key to continual growth for all" (Fullan, 2002a, Knowledge Creation and Sharing section, ¶ 1). Both Fullan (2001a) and Elmore (2000) explicitly state that schools and districts must name knowledge creation and sharing as a core value.

Everyone should believe that it is their responsibility to share their knowledge with others and not hold their expertise over others' heads. In this way, an individual's knowledge can be "stretched over" others who have different areas of expertise (Elmore,

2000). This sharing and acquiring of knowledge and shared problem-solving and

meaning-making leads to high levels of commitment and satisfaction. It also creates

communities of reciprocity and mutual dependency (Elmore, 2000) and fuels moral

purpose in schools (Fullan, 2002a).

School and district leaders should be constantly working on ways to convert tacit

knowledge into shared knowledge (Fullan, 2001b). They should also be working on

eliminating barriers to knowledge creation and sharing and increasing opportunities for

knowledge growth (Fullan, 2001a). Finally, every principal needs to become a lead

learner and model "lifelong learning by sharing what he or she has read lately, engaging

in and encouraging action research, and implementing inquiry groups among…[his or

her] …staff" (Fullan, 2002a, Knowledge Creation and Sharing section, ¶ 2).

2.6.5   Coherence making

An individual teacher developing and refining her skills is a good thing for a school. A

principal fostering and developing professional learning communities is also a good thing

for a school. However, neither occurrence means that anything of much import is

actually happening for a school: teachers may be isolated in their classrooms, under the

spell of groupthink, or balkanized into opposing factions (Fullan, 1993). However, if a

school has committed to a moral purpose, worked at understanding the complexities of

change, cultivated new and improved relationships among those in its community, and

made knowledge creation and sharing a central tenet -- they have probably forged

"coherence through the checks and balances embedded in their interaction" (Fullan,

2002a, Coherence Making section, ¶ 1). Program coherence is "the extent to which the school's programs for students and staff learning are coordinated, focused on clear learning goals, and sustained over a period of time" (Newmann et a. as cited in Fullan, 2001a, p. 64). Put another way, coherence making is striving to "focus energy and achieve greater alignment" (Fullan, 2002a, Coherence Making section, ¶ 2). Coherence or organizational integration is the flip side of the overload and fragmentation that frequently plague complex systems.

Two factors relate to coherence making: *self-organizing* and *strange attractors*. Self-organizing is what results after school leaders have committed to moral purpose, studied change, invested in relationships, and cultivated knowledge sharing. Sergiovanni describes this as an "inside-outside strategy" – one that requires time and "reflection as teachers struggle with such issues as who they are, what they hope to become for the students they serve, and how they will decide, organize, teach, learn, and live together" (1994, p. XV). Out of this interaction and experience emerges a shared body of ideas – ideas and goals that become the focal point their work. This coherence-making process is crucial for moving a school along the path of positive change for *all* students and teachers. Elmore asserts that "Organizational coherence on basic aims and values, then, is a precondition for the exercise of any effective leadership around instructional improvement" (2000, p. 17). Meier passionately insists that real reform, reform that takes root and transforms a school "cannot be undertaken by a faculty that is not convinced and involved' (1995, p. 107). Therefore, teachers and administrators must agree on a shared body of ideas. Meier maintains that the experiences of weighing

choices, making decisions, and, hopefully, arriving at a consensus are necessary processes for teachers and administrators to engage in if they are to contemplate and commit to new ideas about teaching and learning. Fullan echoes her passion when he explains that coherence on paper and coherence at administrative meetings are not important: "the only coherence that counts is…what is in the minds and hearts of members of the organization" (2001a, p. 114).

Strange attractors, the second factor of coherence making, are experiences, forces, insights, solutions, or new knowledge that come about as a result of all the processes that have been set into motion (moral purpose, understanding change, fostering relationships and knowledge sharing). They are however, unexpected outcomes. Fullan writes, "Think of strange attractors as a series of experiences that will galvanize (attract) the deep energies and commitment of organization members to make desirable things happen" (2001a, p 115). Strange attractors are one of the many reasons that school leaders cannot control the change process, but can only seek to guide it.

Lastly, Fullan cautions that although coherence is essential and is something that school leaders should always work toward, it is a state that can never be completely realized (2002a). However, working toward coherence is what makes complexity livable and effectiveness possible.

2.7 HOW INFORMATION LITERACY IMPACTS CURRENT TEACHING PRACTICES

As previously discussed, educational change can be simple or complex. Fullan (2001b) notes that each participant brings his or her own unique perspective or starting point to change: one teacher may perceive very little impact from a new program or policy and another may feel overwhelmed by the extent of the change required. Thus, the same innovation may be perceived as either simple or complex. In his discussion of the multidimensionality of change Fullan explains that an educational innovation may require:

"(1) the possible use of new or revised *materials* (instructional resources such as curriculum materials or technologies), (2) the possible use of new *teaching approaches* (i.e., new teaching strategies or activities), and (3) the possible alteration of *beliefs* (e.g., pedagogical assumptions and theories underlying new policies and programs)" (Fullan, 2001b, p. 39, emphasis in original).

The more alterations that participants must make in the use of materials, teaching strategies, and beliefs, the more complex the change will be (Fullan, 2001b). The participants in this case are the teachers, teacher-librarian(s), principals, and central office administrators who are responsible for implementing the new model. An examination of the library research literature reveals that much is already known about the way that an integrated, process approach to information literacy impacts the three dimensions of teaching practice.

In the world of educational practice the three facets of teaching practice i.e., materials, strategies, and beliefs, are intertwined. Why update or revise materials and technologies unless such changes better support one's pedagogical assumptions? Why implement new teaching strategies or activities unless they reflect one's theory about how students learn best? Beliefs about pedagogy and learning underpin and inform the choices that teachers make regarding teaching materials and strategies (Meier, 1995). Beliefs about pedagogy and learning also underpin and inform information literacy instruction. Dividing the three aspects of teaching practice into separate categories makes it easier to show how information literacy impacts teaching. However, this division is artificial and done purely for my convenience. What follows is a series of three discussions about the specific alterations that participants may have to make to their beliefs, teaching materials, and teaching approaches in response an integrated process approach to information literacy programming.

2.7.1   Its impact on beliefs

An examination of the library literature reveals that information literacy borrows heavily from theorists and researchers in the field of cognitive psychology (Kuhlthau, 2001, 2004; McGregor, 1999). Aspects of the work of three prominent theorists on construction, John Dewey, George Kelly, and Jerome Bruner, relate most directly to the view of information seeking inherent in an integrated, process approach to information literacy (Kuhlthau, 2004). As noted earlier, constructivists view "learning as a highly interactive process of constructing personal meaning from the information available in a

learning situation to create new knowledge" (Marzano, 1992, p. 5). The constructivist

theory of learning provides a theoretical foundation for many of the teaching strategies

advocated by researchers and educators who want to raise the intellectual quality of

schools: authentic learning (Newmann & Wehlage, 1995), inquiry-based learning, and

resource-based teaching and learning (Kuhlthau, 2001). A constructivist theory of

learning also provides a suitable "frame or lens for viewing the information-seeking

behavior of library users" (Kuhlthau, 2004, p. 13). The six constructivist based

educational concepts about how children learn that are listed below provide a theoretical

framework for implementing the new model.

- Children learn by being actively engaged and reflecting on that experience.

- Children learn by building on what they already know.

- Children develop higher-order thinking skills through guidance at critical

  points in the learning process.

- Children's development occurs in a sequence of stages.

- Children have different ways of learning.

- Children learn through social interaction with others (Kuhlthau, 2001, pp.2-4).

    Some researchers have found that the successful implementation of an integrated,

process approach to information literacy is related to the extent that participants'

perceptions, attitudes, and beliefs are consistent with constructivist concepts listed above

or moving in that direction (Kuhlthau, 2001).

2.7.2 Its impact on teaching materials

The most obvious way that an information literacy program impacts teaching materials is that it requires teachers to move away from a textbook centered approach. A resource-based approach to teaching and learning is central to information literacy (Breivik & Senn, 1991, 1993, 1994; Bruce, 2002; Eisenberg et al, 2004; Humes, 1999; Kuhlthau, 1999; Thompson & Henley, 2002). This means that teachers and students must have access to a rich variety of resources in all formats in order to facilitate and support both teaching and learning (Bishop, 2001; Koechlin & Zwaan, 2002; Lance et al, 2000b; Lance & Loertscher, 2002; Willeke & Peterson, 1993). For traditional teachers this requires going beyond the conventional information formats of books, paper journals, indexes, and reference sources and accessing information in electronic formats -- the Internet, subscription databases and indexes, and automated library catalogs. For teachers who use the Internet exclusively to supplement their textbooks, it necessitates going beyond the Internet and accessing additional resources in a variety of formats. Thus, along with the Internet, diaries, other primary sources, newspaper and magazine articles, reference and nonfiction books, maps, charts, poems, plays, fiction books, CD-ROMS, digital databases, experts, museums, works of art, videos, musical compositions, musical and historical recordings, cultural artifacts, and even games must be integrated into teaching plans. They must also be made available to students as they explore new concepts and discover relationships, seek the answers to essential questions, and create knowledge (Thompson & Henley, 2000). From the user's perspective, "What sets a good library off from other sources of documentary material is its provision not merely of

simple summaries for shallow interests but of a complex array of sources from which the individual can piece together for himself what may never yet have been explicitly summarized" (Wilson, as cited in Kuhlthau, 2004, p. 5). Finally, in addition to a rich collection of diverse resources, an effective information literacy program requires computer software and hardware, access to information networks, and equipment for accessing, processing, and presenting information in a variety of formats (Breivik & Senn, 1994; Bruce, 2002; Humes, 1999; Lance et al, 2000b; Lance & Loertscher, 2002; Mancall et al., 1992; Thompson & Henley, 2000).

Teachers and students cannot have access to an ample and current resource collection unless sufficient funds are provided for the purchase of books, subscriptions, software, and hardware. Since information is ever changing and not static, money must be allocated annually to renew electronic and paper subscriptions, to purchase new resource materials to support curricular changes, to replace resource materials that have worn out or become outdated. Money is also needed to update obsolete software and hardware. Since a resource-based approach to teaching and learning is an integral part of any information literacy program, an adequate resource collection is an essential component (AASL & AECT, 1998; Bishop, 2001; Henri, 1998; Kolencik, 2001; Lance et al, 2000b; McCracken, 2001; Zimmerman, 1998).

Another important support for developing an effective information literacy program is an adequate facility. Students and teachers must have access to a modern and spacious school library – one designed for flexible use, changing needs, and access to technology (Bishop, 2001; Lance et al, 2000a). They will need space for study and

research (for both multiple classes and drop-in students) (Kolencik, 2001), informal reading, group projects, information literacy instruction, resource collections, hardware, and program administration (Lance et al, 2000a; Office of Commonwealth Libraries, 2005).

If sufficient funds for resources (Bishop, 2001; Henri, 1998; Kolencik, 2001; Lance & Loertscher, 2002; McCracken, 2001; Zimmerman, 1998) and a satisfactory facility (Kolencik, 2001; Lance et al, 2000a) are not provided to support an information literacy program, it will be very difficult to develop an effective program or sustain an established one (Hartzell, 2002b, 2002c, 2003).

2.7.3   Its impact on teaching approaches

An important way that information literacy impacts teaching strategies is that it obliges teachers and teacher-librarians to collaborate with one another. This means that both parties must be open to sharing ideas about teaching and establishing a teaching partnership (Donham, 1999, 2001; Lumley, 1994; Oberg, 2001; Peterson, 1999). For some participants it will require abandoning isolated approaches to planning, teaching, and assessing. Library research findings support the notion that the most effective teaching relationship, i.e., the one that fosters the greatest increases in student achievement, is one in which the teacher and teacher-librarian collaborate to integrate information literacy into the curriculum (Bruce, 2002; Lance & Loertscher, 2001, 2003; Lance et al, 2000). In this partnership the teacher provides the content and the context of the curriculum and the teacher-librarian provides the resources and the process

(Kuhlthau, 2001). Both members have the opportunity to engage in curriculum planning, lesson design, instruction, student assessment and lesson evaluation (Breivik & Senn, 1994; Donham, 1999; Loertscher, 1988, 2005; Peterson, 1999). Thompson & Henley (2000) describe this relationship in greater detail:

Teachers and library media specialists are responsible for working together to design units or lessons that fulfill both curriculum and information literacy goals and objectives. Teachers are experts on matters concerning the academic curriculum and individual student learning styles and abilities; library media specialists are experts on information literacy instruction, information resources, and related technologies. Together they collaborate on designing lessons that meet curriculum standards and information literacy objectives and that engage all students in hands-on, challenging, real-life problem-solving activities" (p. 92)

The constructivist concept of learning theory that underpins information literacy requires additional changes in teaching strategies. The table below (Table 3), which is adapted from a 1998 AASL teleconference on information literacy, depicts some of these changes. The common characteristic shared by these methods is their movement away from a teacher-centered approach to teaching and toward a student-centered approach.

Table 3 Changing paradigms

Old Teaching Methods	New Teaching Methods
Lecture/Listen	Actively Engaged
Individual Effort	Group Effort
Subjects	Integration
Facts	Problem Centered
Sage on the Stage	Guide on the Side
Spoken/Written	All Resources
RRR (42 hours)	Authentic/Portfolio
Insular Programs	Community Collaboration

Teacher-centered - - - - - - - - - - - - - - - - - - > Student-centered

(Barron, as cited in Thompson & Henley, 2000, p. 65)

Another way that information literacy impacts teaching activities is that it requires

that students have many opportunities to engage in critical thinking and problem solving

(Koechlin & Zwaan, 2002; Kuhlthau, 2001; Thompson & Henley, 2000). To become

effective users of information students need to become "aware of different ways of

experiencing information use through engaging in relevant information practices and

reflection" (Bruce, 2002, p. 2). Such experiences require time. Duckworth (1996)

counsels educators to understand that students need time to construct knowledge that is

meaningful and complex:

Teachers are often, and understandably, impatient for their students

to develop clear and adequate ideas. But putting ideas in relation to each

other is not a simple job. It *is* confusing; and that confusion *does* take time.

All of us need time for our confusion if we are to build the breadth and

depth that give significance to our knowledge (p. 82, emphasis in original).

The teacher and teacher-librarian need to have ample time together to plan appropriate

research units and assignments (Bishop, 2001; Donham, 2001; Farwell, 1998; Kuhlthau,

1989, 2001; Lumley, 1994; Oberg, 2001; Peterson, 1999) and students need sufficient

time to reflect and work through the research process under their guidance (Bishop, 2001;

Kuhlthau, 1989, 2001).

Teachers and teacher-librarians need to create interdisciplinary curricular units

whenever possible so that students understand that information is not neatly

compartmentalized but cuts across disciplines (Thompson & Henley, 2000). These units

give students the chance to engage in authentic learning – to think, to develop a broad-

based understanding about a topic or issue, and to apply what they have learned to actual

problems (Newmann and Wehlage, 1995). To help students develop their problem

solving and critical thinking skills teachers and the teacher-librarian need to model these

skills. This can be done by frequently and deliberately thinking out loud -- letting their

students see these thinking processes in action (Mancall, Aaron, &, Walker, 1986;

Thompson & Henley, 2000).

Another change is that the focus of instruction must shift from an exclusive

concern about content and product and expand to include an emphasis on the learning of

processes and active or hands-on learning (Kuhlthau, 2201; Thompson & Henley, 2000). Thus, in addition to valuing and assessing students' final products, teachers and teacher-librarians need to examine and evaluate the processes that students use to find and evaluate resources and organize and create their final products.

Finally, students need many opportunities to have instruction and practice in the research process. To ensure that students have the chance to learn the information practices that are fundamental to effective information use, it is essential that a school have an articulated information literacy curriculum (Bishop, 2001; Donham, 2001).

The key component of this curriculum is an Information Search Process (ISP) model. Such a model gives students a series of processes or steps that they need to negotiate when they are engaged in information problem solving (Bruce, 2002). Although ISP models "are imperfect examples of a process that is generally not linear, but circular" (O'Grady, 1999, p. 62), they do help students see that researching is a rational and analytical process with stages (Donham, 2001). It is vital that once an ISP model is chosen that is used consistently throughout the school (Bishop, 2001; Donham, 2001; O'Grady, 1999; Thompson & Henley, 2000). ISP models are also important for other reasons: a model "enhances community among teachers and creates consistency between classrooms and the library media center. The model guides instruction, student assessment, and curricular development" (Kuhlthau, 2001, p. viii). Thus, an ISP model provides a common language for talking about and teaching the research process. With this common language the teacher-librarian and "teacher can approach truer integration of information process and content instruction beyond parallel teaching" Donham, 2001,

p. 23). It allows both collaborative partners to own the language of the process. Without this common language there is little shared meaning about how to go about teaching students to do research, students have no rational and analytical approach to doing research, and there is no consistent framework for integrating information literacy into the curriculum (Donham, 2001; Kuhlthau, 2001).

Numerous ISP models and standards have been created for facilitating the development of information literacy skills. For her 1993 dissertation Brock created a model that analyzed and elaborated on the common characteristics of the ISP models then available (see Table 4). Although her model is more than ten years old, it is still helpful and relevant because of the insight that Brock gives into the key teaching strategies used to guide students in the information search process: instructing and coaching them throughout the model and facilitating their self-direction (other ISP models can be found in Appendices C and D).

Table 4 Brock's Information Search and Use Model

Information Search & Use Process	INSTRUCTING	COACHING	FACILITATING
Phase 1 Defining the Problem	√ Build awareness of ISU Process. √ Introduce & model strategies for selecting, developing, & refining a topic for formulating research questions.	✓ Monitor & provide feedback as students practice brainstorming, clustering, & webbing techniques in cooperative learning settings.	✓ Help students select topics independently. ✓ Suggest sources for topic overview. ✓ Consult as students develop authentic topics & research questions.
Phase 2 Developing Information-Seeking Strategies	✓ Introduce information sources. ✓ Model development of search strategy.	✓ Provide guidance as students identify, expand, limit, & combine terms to develop search strategies in practice settings.	✓ Suggest specific resources for student topics. ✓ Help students develop individual search strategies.
Phase 3 Locating Information	✓ Demonstrate retrieval of citations from indexes & databases, location of sources in media center, & location of information in sources. ✓ Discuss access to sources outside the media center	√ Give directions as students practice retrieving citations, locating sources, & using scanning & skimming techniques to find information in a controlled setting.	✓ Assist as students locate information independently. √ Provide access to outside resources.

Intermediary- Directed -------------------------------> Student-Directed

Table 4 (continued)

Information Search & Use Process	INSTRUCTING	COACHING	FACILITATING
Phase 4 Gathering & Assessing Information	✓ Discuss criteria for evaluating relevance, reliability, & adequacy of information. ✓ Demonstrate strategies for taking notes. ✓ Explain rights & responsibilities of information use.	√ Monitor & provide feedback as students apply criteria for evaluating & selecting or rejecting information using practice data in cooperative learning settings.	√ Consult as students assimilate, evaluate, select or reject, & record information independently. √ Help students determine copyright compliance & obtain clearances as needed.
Phase 5 Synthesizing Information	✓ Introduce & model strategies for organizing information, identifying relationships, & drawing conclusions.	✓ Give guidance as students practice strategies for organizing & synthesizing information in cooperative settings.	✓ Help students organize & synthesize information independently. ✓ Consult as students plan presentation of results. ✓ Help students obtain & use required resources.

Intermediary- Directed -------------------------------> Student-Directed

Table 4 (continued)

Information Search & Use Process	INSTRUCTING	COACHING	FACILITATING
Phase 6 Evaluating & Refining Results	✓ Discuss criteria for evaluating product & process. ✓ Discuss how evaluation may suggest revisions.	✓ Provide direction as students apply criteria & suggest revisions using practice data in cooperative learning settings.	✓ Provide feedback as students evaluate process & products. ✓ Consult as they make revisions.

Intermediary-Directed ------------------------------> Student-Directed

(Brock, 1993, p. 81)

2.7.4   Summary of the impact of information literacy

Fullan notes that any change can be "examined with regard to difficulty, skill required, and extent of alterations in beliefs, teaching strategies, and use of materials" (Fullan, 2001b, p. 78). Implementing an integrated, process approach to information literacy will be difficult for some. Like any meaningful instructional change, it will take time for participants to develop the teaching skills and professional relationships that the new model requires (Elmore, 2000; Fullan, 1993, 2001a, 2001b, 2002; Meier, 1995). In addition, all three dimensions of teaching practice are impacted by this innovation. Therefore, implementing a school-wide information literacy program is a complex change for a school to undertake. However, without meaningful change in all three

dimensions of teaching practice a school will not be able to achieve the desired outcomes: information literate students, students who know how to think and learn independently, students who are able to "use information meaningfully in the workplace, for citizenship, and for daily living" (Stripling, 1999, p. 11).

Each participant must come to terms with the changes that this innovation necessitates. People cannot be mandated to learn or accomplish complex change. Deep change takes time as people develop multilevel understandings of the reasons for and implications of a change over time (Fullan, 1993, 2001b). Fullan maintains "that it is what people develop in their minds and actions that counts" (2001b, p. 80). To this end, the constructivist philosophy of learning that underpins information literacy should also underpin implementation efforts. Otherwise, schools run the risk of implementing an information literacy program on paper only (Fullan, 2001b). Elmore concisely describes what an active and hands-on approach to educational change looks like:

> People make these fundamental transitions, by having **many** opportunities to be exposed to the ideas, to argue them into their own normative belief systems, to practice the behaviors that go with these values, to observe others practicing those behaviors, and, most importantly, to be successful at practicing in the presence of others (that is, to be seen to be successful). (Elmore, 2000, p. 31, emphasis in original).

3.0   STUDY DESIGN

Often, problems are knots with many strands, and looking at those strands can make a problem seem different. (Fred Rogers, 1994, p. 99)

3.1   STATEMENT OF INTENT

In 1998 the AASL and AECT jointly enacted new standards that called for the implementation of an integrated, collaborative, process approach to information literacy instruction in school library programs. An examination of the literature reveals that very little is known about the change process used by American high schools that have successfully implemented the type of information literacy program advocated by these standards (Lumley, 1994). This study sought to add to the knowledge and understanding of the organizational change process for implementing effective information literacy programming by accessing the experiences of participants in order to identify and describe the elements of a successful change process and the barriers and supports that affect its success, and to discover how the elements are interrelated. It also explored participants' beliefs about the affect of the integrated program on student achievement and examined how these beliefs relate to the change process.

3.2   GUIDING RESEARCH QUESTIONS

1. Why and how was an integrated approach to information literacy initiated and implemented in the school library program?

2. Do participants believe that the changes in the school library program have been or will be institutionalized? If so, how or why?

3. What factors supported or impeded the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?

4. What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships among the various participants?

5. How have the changes in the school library program impacted student learning?

3.3   APPROACHES TO RESEARCH

In order to achieve the intent of my study, I chose a qualitative naturalistic inquiry. This was an appropriate choice because advocates of the naturalistic paradigm believe that:

- "Realities are wholes that cannot be understood in isolation from their contexts…" (Lincoln & Guba, 1985, p. 39); therefore, to obtain the fullest understanding research interactions should take place in-context.

- Gaining access to the tacit knowledge of participants is crucial for understanding the "nuances of the multiple realities" of an experience (Lincoln & Guba, p. 40).

- By using inductive data analysis one "is more likely to identify the multiple realities" found in a study's data (Lincoln & Guba, p. 40).

- The final focus of the study should emerge from the study's data rather than the preconceptions of the inquirer (Lincoln & Guba, 1985).

Simons (1996, ¶ 20) defines a case study as "the examination of an instance in action." To achieve the intent of my study I conducted a single case study in one American high school that had successfully implemented an effective integrated information literacy program. A case study format allowed me to explore the tacit knowledge of participants in order to obtain their perspectives of the change process and the barriers and supports that affected it (Lincoln & Guba, 1985; Simons, 1996; Stake, 1978). In-depth interviews, focused on participants' recollections and understandings of the change process as they experienced it, were the primary data for my study. Additional data was obtained from relevant school documents, conversations, my personal research journal, and related literature.

A case study format allows one to report participants' perspectives on their school's change process in their own words (Simons, 1996) and check the veracity of their perspectives with other participants and other data sources (Lincoln & Guba, 1985). Thus, triangulation is built into the case study format. Case studies are also characterized by "thick descriptions" of a study's context – descriptions that help others to understand a site, that show the site through participants' eyes, and enable others to vicariously

experience what it was like to be there (Lincoln & Guba, 1985; Lumley, 1994; Simons, 1996; Stake, 1978). In fact, it is these descriptions which provide "the basis for both individual 'naturalistic generalizations'…and transferability to other sites", (Lincoln & Guba, 1985, p. 42).

Finally, a case study format was selected because "it is suited to demonstrating the variety of mutually shaping influences present" at my site (Lincoln & Guba, 1985, p. 42). Some have also found that because case study data is more open to presenting the complex and multiple perspectives of a case, it gives policy makers opportunities to increase their understanding of programs and inform the judgments that they need to make (Simons, 1996). Information from my case study will help department heads, principals, and upper level administrators identify and better understand the issues and processes that are involved in achieving effective information literacy programming.

I was the primary instrument for gathering data because a human being is the instrument most capable of adapting to a variety of situations and "grasping and evaluating the meaning" of participants and objects (Lincoln & Guba, 1985, p. 39). The primary sources of data were the recollections of key program participants obtained through a series of individual exploratory interviews (Lincoln & Guba, 1985). The interview was selected as the chief method for gathering data because it is uniquely suited for obtaining inside meanings -- the "*reconstructions*" of those involved in the change process – their "activities,… feelings, motivations, claims, and concerns…" (Lincoln & Guba, 1985, p. 268). Although Lincoln and Guba (1985) advise against recording interviews, other researchers do advise it (Lashbrook, 1986; Mellon, 1990). Because the

advantages of recording the interviews (an accurate record and the opportunity to review key parts to assure understanding) seemed to outweigh the disadvantages (the possibility of experiencing mechanical problems while in the field), all interviews were digitally recorded and transcribed. Finally, all forms of data were analyzed using grounded theory practices to develop 'working hypotheses' that described the case (Lincoln & Guba, 1985).

Little is known about the change process for implementing an effective information literacy program (Lumley, 1994). Many past investigations of effective school library programs have explored the role of the principal (Henri, Hey & Oberg, 2002; McGregor, 2002; Oberg, 2001) or the personal characteristics of the teacher-librarian (Bell, 1992; Charter, 1982; Farwell, 1998; Haycock, 1990). This state of affairs made a grounded theory investigation the most appropriate for this study:

…[T]he strongest case for the use of grounded theory is in investigations of relatively uncharted waters, or to gain a fresh perspective in a familiar situation. In the first instance, it can be easily understood that where no theory regarding a situation exists, it is impossible to test theory. It is especially helpful – even necessary – in attempting to study complex areas of behavioral problems where salient variables have not been identified. In the second instance, it becomes clear that the value of a fresh perspective in a familiar situation is in its applicability to practical problems (Stern, 1994, p. 30).

The procedures of grounded theory provide researchers with a disciplined process for generating "theoretical constructs which explain the action in the social context" (Stern, 1994, p. 32) and, more importantly, "for coming to see possible and plausible relationships among them" (Piantanida, Tananis, & Grubs, 2002). In this case, grounded theory was used to generate theoretical constructs or concepts that explain the successful change process followed by one school, the barriers and supports that affect its success, how the program is perceived to impact student achievement, and how these concepts are related. These concepts and relationships can then be used by others to better understand and successfully implement effective information literacy programming in their school libraries.

Out of experience, concepts are formed. Concepts are imaginative distillations of the essential features of the experienced world. They can be manipulated and modified and they can be used to generate possibilities that, though never encountered directly in the environment itself – infinity and dragons, quarks and goblins, for example – can have pragmatic and aesthetic value (Eisner, 1993, p. 7).

I followed the five-phased grounded theory research process described by Stern (1994) in her article, "Grounded theory methodology: Its uses and processes": the collection of data, concept formation, concept development, concept modification and integration, and the production of the research report. The key characteristic of this research process is that one engages in the five phases of research at once. Schram describes it as the "simultaneous and sequential collection and analysis of data" (Schram,

2003, p. 74). Glaser and Strauss (1967) use the term *theoretical sampling* for this process

of collecting data for the generation of theory. Others use the term *purposive sampling*

(Lincoln & Guba, 1985) or *selective sampling* for this process (Stern, 1994). Glaser and

Strauss describe it as a process "whereby the analyst jointly collects, codes, and analyzes

his data and decides what data to collect next and where to find them, in order to develop

his theory as it emerges" (1967, p. 45). Thus, emerging theory (grounded in the data)

controls the process of data collection and shapes and changes the study as the research

process unfolds and salient factors make themselves known during the interview and

document examination processes (Glaser, 1978; Glaser and Strauss, 1967; Lincoln &

Guba, 1985).

3.4   SELECTION OF THE STUDY SITE

I asked school library experts to identify potential sites that met the study's information

literacy program criteria (Nalwasky, 1990). (A copy of the criteria, *Site Selection*

Criteria, and the nomination form, *Site Nomination Form*, can be found in Appendices B

and E.) Experts were identified from the faculties of regional colleges and universities

with school library certification programs, researchers in the field of school libraries,

national and state school library organizations, state departments of education, and the

recommendations of school library experts who advised me. (A list of these experts,

Library Experts Asked to Nominate Study Sites, can be found in Appendix F. Copies of

the contact letter, *Letter to Experts Requesting Nominations* and the reminder postcard,

Postcard to Experts Reminding About Nominations, can be found in Appendices G and H.) Based on their expert recommendations a short list of potential study sites was developed.

The teacher-librarians from this recommended list of high schools were contacted by letter, email or telephone. (A copy of this letter, email, or telephone text, *Initial Contact with the Teacher-Librarian*, can be found in Appendix I.) After briefly explaining the purpose of my study, they were asked if they were willing to answer some questions about their school and library program. These questions were to verify that the school and program information provided by the school library experts was accurate and that the school did indeed meet the criteria of the study (Nalwasky, 1990). (These questions, *Telephone Questions*, can be found in Appendix J.) Those teacher-librarians who responded and whose schools met the study's criteria were asked if they were interested in participating in the study. Those who were interested were given a copy of the initial interview questions, a description of the study, and a form that requested permission to quote the subject. (These questions, *Initial Interview Questions* and the documents *Study Description* and *Permission to Quote* can be found in Appendices K, L, and M respectively)

During the last phase of the selection process, the school principals of those schools in this smaller selection pool were contacted and informed of the study. They were then asked if they were willing to participate in the study. They were given a list of initial interview questions and appropriate study documents (previously described). (A copy of this letter, *Initial Letter to Principal*, can be found in Appendix N.)

The study site was selected from this final pool (schools meeting the selection criteria whose teacher-librarian and principal were both willing to participate in the study). At this time the district superintendent was contacted and asked for his permission to interview key members of the high school's staff and examine relevant district documents. (A copy of this letter, *Letter to Superintendent Requesting Permission to Study,* can be found in Appendix O.) Enclosed with this letter was a list of the initial interview questions and appropriate study documents (previously described). If permission had been denied the superintendent of the next school on the final selection list would have been contacted.

After obtaining the superintendent's permission, the teacher-librarian(s), and principal were recontacted and asked to identify others who, in their opinion, were key program participants (i.e., change agents and/or collaborators) during the initiation and/or implementation of their information literacy program. I sent introductory letters to those whom they identified and invited them to be study participants. (A copy of this letter, *Initial Contact Letter to Study Participants,* can be found in Appendix P.) Enclosed with this letter was a list of the initial interview questions and appropriate study documents (previously described). All study participants were asked to read and consider signing the *Permission to Quote* form (see Appendix M). Those who agreed to be quoted were asked to sign and return the form to me. These forms are being kept in a secure location with the study data.

3.5   CHARACTERISTICS OF THE STUDY SCHOOL AND PARTICIPANTS

The high school selected for this study is one of two secondary schools in a mixed urban/rural school district of 4,407 students in northwestern Pennsylvania. The study school is located in a small city that is home to a small liberal arts college. The U.S. Census Bureau lists the following Census 2000 demographic profile data for this city on its American FactFinder webpage (see Table 5 below):

Table 5 Census 2000 demographic profile highlights

Characteristics	Number	Percent
Total population	13,685	100.0
Under 5 years	757	5.5
18 years and over	11,033	80.6
65 years and over	2,558	18.7
White	12,587	92.0
Black or African American	686	5.0
American Indian and Alaska Native	24	0.2
Asian	86	0.6
Some other race	46	0.3
Hispanic or Latino (of any race)	152	1.1
Population 25 years and over	8,317	100.0
High school graduate or higher	6,753	81.2
Bachelor's degree or higher	1,987	23.9
Median family income in 1999 (dollars)	38,227	(X)
Single-family owner-occupied homes	2,160	100.0
Median value (dollars)	73,300	(X)

(U.S. Census Bureau, 2000)

Table 6 Census 2000 poverty status in 1999 (below poverty level)

Economic characteristics	Number	Percent
Individuals below the poverty level	2,696	22.7
Families below poverty level	398	13.7
Families (below poverty level) with related children under 18 years	300	
Percent below poverty level		21.5
Families (below poverty level) with related children under 5 years	133	
Percent below poverty level		24.6
Female householder, no husband present with related children under 18 years	173	
Percent below poverty level		36.8
Female householder, no husband present with related children under 5 years	70	
Percent below poverty level		50.7

(U.S. Census Bureau, 2000)

The high school principal provided the following 2005-2006 enrollment and demographic data for the study school (see Tables 7 and 8 below):

Table 7 Population and grade composition of the study high school

Grade	Number of Students
Grade 9	288
Grade 10	282
Grade 11	220
Grade 12	226
Total enrollment	1,016

The table that follows statistically describes the characteristics of the high school students of the study school (Pennsylvania Department of Education descriptors are used in Tables 8 and 9 below):

Table 8 Student demographic characteristics

Characteristic	Percent
Male *	52%
Female *	47%
White **	98%
Black or African American **	07%
Hispanic **	01%
Asian **	01%
American Indian **	01%
Economically disadvantaged students	32%
Migrant students	0%
English language learners	.0009%
Special Education students	10%
Gifted students	.02%
Students intending to pursue higher education	70%

*   ** (When added together these numbers equal 99%.)

According to the Pennsylvania Department of Education's website, the eleventh grade students at the study school had the following results on their Pennsylvania System of School Assessment (PSSA) tests in 2002 and 2005 (see Table 9 below).

Table 9 Study high school's PSSA assessment results for 2002 and 2005

Assessment	Advanced	Proficient	Basic	Below Basic
Mathematics (Grade 11)				
2002 *	26%	32%	23%	20%
2005 **	28.8%	22%	20.3%	28.8%
Reading (Grade 11)				
2002	26%	48%	16%	10%
2005	43%	34.2%	7.2%	15.6%
Writing (Grade 11)				
2002 *	17%	61%	13%	10%
2005	5.5%	67.2%	15.5%	11.8%

(Pennsylvania Department of Education, n.d.)

*   (When added together these numbers equal 101%.)
** (When added together these numbers equal 99.9%.)

The information in Table 10 (below) was obtained from the high school principal at the study site. The information in Tables 11, 12, 13, and 14 describes the four study participants. This information was solicited from each study participant at the close of his/her first interview.

Table 10 General description of the high school staff

Staff Position	Full-time	Part-time
Classroom Teachers	54	6
Teacher-Librarians	1	0
Counselors	4	0
Administrative/Supervisory	3	0
Other Service Coordinators	0	0
Other	18	0
Professional Staff	7	0

Table 11 The building principal

Respondent #1	
Number of years as principal at the study high school	3
Number of years assistant principal at the study high school	4
Number of years at the study school district	10
Number of years an educator	30
Highest degree obtained	M.A.+

Table 12 The teacher-librarian

Respondent #2	
Number of years as teacher-librarian at the study high school	7
Number of years as a teacher-librarian	12
Number of years at the study school district	22
Number of years an educator	26.5
Highest degree obtained	M.A.+

Table 13 First classroom teacher

Respondent #3	
Number of years as teacher at the study high school	8
Number of years at the study school district	8
Number of years an educator	9
Highest degree obtained	B.A. (M.A. underway)

Table 14 Second classroom teacher

Respondent #4	
Number of years as teacher at the study high school	8
Number of years at the study school district	11
Number of years an educator	14
Highest degree obtained	B.A.

3.6   INTERVIEW PROCESS AND PROCEDURES

The interview questions were based directly on the study's guiding research questions and aimed to achieve the intent of the study. (See the table, *Correspondence Between Interview and Research Questions*, that can be found in Appendix Q.) Participants were given the initial interview questions beforehand so that they would have an opportunity to think about their responses, recollect their past experiences, and organize their thoughts (Gaspar, 2004). The interview questions were purposely open-ended because they sought to invite the participants to take part in "a conversation with a purpose" (Lincoln & Guba, 1985, p. 268). As previously stated, this investigation sought to get at participants' actions, feelings, motives, claims, and concerns in order to arrive at a conceptual understanding of how the change process was pursued in their particular school. Since there is little literature about how this process occurs in high schools, my investigation had to begin with interviews that were unstructured and in-depth in order to discover what was going on (Mellon, 1990). "[T]he unstructured interview is the mode of choice when the interviewer *does not know what he or she doesn't know* and must therefore rely

on the respondent to tell him or her" (Lincoln & Guba, 1985, p. 269). In this way, I

hoped to draw on the knowledge of my interviewees – to let them help me to discover

what questions I should ask and then answer them for me (Lincoln & Guba).

Two types of participants were invited to take part in the study: key informants

and special respondents. Key informants are people who are primary sources of

information -- people who can give the history of the setting (Taylor & Bogdan, 1998).

They "provide initial information about the study site and the administrative hierarchy

controlling it, they help to identify possible respondents, and they provide information and

assistance during the course of the study" (Mellon, 1990, p. 49). Key informants were

identified by the professional roles that they held (principal or teacher-librarian) in the

school. The principal and teacher-librarian were asked to nominate the other group of

study participants, special respondents. The term *snowball sampling* is used to describe

this technique for identifying study participants (Lincoln & Guba, 1985, p. 202). Special

respondents are selected because they can "provide information that cannot be provided

by representative respondents" (Mellon, 1990, p. 49). They have a unique position in the

organization being studied. In this case, they were teachers who acted as change agents

and/or collaborators during the initiation and/or implementation of their school's

information literacy program.

When the first round of interviews were arranged, participants were asked to

choose the place where they would like to be interviewed (whenever a choice was

possible). Ideally, I sought to conduct the interviews in a place with few distractions and

where we could talk uninterrupted for at least forty minutes (Mellon, 1990). A face sheet

was used to record identifying information about each interview (Mellon, 1990). (A copy

and sample of this form, *Interview Information Sheet,* can be found in Appendix R.)

During each interview I jotted occasional brief notes in my research journal to

help me remember what occurred during the interview that was not on the recording. My

research journal was a detailed chronological record of my study and an additional source

of data. It contained appointments, interview arrangements, site maps, descriptions of the

study site, verbal portraits of study participants and their behavior during interviews, and

conversations that took place outside the interview situation. It was also the place where

I wrote memos that reflected my immediate reactions to experiences, changing views,

current puzzlements and interpretations, fleeting insights, emerging codes, themes, or

categories, and growing understanding of my research topic (Gaspar, 2004; Mellon,

1990).

At the end of the first round of interviews all participants were asked if they had

any documents that they could share to provide additional data for the study. These

documents were used to check participants' recollections, to further focus questions

during the second round of interviews, and as additional sources of study data.

Documents of particular interest to me were: relevant initiation and implementation

plans, the school/district information literacy curriculum, related meeting and workshop

agendas and handouts, records of teacher and teacher-librarian information literacy

collaborations, a floor plan of the library, a map of the school, the teacher-librarian's

schedule, the library schedule and record of class visits, various statistical measures of

library usage, collection development budgets and statistics, and any other school/district

documents that directly referenced the high school's information literacy program.

According to Lincoln and Guba (1985, p. 276) documents "are singularly useful sources

of information." They are useful for a variety of reasons: they are always available and

usually free; they are a stable source of information that may accurately reflect past

situations; they are rich with contextual information about the time and setting; they are

often formal statements about policies or programs; and they, unlike human participants,

are nonreactive sources of data (Lincoln and Guba, 1985). A document/record sheet was

used to record identifying information for each document or record. (A copy and sample

of this form, *Document Information Sheet,* can be found in Appendix S.)

3.7   CODING AND ANALYZING DATA

Immediately after the first round of interviews the digital recordings were transcribed for

coding. By transcribing the recordings as soon as possible I was more likely to remember

and understand unclear portions of the recording. Mellon cautions against waiting: "the

longer the period between data collection and analysis, the more likely that it becomes

that clarifying nuances such as tone, gesture, and mood will be lost from the data" (1990,

p. 59). An advantage of self-transcribing the data was that I could begin to analyze it

while I was transcribing it and, by doing so, I could push my study forward (Mellon,

1990). Early analysis of data is a key characteristic of grounded theory (Bartell, 1995;

Charmaz, 2003). After transcription was completed, the coding and categorizing

activities of concept development began.

I started by coding all of my data line by line (from interviews, my journal, and district documents) looking for and identifying processes in the data (Stern, 1994). Goodwin (1983) cautions that data should not be interpreted at face value but that each piece should be evaluated for what it indicates about the situation. Coding entails looking for underlying meanings – for "themes – words, phrases, thoughts, or ideas that are repeated over and over again throughout the data" (Mellon, 1990, p. 65). According to Charmaz, "coding helps us gain a new perspective on our material and to focus further data collection, and may lead us in unforeseen directions" (2003, p. 258). Coding is also one of the techniques that naturalistic researchers use to reduce their data into increasingly smaller and more meaningful blocks of information (Mellon, 1990).

During this first round of initial or open coding, I copied the method used by Goodwin in her 1983 study: I began by looking for themes related to each of my nine guiding research questions and labeled each piece of data accordingly. All data that was unrelated to my questions was assigned the generic label "other" and was set aside until later. After all of the data was initially examined and coded, I examined this "other" data more closely and assigned it labels that described the substance of what was occurring in the data. These labels are called "substantive codes, because they codify the **substance** (emphasis in original) of the data, and often use the very words used by the actors themselves" (Stern, 1994, p. 33). Charmaz (2003) uses the term "action coding" to describe this process since these codes provide insight into what people are doing and what is occurring in the setting. After substantively or action coding all of the data, I reduced the number of unique codes by looking for categories, or "fits" and "clusters"

(Goodwin, 1983) in the data. I accomplished this by making comparisons among the different pieces of coded data.

Making comparisons is a major characteristic of naturalistic inquiry; it is a key technique in grounded theory (Charmaz, 2003). In the grounded theory literature this process of making comparisons is called the *constant comparative method* (Glaser & Strauss, 1967; Lincoln & Guba, 1985, Mellon, 1990). Charmaz defines and explains it this way:

> The constant comparative method of grounded theory means (a) comparing different people (such as their views, situations, actions, accounts, and experiences), (b) comparing data from the same individual with themselves at different points in time, (c) comparing incident with incident, (d) comparing data with category, and (e) comparing a category with other categories (2003, pp. 259-260).

I used constant comparison to identify categories in my data. "Categories", according to Stern, "are simply coded data which seems to cluster together" (1994, p. 33). As I examined my coded data looking for categories, I looked specifically for problems – things that the participants viewed as the main problems they encountered when initiating and implementing their information literacy program (Stern, 1994). The salient problems that they identified served as my guides during the concept formation phase (Stern, 1994). After identifying all possible categories, I used the constant comparison method to reduce the number of categories.

As I engaged in the processes of concept development, concept formation, concept modification, and concept integration, I compared category with category and "concept with more highly developed concept to discover their relationship, and once again, related concepts [were] compared with data for validation" (Stern, 1994, p. 36). Related categories were collapsed or integrated into other categories. I accomplished this by engaging in theoretical coding and memo writing and by creating diagrams. All three are analytic techniques that grounded theorists use to reduce data into more general or conceptual categories (Mellon, 1990). These reduction techniques are essential for discovering the major processes that occur in the data. Theoretical or selective coding means thinking about data in theoretical or conceptual terms -- not descriptive ones (stern, 1994). Memo writing refers to jotting down ideas that strike – ideas about how the data can be interpreted or emerging hypotheses (Stern, 1994). Mellon (1990) identifies three specific types of memos: in-text memos (written by a researcher as she prepares field notes or transcriptions), marginal memos (short notes about patterns, themes or analytical ideas written in the margins of field notes or transcriptions), and reflective memos (extensive writings in a research journal that capture the full meaning of various ideas). Finally, diagrams can help "researchers to visualize their ideas and speculate graphically about how various bits of data fit together" (Mellon, 1990, p. 82). I created lists, tables, and charts to hypothesize about concepts or illustrate the relationships among concepts.

The goal of all this activity was to reduce the number of categories to a few main categories in order to find the "unifying thread" that ran through all the main categories

(Goodwin, 1983). This thread was the core variable (Glaser & Strauss, 1967) – the concept which explicated the change process followed by my study school to achieve effective information literacy programming. I tested the value of this concept by examining its reliability and utility. Reliability "is the degree to which the same event, observed by other colleagues, would be recognized or described in the same way by them" and utility refers to a concept's usefulness for a given purpose (Garman, 1982, p. 37). If the core category is sound it fits together with the main categories and explains "the action in the social scene" (Stern, 1994, p. 34). Mellon notes that the core category is the central theme of the study – "appearing frequently in the data and relating easily to other categories" (1990, p. 79). Selective coding continued until the core category was identified. Once it emerged from my data, I used theoretical sampling to discover the conceptual framework that linked the core category to the main categories.

Theoretical sampling is a more parsimonious form of data collection and coding (Goodwin, 1983). As I engaged in this process, I zigzagged back and forth among data collection, concept formation, concept modification, and concept integration:

> As the main concepts or variables become apparent, they are compared
> with the data to determine under what conditions they are likely to occur
> and if they are indeed central to the emerging theory. Additional data may
> be collected at this time in a selective manner for the specific purpose of
> developing the hypotheses, and identifying the properties of the main
> categories of variables (Stern, 1994, p. 35).

As part of my theoretical sampling activities, I scrutinized the existing literature for related concepts and used these concepts as supporting data in my study. The information that I took from the literature was treated like the other data in my study. "The information from outside sources is not used to test the emerging substantive theory, but to make it richer, broader, and more dense" (Goodwin, 1983, p. 50). As the theoretical sampling progressed, the main categories became saturated -- filled out, defined, and limited. This process went on until additional analysis no longer contributed anything new about a concept. When the information became repetitive, I stopped collecting data (Schram, 2003; Stern, 1994).

3.8   THE RESEARCH REPORT

The final phase of the study was writing the research report. The reason for conducting the study and writing the research report was to accurately interpret my subjects' experiences of the change process and to seek meanings – their meanings and my meanings about what occurred at the study site (Charmaz, 2003). After writing my initial report, I shared it with those subjects who wished to read it so that they could challenge and correct my views. Sharing my draft was also a way of ensuring that my interpretation got beyond the surface of things and included "views and values as well as …acts and facts" (Charmaz, 2003, p. 275). I had planned to write the final version of my report after reading and reviewing their comments and to include whatever changes they

might have suggested that were supported by the study data. This last revision was

unnecessary since none of my participants had any comments on my initial report.

4.0 DATA ANALYSIS

Be patient towards all that is unresolved in your heart, and learn to love
the questions themselves. (Rilke as cited in Fred Rogers, 1994, p. 160)

In chapter three I explained that I would use grounded theory to discover the main

concepts in my interview data and to identify the unifying thread that runs through these

concepts. Glaser refers to this unifying thread as the core concept and stipulates eleven

criteria for identifying it. In this chapter I will describe the process that I used to discover

the main concepts in my data and uncover the core. After that, I will review the

definition and significance of the core concept and I will discuss how I used Glaser's

criteria to identify *Distributed Leadership* as the core concept of my study. Then I will

substantiate why it is the core by citing supporting data from my study and related

literature. A discussion and authentication of the five main concepts will follow this.

4.1 SIFTING THROUGH THE DATA

As I coded the transcripts from my first round of open interviews I looked for and

identified themes that repeated throughout the data (Mellon, 1999). Certain themes

quickly jumped out of the responses of my four participants: they shared ideas and

information, they communicated openly and frequently, they described an information literacy program that supported teaching and learning, they seemed to share leadership and respect the expertise of others, the teacher-librarian played a leadership role in their school, there were many good relationships in their building, and their teaching was influenced by a multi-faceted view of literacy and many non-traditional and constructivist beliefs. Although the data from my first round of open interviews was sometimes only tangentially related to my questions, it was rich with descriptions about their actions, feelings, motives, claims, and concerns. It gave me a penetrating glimpse into what was going on at their school and it guided me in my next round of interviews (Charmaz, 2003). (My first set of interview questions can be found in Chapter Three on page 101.)

As I prepared for my second round of open interviews I resolved to follow Lincoln and Guba's (1985) advice – to let my interviewees help me to discover what questions I should ask them. My second set of interview questions reflected my participants' first responses by focusing on many of the themes that they had dwelt on. In this way I hoped to learn more about the points that they raised and to discover how these themes related to their exemplary information literacy program. My second set of interview questions is listed below:

1. Each of you described an environment in which staff members can engage in the sharing of ideas and information. In what ways, if any, (and by whom?) have the staff members in your school been encouraged to share knowledge?

2. In your opinion, has your curricularly integrated information literacy program had a positive impact on the achievement of your students? If so, in what ways?

3. Each of you discussed the importance of open and frequent communication between the teacher-librarian and other staff members. Could you tell me why you believe that this communication is so important?

4. Integrating information literacy into the curriculum requires that some changes be made in one's teaching style. What kind of support, if any, has there been for moving away from a self-contained, textbook-oriented teaching style and toward a more collaborative, resource-based teaching style?

5. In your discussion of your school's information literacy program, each of you alluded to an environment in which people share leadership and respect the expertise of others. Could you tell me more about this?

6. Each of you discussed the importance of preparing students for life after high school. In what ways, if any, does your school's information literacy program prepare students for their futures?

7. School library experts have described your current information literacy program as "exemplary". In your opinion, what must be done to sustain its effectiveness and continued growth in the future?

I used the constant comparative method to code both sets of interview transcripts (each of my four participants was interviewed twice). As I read, I wrote brief marginal memos on each page and highlighted interesting passages (Mellon, 1990). I looked for

consistencies and inconsistencies between each participant's first and second interviews. I also looked for agreement and disagreement between my different participants' responses. I reexamined the first set of transcripts in light of what I had learned from my second interviews, and reexamined the second set of transcripts using the new ideas that I had gleaned from the first set of interviews (Charmaz, 2003). I then made a list of all the recurring categories that I had identified and I theorized about their interrelationships and relationship to the school's information literacy program. I knew that something wonderful was going on in my data but I did not yet understand what it was.

I reexamined my data. This time I took my list of recurring categories and used them as guides as I went through both sets of transcripts. I wrote many more marginal memos on each page. I re-highlighted old passages and highlighted new passages that now seemed significant. Then, participant by participant and data strand by data strand, I wrote reflective memos on separate sheets of paper that carefully summarized the actions or situations occurring in each piece of data (Mellon, 1990). Next to each memo I wrote a list of theoretical codes. These codes were conceptual – they evaluated each data strand for what it indicated about the study school situation (Goodwin, 1993). This final form of coding yielded many new theoretical codes. When I completed my conceptual analysis of the data, I compiled a database that listed every code that I had encountered and how many times it had occurred. Next I printed out my database and cut it up into individual code cells. Then I sat on the floor and physically sorted the disparate pieces of code into piles of look-alike ideas or categories (Lincoln & Guba, 1985; Piantanida & Garman, 1999). After comparing category with category, related categories were

128

clustered together and collapsed into broader categories (Mellon, 1990). At the end of this process six main concepts emerged from the data: Aspects of Teaching, Communication, Distributed Leadership, Elements of Their Information Literacy Program, Leadership, and Relationships. Then I played with my six main concepts – moving them around like the pieces of a jigsaw puzzle in order to see which one or ones "fit" as the core. After drawing a series of tentative analytic diagrams (Mellon, 1990), bouncing ideas around in my head, and conjecturing different possible relationships to my husband (the man who has read every study draft that I have written) *Distributed Leadership* emerged as the core.

For Glaser the core concept is that which "sums up in a pattern of behavior the substance of the what is going on in the data…" (Glaser, 1978, p. 94). In describing the function of the core, Mellon notes that once the core concept "is defined and elaborated, the researcher is better able to understand and articulate what is being learned" (1990, p. 79). Only *Distributed Leadership* weaves the five other main concepts together and explains why these concepts appear so frequently in the study site data. In addition, only *Distributed Leadership* explains what I heard, saw, and felt while at the study site and in my transcripts.

Glaser's eleven criteria (1978, pp. 95-96) for identifying the core concept support my selection of *Distributed Leadership* as the core of my study.

Criteria 1 and 2 state that the core must be central -- appear frequently in the data and relate easily to all the other concepts. When I coded my first set of interview transcripts I described the category that was to become the core this way*: they seemed to*

share leadership and respect the expertise of others. This category emerged from the data early in my analysis. The only codes that occurred more frequently in my data were those specifically related to information literacy (the focus of my study). The concept of distributed leadership is directly related to all the other main concepts that emerged during my final analysis*: Aspects of Teaching and Learning, Communication, Elements of the Information Literacy Program, Leadership,* and *Better Relationships.* Not only does *Distributed Leadership* relate to all of the concepts; it also accounts for their amazing strength and tenacity. If I had chosen this concept to be the core and it was not really the core -- its frequency and centrality would be much harder to justify.

Criterion 3 states that the core should take more time to saturate than the other categories. The only concept that took more time to saturate than the core was the concept *Elements of the Information Literacy Program.* Even though this concept appears more frequently in the data it cannot be the core because it does not explain " the action in the social scene" (Stern, 1994, p. 34). *Distributed Leadership,* however, does explain the action and environment at the study site that gave rise to the school's successful information literacy program.

Criterion 4 states the core should relate meaningfully and easily with other concepts. Later in this chapter I will discuss each main concept and show how *Distributed Leadership* relates meaningfully and easily to each.

Criterion 5 states that the core should have clear and grabbing implication for formal theory. The concept *Distributed Leadership* appears frequently in the education literature (Fullan, 1992, 2002a, 2005; Elmore, 2000; Glickman, 1991; Hargreaves &

Fink, 2004; Meier, 1995; Neuman & Simmons, 2000; Sergiovanni, 2005; Spillane, Diamond & Jita, 2003), although its positive relationship to the success of a school library's information literacy program has not been explicitly discussed in the school library literature. Some school library researchers have noted that when a principal shares power with teacher leaders and fosters a climate of teacher-decision making, the initiation and implementation of an integrated information literacy program goes more smoothly (Lumley, 1994; McGregor, 2002; Oberg, 2001). Some studies have even discussed how identifying teacher leaders and teaching them about the change process seems to create an environment more conducive to the development and institutionalization of an effective information literacy program (Donham 2001; Lumley 1994; Oberg, 2001; Peterson, 1999). Still other studies have focused on the concept of power and how the principal uses his or her power to do things that *support* the teacher-librarian or the library program. Oberg and Henri (2005) analyzed this support and identified four different kinds of practices or roles engaged in by principals: as a teacher supervisor (e.g., outlining expectations for teacher library use), as a model demonstrating personal commitment (e.g., being visible in the library), as a manager fostering the program (e.g., providing an adequate materials budget), and as a mentor providing visibility (e.g., making time for meeting with the teacher-librarian). In each of these practice situations, however, the principal owns the power and has the right to decide how much of her power (or leadership) she is willing to share with the teacher-librarian and under what circumstances. This is shared leadership.

In *Distributed Leadership*, leadership is viewed as a practice shared by many. Since it is shared by many, "then it must be distributed among those who are in the right place at the right time (situation) and among those who have the unique competence to get the job done correctly (ability)" (Sergiovanni, 2005, p.46). Thus, in a school with *Distributed Leadership* the principal routinely responds to different school situations by distributing responsibility and authority among specifically skilled and knowledgeable teachers. Since the relationship of *Distributed Leadership* to the success of a school's information literacy program has not been discussed in the literature, this concept has a clear and grabbing implication for school library literature.

Criterion 6 states that the core should have considerable carry-through – it should lead the researcher through the analysis. As I previously noted, the core emerged as a main category early in my data analysis. Later, *Distributed Leadership* fell into place as the only main concept that "fit" in the core position. It explained what was going on at the study site, how the other main concepts were related, and why they were flourishing.

Criterion 7 states that the core is completely variable or modifiable in its degree, dimension and type. The degree of *Distributed Leadership* in an educational setting can be varied. It may pervade an entire district or it may only exist in certain schools. The pervasiveness of *Distributed Leadership* will determine how strong its influence will be on the other concepts. The more a leader enables others to lead by distributing responsibility and authority, the more she expands her school's (or district's) capacity for deeper learning that results in far-reaching change and reculturing (Fullan, 1992, 2002a, 2005; Neuman & Simmons, 2000; Sergiovanni, 2005).

Criterion 8 states that the core is a part or dimension of the problem or process.
Distributed Leadership is pivotal to the processes occurring at the study school. It is intrinsically related to the school's vibrant information literacy program, the openness and frequency of communications, the many good relationships, the focus on teaching and learning, and serves instructional leadership efforts.

Criterion 9 states that the core cannot be established from a sociological interest or a deductive or logical elaboration (i.e., the core will not be contrived from an already existing theory) if criteria one through eight are truly met. This was avoided by doggedly following grounded theory data analysis methods until the core emerged on its own.

Criterion 10 states that the core can cause the researcher to begin seeing the core category in all relations, whether it is grounded in the data or not. Once I understood that *Distributed Leadership* was the core I had to caution myself not to let it exert too great an influence on my perception of the other five main categories.

Criterion 11 states that the core category can be any kind of a code: a process, a condition, a dimension, a consequence and so forth. When I first noticed the phenomenon that I later labeled *Distributed Leadership* I described it this way: *they seemed to share leadership and respect the expertise of others*. This could describe a process or a condition. The label I chose for this concept is borrowed from Elmore's article "Building a New Structure for School Leadership" (2000). Here is Elmore's description of this concept in action:

The job of leaders of instructional practice is to extend professional

leadership into schools and school systems, drawing upon the differential

expertise of educators at each level. Those who have a higher degree of

knowledge, skill, and competence should be expected to spend some

portion of their work engaged in the improvement of practice across

schools and classrooms. The success of such a framework depends as

much on the transactions across roles – the creation of mutual dependency

and reciprocity – as it does on defining the core responsibilities of the roles

themselves (p. 24).

I believe that *Distributed Leadership* is a process – one that involves ongoing interaction

among leaders, followers, and situations. While the goal of a high-quality education for

all students does not change – the social and situational context of a school is always in

flux. A distributed perspective on leadership recognizes that changing situations call for

different areas of expertise, knowledge, and skills (Elmore, 2000; Neuman & Simmons,

2001; Sergiovanni, 2005; Spillane, 2005; Spillane, Diamond & Jita, 2003). In such a

milieu "every member of the education community has the responsibility – and the

authority – to take appropriate leadership roles" (Neuman & Simmons, 2001).

4.2   EVIDENCE OF DISTRIBUTED LEADERSHIP

Distributed Leadership is an undercurrent theme in the interview transcripts of Tom (not

his real name), the building principal. Based on the frequency that the concept appears in

his transcripts it seems to be an integral part of his leadership style. He speaks respectfully about his teachers and the work that they do, is very aware of their skills and knowledge, and stresses that he depends on them to share their expertise. For Tom his teachers are his resident experts – a host of in-house consultants that he or their students can tap into on a wide variety of topics. He places the child squarely in the middle of the educational process and in the midst of his circle of teachers-experts. This passage illustrates these points:

People share leadership and respect the expertise of others. I – that's one of, one of my goals when I became the building principal. I didn't want to departmentalize, even though we do. I don't want to departmentalize to the point where I have all these different pockets. I want that -- those pockets to focus. I guess if I made a graph I would put all of the departments around and put the student in the center. So that they're able to feed off whatever they need to feed off – if it's Math, if it's Chemistry, if it's English, any, any academic area that they choose to go to. That's why we're here. And that's what I want the student to feel comfortable doing. That if they have a problem or they need something then they can go to these various places. And, and again it comes down to the communication aspect of it. And respecting each other, I mean we're all, all…. You know I don't see any difference between a Chemistry teacher or an A.P. Physics teacher, and a Home Ec teacher and so…. They have their own expertise. And those people will have -- a Home Ec. Teacher or a Tech Ed. Teacher

will have a different expertise than an A.P. Physics or an A.P. Chemistry or whatever. But it's still that expertise that you're passing to the child. And that's always and will always be my primary focus -- is to make sure that expertise gets to that child (interview, November 22, 2005).

He has a very hands-off attitude toward the information literacy program; he trusts the expertise of Carol (not her real name), the teacher-librarian, and defers to her (Hay & Henri, 1995): "And I don't, I don't try to get overly involved in a sense that -- I don't try to change things. That she is the specialist there and I look at her as the resource and she knows what she needs and, I support it" (interview, September 9, 2005). Finally, he is not threatened by the wisdom of his teachers; instead he cherishes it and continues to tap them for leadership roles and responsibilities (Glickman, 1991). He uses his position as the building principal to provide ongoing opportunities for teachers to gain new skills, experience, and confidence in their abilities. In this passage he discusses how he supports the teacher-librarian's professional development needs (Oberg, 2006):

You know if there's something that she needs to attend or … You know I pretty much --- my philosophy in general of the building is that people know what they have to do. Unless they come to me and say I need to go to this conference or I need to go to that and it's the same way with [Carol]. We let her do those kinds of things and -- but whatever she feels that she -- she knows better than I (interview, September 2, 2005).

The degree to which *Distributed Leadership* has empowered the teachers at the study school to function as experts has contributed to the further development of their

expertise – both personally and collectively. According to the literature, *Distributed*

Leadership helps to build the capacity of a school or district by extending professional

leadership into schools and tapping the varied expertise of all knowledgeable staff

(Elmore, 2000; Hargreaves & Fink, 2004; Sergiovanni, 2005). Thus, by fostering the

leadership skills of others an effective leader expands her staff's capacity for deeper

learning and far-reaching change (Fullan, 1992, 2002a, 2005). As I read through the

interview transcripts I heard the voices of teachers who saw themselves as knowledgeable

and skilled in certain areas. They came across as confident in their abilities and desirous

of more opportunities for broadening and deepening their knowledge and skills. The

teachers at the study site seem to have learned "to attach positive value to the learning

and doing of new things" (Fullan, 2000, p. 19) as seen in this excerpt from Carol's (the

teacher-librarian) September 2, 2005 interview:

> I approach teachers. Like if there's something that I have that I think that
>
> they'll do and it's a doable thing. And like…an example of that would be
>
> last year a mythology unit that we collaborated on. My student teacher was
>
> good in mythology -- she had a unit. And I said to the English teachers
>
> "say, boy this is too good to pass up, do you want give this a go?" And the
>
> answer was yes. They're willing to try things. And my teachers are
>
> wonderful, also. I mean they're, they're willing to step out on the limb
>
> with me. And the way we always start it…. You know what, you know
>
> we'll make mistakes this year and it won't be perfect but next year we'll do
>
> it better. And that's kind of the philosophy we have. And the

administration, the principal seems to go along with that, too. So, that

gives us the freedom to do stuff.

All three teachers described situations of mutual dependency and reciprocity in

which they were open to sharing their knowledge with other teachers and learning from

them. For the participants, "seeking or giving collegial advice is not a gauge of relative

competence, but rather a professional action viewed as desirable, necessary, and

legitimate in the acquisition of new skills" (Elmore, 2000, p. 15). In this passage the

Spanish teacher, Beth (not her real name), illustrates these points:

Sure, I think that this is something that is really neat and I don't know if it's

unique to our district or not because I haven't worked outside this district in

a long time. But there's a lot of collaboration in this district. In offering

different in-service classes and things like that or after school options, they

don't always fly in some quote unquote expert from Philadelphia, or D.C.,

or California. They tap the resources that are available here in this school.

Because we have all kinds of teachers and professionals who are really well

trained or who are professionals in different areas. And they encourage

them to share their expertise with us. And they're accorded the same

respect that someone who flew in from somewhere else is given. And I

think that's really big of teachers to look at their peers not only as peers but

with respect and give them the treatment that they would because they're an

expert in their field. For example, [Mrs. X], the librarian, often can present

something that teaches us more about the things that are available in

information literacy. Someone in the business department or computer

department might teach us how to use a new program. And, we don't need

some fancy expert, we need someone who really is really well versed in it

and they are. And so they give them a lot of respect in that way. And you

just see teachers networking all the time, talking with one another, asking

questions, getting ideas and things like that. I think that we've got a really

good thing going here with that (interview, November 22, 2005).

4.3   THE ROLE OF LEADERSHIP

Fullan stresses that effective leadership is essential for successfully guiding the

implementation of good instructional ideas (Fullan, 1993a, 2001a, 2001b). For Elmore

leadership and improvement are even more closely related: "Leadership *is* the guidance

and direction of instructional improvement" (2000, p. 13, emphasis mine). As I read and

coded the data in my transcripts, it became clear at the onset that *Leadership* was

emerging as a main category. Many times when leadership appeared in the data it took

the form of guiding, directing, or supporting good instructional ideas.

Beth (a Spanish teacher) described two supports for teachers who want to move

toward a more collaborative, resource-based style teaching:

One, in particular, our school district really strives to give us valuable in-

service options. That when we have our Act 48 days (Act 48 is a

Pennsylvania law that requires teachers to engage in 160 hours of

continuing education every five years) or we have an in-service day they offer to us opportunities to learn new things. For example, we might have one that teaches us about Access Power and all the things that are available online through that. Or, they might take us through using GaleNet. And so they offer to us the opportunity to learn new programs, new online options, and they introduce us to new hardware…. The second thing I thought of is that the district commits to getting new equipment. We have the latest technology available for us. For example, LCD projectors – the school was able to get several of those that we can sign out and use in our classroom. And that encourages us to get away from the textbook and it equips us to do it. It's not that they're saying, "You need to use this new technology and, um-mm, -- figure it out" (interview, November 22, 2005).

The other prevalent way that leadership appears in the data is in the form of strategic thinking. Strategic thinking was evident at all levels -- in the thought processes and actions of upper administrators, the building principal, the teacher-librarian, and classroom teachers. Carol, the teacher-librarian, is a very strategic thinker. She uses her numerous communications with teachers not only to share information but also to bring teachers into the library. Here she shares her reasons for creating an inter-school Middle School/High School calendar: "Another service that I started to offer least year, which piqued interest -- it gets people interested in the library. You know it brings them down here. I do a calendar" (interview, September 2, 2005). Once teachers come to the library

Carol approaches them with ideas for collaborative projects related to the information

item that drew them to the library:

> …[B]ut see all along I send information out -- like on a daily basis
> I'll send, I have a list of teachers and I'll list everything that's pertinent to
> them. English department -- I'll send information on plagiarism if I have a
> good website or whatever. Well then they come back to me and they say,
> "Oh boy can you tell me more about this"? "Well I can do, I can do a unit
> for you, I can do a little lesson." So now in the 9th grade, I'm teaching a
> unit on plagiarism and copyright. So, it's good! It's a great way of
> collaborating. You know, you get their fingers wet, give them a little taste
> of something, dangle that little carrot out there and... It's been wonderful.
> I love my teachers. We have wonderful teachers (interview, September 2,
> 2005).

Finally, in this excerpt Carol explains why the information literacy program has stayed so

current:

> The students like online sources. They'll use those resources before they'll
> use the books. So I have to be honest with myself and say, "Now what do I
> do?" You know I have to change with what's happening or else I'm going
> to lose the teachers, I'm going to lose the students. That's exciting to
> students to see that we have e-books out there (interview, November 22,
> 2005).

Although guiding and directing good instructional ideas and thinking strategically can make some inroads on improving instruction, it is not the kind of leadership that leads to large-scale improvement in a school. Very often it means that only a minority of teachers initiate and implement a new instructional practice (e.g. information literacy) while other teachers choose to sit things out in hopes that *this too shall pass* (Fullan, 2001b). As a result loose-coupling occurs and improvement occurs in only small pockets – those pockets of teachers who have adopted the new instructional approach. Meanwhile, the rest of the school remains unchanged (Elmore, 2000, p. 42). If, however, *Distributed Leadership* is combined with general *Leadership* isolated improvement gives way to overall improvement. As Elmore explains in this passage, in a distributed approach to leadership

> …the job of administrative leaders is primarily about enhancing the skills
> and knowledge of people in the organization, creating a common culture of
> expectations around the use of those skills and knowledge, holding the
> various pieces of organization together in a productive relationship with
> each other, and holding individuals accountable for their contributions to
> the collective result" (Elmore, 2000, p. 15).

4.4 OPEN AND FREQUENT COMMUNICATION

Lambert (1998, p. 80) uses the phrase "assertive information sharing" to describe the kind of communication system that a school needs to keep everyone informed and

involved with what is happening. *Open and Frequent Communication* was the first theme to emerge from the interview transcripts of the study participants. It figured prominently in every discussion about the school's information literacy program and the principal stressed that it is an indispensable part of his own leadership style.

Everyone discussed the teacher-librarian's open and frequent communications with him or her or others. Carol, the teacher-librarian, is a consummate communicator – a one-woman communication system that works to keep everyone informed and involved with the school's information literacy program (Campbell, 1991; Hartzell, 2003; Hay & Henri, 1995; Oberg, 2006). As evidenced by the transcript data there are four underlying reasons that Carol communicates. First, she wants to inform teachers about services or resources that can support their teaching and their students' learning. (See Appendix T for an example of how the teacher-librarian uses a routine planning form to inform teachers about the numerous information literacy resources that are available.) Second, she tries to raise awareness of the library and thereby interest new teachers in integrating information literacy into their teaching. Third, she believes that it is crucial to keep all administrators informed about the usage of the information literacy resources and facilities by teachers and students (in terms of numbers and frequency). Fourth, she works very hard as an advocate for the information literacy program seeking the continued financial and political support of administrators, the school board, and the outside community (Hartzell, 2003; Oberg, 2006).

Carol uses a variety of methods to communicate: emails, face-to-face conversations, her library webpage, a printed newsletter, library displays, published

student booklists, bibliographies of new materials, an online inter-school calendar, lesson plans, and detailed monthly reports. (See Appendix U for an example of a monthly report.) In this excerpt Carol discusses several of the ways that she communicates with teachers and administrators:

Well how would they know what you have unless you communicate with them? And so that communication is in many ways. If I see them in the hall I'll say, "Oh, hey I have this." I send email – just like I told you on Fridays. What I'm doing every Friday – they get a communication and they know to expect that. I also send that to Mr. [Z.] and the people at the administration. I'm department chairperson – all the department heads so that they can, they know what's there for their department in the high school. The word is getting out and just, just sometimes it's by word of mouth from me and sometimes others. Some people will say, "Hey, did you know that they have this in the library?" And then some of them will come down and they say to me, "Hum, hum, hum!" [nonsense syllables] So that – it's great! You know, and so there are many ways to communicate and we try very hard to communicate what we have as resources in this library (interview, November 22, 2005).

Both classroom teachers that I interviewed appreciate Carol's assertive information sharing. They indicated that they are very aware of how hard she works to keep them informed about important resources that can support their teaching and help their students. John (a Social Studies teacher) said that teachers should receive Act 48

144

credit for being in the library with their students since Carol shares so much new

information with teachers during their visits. He acknowledged how much he learns from

Carol and laughingly said, in reference to the library staff: "it's stagnation if you're not

in communication with them over there (interview, November 22, 2005). In this excerpt

he describes how he feels about Carol's numerous communications:

> It's constant -- it's constant contact, and granted, email contact. A lot of
>
> people, I think, have the tendency, you know, when you get five emails a
>
> week from [Carol] – and they go, "Oh, my god, she emailed me again!"
>
> Because, you know, it is a little bit of an overload but that just speaks to
>
> how much stuff she has there. She just wants to let you know. "Hey, guess
>
> what I have? You know and if you want it, if you want it we got it – if you
>
> don't …" (interview, November 4, 2005).

In addition to informing teachers about information literacy resources and

services, she also works to raise general awareness about the information literacy

program. She does this by publishing a media center newsletter three or four times a year

and maintaining a curriculum-based webpage for students and teachers that lists teachers'

research assignments and all appropriate resources for completing them. This passage

conveys some of Carol's thoughts about this:

> I think the thing is, one of the most important things is letting people know
>
> what you have, letting people know what you'll do for them. Getting that
>
> word out there. And that's one thing our webpage does, too. People go to
>
> our webpage on a daily basis. They have it set so that it comes up for them

because they know there are a lot of good things on there for them

(interview, September 2, 2006).

Beth (a Spanish teacher) shares Carol's beliefs about the effectiveness of her

communications and maintains that Carol's efforts have helped to advance the

implementation of the information literacy program. "I think as well, I think the

librarians have been their own best allies in that they have done such a nice job of

representing the library to people that it has taken [it] on that new level" (interview,

November 4, 2005).

Carol goes to great lengths to keep her principal, the other district principals, and

all upper administrators informed about the program. This kind of attention to

communicating with administrators is supported by Haycock in his book, *Program*

Advocacy. He writes, "Effective communication is the key to development of successful

school library programs. The administrator plays an important role in establishing an

environment for growth and the development of important services" (1990, p. 63).

In his interview, Tom, Carol's principal, described how she and her staff maintain

frequent contact with him and fellow teachers:

> I mean they're not adverse to coming here and saying to me or saying to a
>
> department of English or History, or whatever: "We've just received this".
>
> And she keeps us updated as far as emails. Any new programs that she
>
> may have or any ideas that she may have to present information to students
>
> (interview, September 2, 2005).

Carol also sends Tom detailed lesson plans that document her collaborative efforts with teachers and list the state standards addressed by each lesson. Finally, she sends him and all district administrators comprehensive monthly reports that list the library's usage statistics (students and teachers using the library and circulation statistics), specific teachers, classes, and grades that came to the library, and all database usage statistics that are available. In this way she documents just how well information literacy resources and facilities are being used and the extent to which she and her staff are intimately involved in the teaching and learning of the school (Hartzell, 2003; Oberg, 2006).

Finally, an underlying theme of all her communication efforts is to advocate for the future of the information literacy program (Hartzell, 2003; Hay & Henri, 1995; Oberg, 2006). She does this in several ways. This passage shows what she does to keep all the administrators in her district informed about the latest research about school libraries and their positive impact on student achievement.

> And then,…every study that comes out – like the Keith Curry Lance study
>
> or any study that I read about in *School Library Journal* or whatever. I
>
> copy it and give it to all the administrators. Then I highlight in it the parts
>
> where it says the library…" (interview, September 2, 2006).

She also sends them information that she discovers that she believes will be of particular interest to them. Keeping her administrators informed, especially her superintendent, and actively advocating for the library's information literacy program has enabled Carol to grow her program (Hartzell, 2003; Hay & Henri, 1995; Haycock, 1990, 1995; Lumley, 1994; Oberg, 2006; Thompson & Henley, 2000; Willeke & Peterson,

1993). In 2003 she went before her school board and said, "We need money, you know, - - this book collection is old" (interview, November 22, 2005). Her school board responded by allocating $10,000 of PSSA money (funds awarded to the school for improved test scores on the Pennsylvania System of School Assessment (PSSA)) to update the library's book collection.

Carol, however, is not the only one in her school who is aware of the importance and power of open and frequent communication. Her principal, Tom, also relies on a strong communication system to support his work. Here he discusses the role of *Open and Frequent Communication* in his principalship:

First of all I'm a firm believer in communication and open communication. As the principal of the building I have an open door policy – because there are episodes that happen throughout the day -- be they behavioral, be they academic, be they parental, be they staff involved. In order for me to have a finger on this building and the pulse of this building we need to have communication. We can't sit in the Science Department or sit in the English Department and just focus on that little group. We need to have to have the open communication for the betterment of students primarily but also for staff. We need to have that for staff -- to have them openly involved in communication. I'm a firm believer in communication, a firm believer in communication. That it's vital. I look at it not even as an option – I require it because you can maybe not eliminate problems but you can kind of soften the impact of problems if you are open to

communication. Because I tell students here, you may not like what I have

to say in the final answer but at least I'll let you communicate to me and I'll

let you offer some words that – why you're doing, or why you need to do,

or even staff can do the same thing. The bottom line, we have to make a

decision at some point but we need input in that point (interview,

November 22, 2005).

Distributed Leadership affects the openness and frequency of the *Communication*

in the study school. The data clearly indicates that Carol, the teacher-librarian, is a

skilled communicator who understands the importance of attracting positive attention to

her program: "every chance I get I put us in the limelight" (interview, September, 2005).

However, her assertive information sharing would be wasted in an environment that did

not welcome and encourage open and frequent communication at all levels of the school:

among teachers, from the principal to teachers, and from teachers to the principal. As I

previously stated, Carol is a strategic thinker. During one interview (on September 2,

2005) she shared with me that she only repeats those efforts that produce positive results

for the information literacy program. If her actions do not get a response or only a poor

response from her teachers and administrators she does not repeat it. Clearly she spends

so much of her time communicating because people in her school and district welcome

her efforts and perceive her as "enhancing the skills and knowledge of the people in the

organization" (Elmore, 2000, p. 15).

4.5   BETTER RELATIONSHIPS

At the beginning of his book, *Leading in a Culture of Change*, Fullan states that one factor that is common to all "successful change initiatives is that relationships improve. If relationships improve, things get better. If they remain the same or get worse, ground is lost" (2001a, p. 5). In my first interview with each participant I asked whether any changes had occurred in the relationships among staff members as a result of the information literacy program. According to their responses to that and other questions it is clear that they believe the information literacy program has positively affected staff relationships. Participant responses varied from teachers being more aware of the library and its resources to teachers now routinely engaging in team teaching or working with other teachers who are trying to master new skills.

Tom (the principal) has seen the library move from the periphery of the education process to the middle of it as a result of the information literacy program. He believes that his teachers are now more aware of the library and how its resources can support their teaching. He also believes that there are more collaborative relationships among teachers and the teacher-librarian. He noted Carol's collaborative efforts have extended to district administrators: "it even happens for the district office because sometimes we have people come over here who may be dealing with graduate classes that they may have, and [Carol's] willing to help them also -- in methods of research or finding things…" (interview, September 2, 2005).

John (a Social Studies teacher) is very current on the latest technology and quite knowledgeable about the library and all its resources. He describes himself as very

resourceful and independent when it comes to procuring needed information and a bit of

a technological trailblazer in his teaching methods. However he has a very good

relationship with Carol, the teacher-librarian, and he takes his students to the library quite

frequently. Here is how he describes their relationship: "…so I think our relationship is

in terms of -- if I need something she knows [I] come to her. And if she has something

she'll let me know that she has it" (interview, November 4, 2005). In our second

interview he also shared that he emphatically trusts Carol's judgment when she sends him

one of her informational emails: "if [Carol] sends – [she] would not send me something

unless it's something valid…" (interview, November 22, 2005).

Beth (a Spanish teacher) discussed professional relationships that had changed

more drastically and positively as a result of Carol's efforts with the information literacy

program. Beth used these phrases to describe her current relationship with Carol: "she

teaches right along side of me"; "she is such a facilitator"; "she helps me to refine, she

helps me with my resources, and then she teaches my kids"; "she really becomes like my

right hand when I do a project" (interview, November 4, 2005). (See Appendices V and

W for examples of Spanish projects that were collaboratively planned by Beth and

Carol.) In a later passage she describes how she and other teachers now relate differently

as a result of their involvement with the information literacy program:

> …but I guess we interconnect even between the other staff, not just me and
>
> the library, but the other staff and just really working off of one another
>
> to… say, "Hey did you know about this?" And, "Can you believe we can

do this?" And coordinating sometimes what we're doing or how we're

doing it (interview, November 4, 2005).

Carol, the teacher-librarian, has seen a very dramatic change both in her own

relationships with teachers and in other teachers' relationships in the school. She

believes that it has brought the faculty a lot closer together (Farwell, 1998) and that they

now help each other more and share more ideas about teaching. She describes some of

these changes in this passage: "Inter-departmentalization….integrated curriculum….

Now we work together, we try to see what we can do as far as integrating the curriculum

into the different areas, core-curricular areas" (interview, September 2, 2005). All the

participants stated that more teachers are now using the library on a regular basis.

According to Carol, she now collaborates with 77% of her faculty.

Carol is very sensitive to teachers' needs. The day of our second interview Carol

shared with me that a teacher dropped by the library earlier in the morning and explained

that her students were not meeting her expectations for a research assignment that she had

given them. Carol described how she responded to her problem:

I said, "You know what, [Debbie], we're not busy third period. I'm going

to keep study hall students out. We're going to put these kids all over the

library and I'm going to help you. [You're] going to come down here and

we'll stand over them. And we'll get it done" (interview, November 22,

2005).

She is also very aware of teachers' time constraints. Here she discusses how she

typically develops a collaborative lesson with a teacher:

I say "Well, now, this'll be a good database for you. Can I show you this,

can I show you how this will fit in, can we do this, just for a minute? Oh,

we don't have time, well, that's okay. Well, then I'll show you later." And

next time they come in then they might ask me how it's going to fit in. And

so, this is my opportunity (interview, September 2, 2005).

Finally, Carol is very respectful and supportive in her interactions with teachers and

works very hard at cultivating their trust. In her second interview she described a

situation in which an older teacher who was not a computer user came to the library after

receiving one of her emails about a new database. He had tried to access the database but

had not been successful.

…he said, "I'd like this, how do I do this?" He said, "I didn't understand

the directions." And I said, "Well you know what, maybe I need to make

them clearer. And so, I'll send them out again." But I sat down with him

and showed him. Um-mm, it's a mutual respect. I have a – it's wonderful,

we have wonderful teachers (interview, November 22, 2005).

Carol describes what she does as making "them feel good about what they have to give

you" in order to for you to be able "to give and open up and share what you know"

(interview, November 22, 2005).

The improved and often closer staff relationships that the participants described in

their interviews are an indication that the information literacy program is gaining ground

at their school (Fullan, 2001a). According to Meier (1995), Fullan (2002a), and

Sergiovanni (1994) there is a link between improved relationships in a school and the

creation and sharing of knowledge that leads to the development of better teachers.

Distributed Leadership plays a role in the school's improved relationships because it helps to create an environment in which support, trust, and mutual respect can grow. These, in turn, lead to the development of better relationships among staff members. Improved relationships lead to more open and frequent communication, which can result in even better relationships (Hartzell, 2002).

In a school with good relationships teachers are encouraged to collaborate with one another and ask for help when they need it. In an environment like that of the study school collaborating and asking for help are not seen as signs of professional incompetence "but rather a professional action viewed as desirable, necessary, and legitimate in the acquisition of new skills" (Elmore, 2000, p. 15). In addition, in a collaborative school culture, those teachers who have attained personal mastery of a skill believe and understand that they are responsible for sharing their knowledge with other teachers in order to enhance their skills (Fullan, 2001a; Elmore, 2000).

All of these elements are in play at the study school -- support, trust, mutual respect, open and frequent communications, and better relationships. Their presence makes it increasingly easy for teachers to venture out into the unknown and try new and perhaps better strategies in their teaching. In his discussion of the link between improved staff relationships and the creation and sharing of knowledge Fullan describes well established relationships as "the resource that keeps on giving" (Fullan, 2002a, Improving Relationships section, ¶ 2).

4.6   ASPECTS OF TEACHING & LEARNING

Aspects of Teaching & Learning emerged as a main theme during my first round of

interviews. It was particularly evident in the interviews of John (a Social Studies teacher)

and Tom (the building principal); it appeared more subtly in the transcripts of the two

other participants. It was apparent in the responses of all four participants that they have

been greatly influenced by constructivist based educational concepts. They all spoke of

moving away from a teacher-centered approach to teaching and toward a student-

centered approach. They all indicated that they believe that learning is a highly

interactive process of constructing meaning from information (Marzano, 1992). Lastly,

all of their responses show that they think that it is important to incorporate a rich variety

of resources to support both teaching and learning. This excerpt from John's (a Social

Studies teacher) first interview gives some idea of how they spoke about teaching and the

passion that they bring to their work:

> I want the kids to have the same kind of love and thirst for
>
> knowledge -- that if they wonder about something – fine! A kid yesterday
>
> asked me -- I brought up Chaucer and he likes medieval history. But, you
>
> know,…I guess I'm the person that tries to turn the key and he was – he
>
> liked medieval history and I said, "Really, have you ever read the
>
> *Canterbury Tales*?" "No, never heard of them." So I said "Whoa!" – wrote
>
> him a pass. "Go down to the library and get the *Canterbury Tales*". You
>
> know, and he checked it out yesterday and he comes in this morning and he
>
> says, "I'm already one-hundred and fifty in." You know, on his own

because somebody turned the key. And they don't realize what is there. That's the big thing. I feel like my job is almost like a facilitator as far as showing them where the stuff is that they do want to know. (interview, November 4, 2005)

In my second round of interviews I probed more deeply into some of the issues that they had raised about the different aspects of teaching (materials, strategies, and beliefs). This question was posed to elicit more of their views on teaching: Integrating information literacy into the curriculum requires that some changes be made in one's teaching style. What kind of support, if any, has there been for moving away from a self-contained, textbook-oriented teaching style and toward a more collaborative, resource-based teaching style? Based on their responses to this and other questions it is obvious that they believe that at their school there is a lot of support for moving toward a more student-centered approach to teaching. The participants stated that support comes from upper administrators, the building principal, the teacher-librarian (through the resources and services of the information literacy program), the technology department, and other teachers.

In both interviews all four participants expressed very strong views about the different aspects of teaching. As seen in Table 15, four dominant issues emerged from their responses. In the real world of education practice the three facets of teaching (materials, strategies and beliefs) are interwoven and not easily separated into neatly defined boxes. It was very difficult to divide their answers into separate categories

because, in most instances, they intertwined a variety of issues and points in every

response. However, for the sake of conciseness I am reporting them in this manner.

Table 15 teaching issues most discussed by participants

Teaching Issue Addressed	Representative Points
The need to develop students' critical thinking skills and their ability to see the interconnections among ideas	Teaching for understanding; deep, in-depth learning; exploring questions with students; cross-curricular teaching; modeling critical thinking for students; concept-centered teaching; having high expectations of all students
The importance of nurturing a love for lifelong learning in students and teaching them how to learn on their own	Teachers discussing their own learning processes; teachers encouraging and modeling lifelong learning
The merit of varied approaches and, specifically, more student-centered approaches to teaching	Resource-based teaching and learning; differentiated instruction; collaborative teaching; hands on learning; integrating the outside world into one's teaching; actively engaging students; using resources in a variety of formats (multisensory)
The need for teachers to be guides for their students	Exposing students to new ideas; encouraging and showing students how to follow up on their own curiosity; seizing the teachable moment; taking student interests into consideration

During their interviews some participants indicated that they or other teachers in their school have become experts in non-traditional, constructivist based teaching practices. Others implied that they are still working on attaining mastery. Both groups, however, stated that they believed that their administrators supported their efforts to change their teaching styles.

In addition to administrative support, many other factors are at work in their school that foster their change efforts: leadership, open and frequent communications, better relationships, the resources and services of the information literacy program, and distributed leadership. *Distributed Leadership* has played the major role at their school in creating an environment that supports the adoption of worthwhile educational innovations. The key supportive characteristics of the study environment are: administrators who solicit and respond to teachers' ideas and needs, teachers being routinely placed in leadership roles based on their knowledge and skills, and teachers being encouraged to become experts and then given opportunities to be seen as being successful and to share their expertise with other teachers (Elmore, 2000; Fullan, 2002a).

4.7   BETTER RELATIONSHIPS

What does an exemplary information literacy program look like in action? How did it become exemplary? How do the people who support, use, or facilitate the program perceive it? These are just a few of the many questions that I had as I contemplated,

planned, and conducted my study. My interview data is rich with descriptions that answered these and the many other questions that I did not think to ask.

Although I found both barriers and supports for their information literacy program in the study data, there were far fewer barriers than supports. (They are listed in Tables 16 and 17 below.)

Table 16 Factors impeding the Information Literacy Program at the study school

Category	Barrier
Capacity	Some teachers fear technology & this fear prevents them from using the program
Capacity	Some teachers are not aware of the program, its resources & its services
Capacity	Some teachers are afraid of trying new things
Resources	The program has had to endure budget cuts
Resources	A half-time support staff position has been eliminated from the program
Resources	Not enough library staff to effectively work with large classes
Resources	More money is needed to purchase resources
Resources	Grants are needed to supplement the budget
Resources	Teachers who use the program are often pressed for time to learn the new resources that are available
Resources	Teachers who use the program are often pressed for time to plan collaborative lessons with the teacher-librarian
Curriculum & Instruction	Some teachers prefer a textbook-centered, self-contained teaching style that precludes them from integrating information literacy into their teaching
Attitude	Some teachers do not value the program or make use of its resources & services in their teaching
Attitude	Not all students understand the value of learning information literacy skills
Attitude	Some teachers do not believe that lifelong learning is important

Table 16 (continued)

Category	Barrier
Attitude	Some teachers are not open to new ideas
Attitude	Some teachers do not like to collaborate
Attitude	Some teachers do not respect the expertise of others

Table 17 Factors supporting the Information Literacy Program at the study school

Category	Support
Initiation	ACCESS PA played a significant role in capacity development which prepared the teacher-librarian & the library for developing an information literacy program
Initiation	The teachers & the teacher-librarian perceived a need for a change in the library program in order to respond to the information explosion & rising teacher expectations for students
Initiation	The teacher-librarian pushed for the incremental changes (e.g., ACCESS PA & Power Library databases that prepared her & the library for an information literacy program
Climate	Teachers are open to collaborating
Climate	The school and district took an evolutionary approach to information literacy program development
Climate	There is open & frequent communication between the teacher-librarian & administrators
Climate	There is open & frequent communication between the teacher-librarian & teachers

Table 17 (continued)

Category	Support
Climate	Administrators foster a climate of teacher leadership, experimentation, & risk-taking
Climate	Teachers are open to resource-based teaching & learning
Climate	Those teachers who are technologically advanced support the information literacy program
Leadership	Teacher-librarian assumed a leadership role in both the school & district
Leadership	Teacher-librarian is the department chair
Principal	Principal gives the teacher-librarian whatever he can
Principal	Principal provides disciplinary support to the teacher-librarian in matters of student behavior
Principal	Principal distributes leadership to the school's leaders
Principal	Principal supports teacher-librarian having an active curricular role
Upper Administrators	Upper administrators value & support the information literacy program & the teacher-librarian
Upper Administrators	The School Board supports the information literacy program
Upper Administrators	The Curriculum Director supports the teacher-librarian
Upper Administrators	The Technology Department supports the information literacy program & the teacher-librarian
Capacity	There is continuous, high quality training for the teacher-librarian

Table 17 (continued)

Category	Support
Capacity	Support is given to teachers as they attempt to modify & change teaching styles in the form of modeling & sharing of successful lesson plans
Capacity	Teachers are given opportunities for high-quality site-based staff development
Capacity	The teacher-librarian is tapped to present in-service workshops on information literacy resources
Capacity	Many staff members share a constructivist view of learning
Capacity	The teacher-librarian is aware of current school library research
Capacity	The teacher-librarian is a lifelong learner
Capacity	The teacher-librarian is extremely well organized
Capacity	The teacher-librarian thinks strategically
Capacity	The teacher-librarian embraces change
Capacity	The teacher-librarian pursues continuing education on her own time
Capacity	The teacher-librarian has extensive technology skills
Goal Setting	The information literacy program has expanded & evolved as new situations, resources, & technology occur
Resources	The library is available (rarely scheduled for other uses)
Resources	The library is a spacious & well-planned facility that is attractive to students & teachers

Table 17 (continued)

Category	Support
Resources	Online resources are readily available for use
Resources	There is a large & current library collection
Resources	The library secretary does excellent work
Resources	The library support staff takes care of clerical tasks
Resources	Volunteers assist with clerical tasks & special projects
Resources	The information literacy program has an adequate budget
Resources	The teacher-librarian is available to work with students & teachers
Resources	The teacher-librarian is given time to attend workshops & professional meetings
Resources	The teacher-librarian devotes extensive personal time to the information literacy program
Resources	Teachers & teacher-librarian make time to collaborate
Resources	There is money available for the purchase of new equipment
Resources	New resources are available in the library
Resources	New technology is available in the library
Curriculum & Instruction	Student assignments are well designed
Curriculum & Instruction	Teachers are using resource-based & authentic learning

Table 17 (continued)

Category	Support
Policy	There is participative collection development (active teacher input)
Policy	Policies exist that that support the instructional role of the teacher-librarian
Policy	The library is flexibly scheduled
Attitude	There are positive teacher attitudes toward the information literacy program & the teacher-librarian
Attitude	Teachers are open to new ways of doing things
Attitude	Collaborative partners share an understanding & mutual respect
Attitude	Collaborative partners are very flexible in the way that they organize & accomplish their work

4.8   THE INFORMATION LITERACY PROGRAM IN PRACTICE

In their book, *Fostering Information Literacy*, Thompson and Henley give a concise

description of an excellent information literacy program in action and then they briefly

discuss the processes and people needed to realize this success.

An effective school-wide information literacy program depends on an

environment that fosters meaningful learning experiences full of

opportunities for students to seek, evaluate, organize, and use information.

The focus of these experiences is on understanding information in all its

forms rather than on memorizing facts…. For lasting improvements, the

entire school community must be involved both in the change process and

in the everyday practices of the information literacy program. Principals,

teachers, families, students, and library media specialists all have a part to

play in fostering information literacy in the daily life of the school (2000, p.

71).

That is how I would describe the information literacy program that emerged from

my data. The participants' transcripts are filled with rich and thick descriptions of their

program – not only the things that support or impede it, but its history and growth,

everyday workings, and how it is understood by those who participate in it. There were

five topics that dominated their discussions of their information literacy program:

1. The way the information literacy program evolved over time.

2. The crucial role that technology played in the development and expansion of the

   information literacy program.

3. How the information literacy program supports teaching and learning.

4. How the role of the teacher-librarian has changed.

5. The link between the information literacy program and the development students'

   lifelong learning skills.

In the pages that follow I will briefly discuss each topic and share study data in support of

each topic.

All four participants remembered the information literacy program evolving

slowly over time. Tom (the principal) recalled that "it started very simply with avenues

that the library was able to go" (interview, September 2, 2005). Carol (the teacher-

librarian) was able to recall more details about the many different avenues of growth that became available. In this particular passage from her first interview she also discusses how technology was the impetus for the beginning of the change process that would lead to the development of the information literacy program. Finally, her statements show the close link between technology and the beginning of her and the library program's role changes.

The internet came upon the scene. People needed more and, so, the most wonderful thing that happened to us was Access PA coming along…. But when Access PA came along it came along with a lot of mandates. They would do this for you if you would do this…You had to turn your collection in and get it automated. Which means you weeded and got it cleaned up…. You got it automated free. I mean, districts couldn't pass it up but you had to say you were going to get the library a copy machine. You were going to have a computer…I mean we didn't even have good computers before that….. They mandated which computer you had to have. You had to have a printer. You had to have a fax machine in the library and a copier…. That was so good! That started it all! You know, because then, people started to see the benefits of it. Then they started with -- we started to teach accessing resources. And so, then came along the fact that they could borrow books across the state. How good is that? You know if you don't have it, we'll get it for you. And so you advertise that. Then Power Library was added (a collection of online databases funded by

the state of Pennsylvania). And it was one of the best things that ever happened to us. And I think that any administrator would agree -- it's one of the best things that ever happened to us. And, so anyway we got all the good stuff with that. And then, along came Power Library -- that was another thing. So, then that came along and, as I said, then training was necessary. So, we did mini in-services. They asked us to do in-services for the in-service days. So, I mean it really opened things up for us. It was wonderful (interview, September 2, 2005).

Beth (a Spanish teacher) also tied the beginnings of the information literacy program to information technology but she also linked it to changes in teachers' goals and outside standards.

Well I think that a lot of this developed because both the teachers and the librarians were seeing a need that needed to be met…. Teachers had goals and didn't necessarily know quite how to accomplish them because they were big. And the librarians would be approached, you know, out of the blue, "Hey, I'm coming. Can you do this for me?" …I think that over the years this developed out of necessity for the teachers' sake to have that kind of background -- that resource available. As well as the fact that the demands for academics just keep getting higher and higher -- which is a good thing…. I think the whole idea of having a program rather than just running back and forth and grabbing things when you need them just developed…to have a systematic way to handle both teacher needs and the

new requirements coming down from the state as well as the federal

[government] (interview, November 4, 2005).

Tom (the building principal) believes that what Carol does through the school's information literacy program is an integral part of the teaching and learning of the school. Here Beth describes how she and Carol developed and implemented a unit on the music and musicians of Spanish speaking countries. It illustrates the integral roles that Carol and the information literacy program play in Beth's teaching.

So…we gave each of the students a person or a type of music to research

and then we took them to the library. But before I did that, the librarians

searched…Access PA and found such wonderful sites for us or resources.

They went through my list of 30 or 40 [musicians] and if they couldn't find

anything on it then we eliminated that person from the list…. So the

student couldn't meet with failure…. So they helped the kids and then

when they went in they showed them where all these were. They showed

them how to find them, how to refine searches. And then we also put this

into PowerPoint and then the kids also made a worksheet to go with it. I

was able to do the worksheet with them. Mrs. [X] (the teacher-librarian)

equipped them with PowerPoint and also talked to them about citing

resources and how to do that correctly. And evaluating sites, as well as

plagiarism and non-plagiarism and things like that. So that was another

project that we did -- that they put together. And again you can find it on

the class links (Carol's curriculum-based webpage) (interview, November 4, 2005).

Carol has seen her role and that of the library change as the information literacy program has developed and expanded into new areas. In his first interview, Tom (the building principal) referred to Carol as a librarian and then added, "I'm not even sure if that's the correct terminology anymore…" Later, during the same interview when asked about changes in the role of the school library he stated: "I don't think we have a library program anymore" (interview, September 2, 2005). John (a Social Studies teacher) said that he wasn't sure what to call Carol and added, "I don't even consider [Carol] a librarian" (interview, November 4, 2005). Both participants' statements seem to indicate that roles of the teacher-librarian and the school library have changed.

Here Carol tells how her role and what she does have changed. She describes how she moved from teaching library skills in isolation to team-teaching and collaborating with other teachers. What also emerges from her discussion is the way that technology has impacted her role.

> Okay, when I first started, I was a caretaker of books. And I did
> bibliographies --- like every other librarian and I thought I was doing a
> great job. Then I found out I wasn't – that wasn't all that was needed. And
> then I became an information provider. You know, and a resource teacher
> to students and that's a fun role. Like a reference person, you know? Not
> specifically teaching information, but how to, how to access that
> information, how… So that it's a life process [that] they know how to do

171

it…. You had to learn more. You had to be an information technology and literacy provider…. So, so anyway, you have to be a technology expert, almost in this field now. And that's really a difference in role. You have a lot of other resources now…. It's not get a book and find the information anymore. It's a wide variety of resources that have to be tapped into and there are certain ways that you have to tap into them. And you have to know what is good out there. You have to know how to evaluate that information – to make sure that it's good information. Collaboration and differentiated instruction, that's another thing that's changed. I mean, you didn't – everybody taught in little isolated pods before and now, you see, now I told you we have 12,000 kids in here in – that was two months last year. We had 12,000 students in one month coming in and out. And that's with teachers and classes and so forth and so ---- we're collaborating. And that's a different role,… a collaboration role, but I love it, and we team-teach. Now I team-teach. I never did that. I taught…library skills in isolation. We expected the kids to go back and next time they did research they would know them. Well we don't do that anymore. When they have a research project they come down and we teach what's applicable to that research project (interview, September 2, 2005).

The last topic that dominated the participants' transcripts was the important role that information literacy plays in teaching students how to be lifelong learners. Beth (a Spanish teacher) shared some thoughtful ideas on this topic.

[O]n the most basic level they understand how to find and how to evaluate information…. I mean, countless times in our lives we're going to need to know something. And now that information's at our fingertips but you can't just go out and do it. It's like a shotgun – because of scatter spray -- we need to teach the kids how to be very specific in finding information and then how to evaluate it to know what's right and good or what's not a good source. They're also going to value resource experts and look to them to network. But they're going to say, "Okay, I don't know everything about this topic but I know someone who does or who is really well versed in it." And they're going to learn how to network to work with other people. They don't have to know everything about everything. They just have to know how to find everything about everything. You know to find those people who are resource experts…And they're going to have very practical knowledge; they're not just going to have a specific knowledge on twenty vocabulary words in Spanish or the Pythagorean Theorem. They're going to understand what it is that they need to study and how it relates to all of life across the curriculum (interview, November 22, 2005).

In one interview Carol (the teacher-librarian) told how Edinboro University and Allegheny College have complimented their school on the writing and research skills of their students. She attributes this, at least in part, to the extensive collaboration that occurs between classroom teachers and the library staff as a result of the integrated information literacy program. "So, we are recognized as a top notch school as far as

getting those kids out there and knowing what they're doing information wise and that's a credit to our teachers and the library" (interview, November 22, 2005).

Distributed Leadership played a significant role in the teacher-librarian being encouraged and supported in her desire to pursue opportunities that would improve, redirect, and fundamentally change her role and the library program. The data in the interviews show that as she and other teachers have worked at learning to adapt and combine their roles and change their teaching styles they have felt supported in their efforts by administrators. John (a Social Studies teacher) describes the administrative support for instructional change in his school and district as passive. "I think it's passive support – but if you're willing to go out and try to get and do those things -- that they will give you all the leeway they can to do that for you (interview, November 22, 2005). John's observation explains why, as the library's program began to change and Carol's expertise developed, she was encouraged to assume a leadership role in her school and district by sharing her knowledge with others at in-services and after school workshops. As each new avenue opened up to her, the information literacy program was allowed grow and develop in unforeseen ways. In an environment that fosters *Distributed Leadership* administrators understand that change cannot be controlled but only guided (Elmore, 2000).

The type of passive support present at the study school has allowed its information literacy program to experience what Fullan (2001b, p. 109) calls "development in use" – i.e., the implementation of the program has occurred developmentally over time. Teachers and the teacher-librarian have been allowed to engage in slow knowing as they

tried their hands at resource-based teaching and learning, collaborative teaching, and

integrating information literacy skills into their curriculum (Farwell, 1998; Goldenberg &

Gallimore, 1991). Thus, the study school seems to mirror Fullan's three lessons for

effective leadership in a culture of change. The lessons are "the vital and paradoxical

need for slow knowing, the importance of learning in context, and the need for leaders at

all levels of the organization, in order to achieve widespread internal commitment"

(2001a, pp. 121-122).

5.0   CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Development comes from within.
Nature does not hurry but advances slowly.
(John Amos Comenius as cited in Fred Rogers, 2003, p. 115)

5.1   GUIDING RESEARCH QUESTION # 1

Why and how was an integrated approach to information literacy initiated and implemented in the school library program?

5.1.1   Conclusion #1

The simultaneous occurrence of need, opportunity, and leadership for change was essential for the successful initiation and implementation of an integrated approach to information literacy in the school library program to occur.

5.1.2   Conclusion #1 Implications

The current study validated research that found that the successful initiation and implementation of educational change is very dependent upon participants perceiving a need for change (Fullan, 1993, 2001a; Hargreaves, 2004). It also validated library

research that found that in order to institute successful school library change it is crucial that all participants – the teacher-librarian, teachers, the principal, and district administrators perceive that the change is needed to support the teaching and learning of the school (Lumley, 1994; Oberg, 2001; Willeke & Peterson, 1993).

The present study also corroborated school library research that found that successful information literacy program development is dependent upon access to supportive resources: time, facilities, learning resources, and an adequate budget (Lance & Loertscher, 2002; Peterson, 1999). In the conclusions of her doctoral study on the change process followed by a school with a successful school information literacy program, Lumley advises teacher-librarians to "be watchful for opportunities for enacting change and capitalize on opportunities when they arise" (1994, p. 225). In this instance the teacher-librarian insisted on participating in a series of ongoing initiatives for school libraries sponsored by the Commonwealth of Pennsylvania (ACCESS PA and the Power Library project). These initiatives gave her access to expertise, training, and electronic resources and mandated the purchase of equipment that would automate many library functions. Her participation in these initiatives laid the groundwork for the development of the school's information literacy program.

Finally, both bodies of research literature stress the importance of effective leadership for guiding the initiation and implementation of an educational initiative, in this case -- information literacy (Fullan 1993a, 2001a, 2001b; Haycock, 1995; Lumley, 1994; McGregor, 2002; Oberg, 2001; Willeke & Peterson, 1993). A leadership team made up of the teacher-librarian, key teachers, the building principal, and key central

177

office administrators provided this leadership. This leadership team was *led from the middle* by the teacher-librarian (AASL & AECT, 1998). Finally, the current study affirms previous research that found that the successful implementation of an educational innovation is facilitated by leaders who work at both educating participants and getting their commitment to the innovation (Fullan 1992, 1993a, 2001a, 2002a).

5.1.3   Conclusion #2

The distributed leadership practiced by the building principal and district administrators empowered the teacher librarian and key teachers to assume leadership roles in the initiation and implementation of the school's integrated information literacy program.

5.1.4   Conclusion #2 implications

Distributed leadership has played a major role in creating a school environment that supports the adoption of worthwhile educational initiatives and emboldens teachers to take risks as they aspire to improve their teaching. The teachers who participated in the study spoke of administrators who routinely ask for and respond to teacher input (Fullan, 2001b). They described a building principal who is not threatened by the knowledge and skills of his teachers but taps them for different leadership roles and responsibilities (Elmore, 200; Fullan, 2002a; Glickman, 1991; Hargreaves & Fink, 2004; Neuman & Simmons, 2000; Sergiovanni, 2005). The data portrays a principal who uses his position to provide ongoing opportunities for teachers to gain new skills, experience, and

confidence in their abilities. It also shows that he strives to create and maintain trustful and respectful relationships among his teachers.

In a school that practices distributed leadership everyone involved with the school is called upon "to take responsibility for student achievement and to assume leadership roles in areas in which they are competent and skilled" (Neuman & Simmons, 2000, p. 10). This climate supported and encouraged the teacher-librarian as she worked to capitalize on unfolding opportunities that would allow her to provide better library services and more resource materials to her students and teachers. By pursuing these opportunities she gained new technological skills and enhanced her teaching, resource, and reference skills. She was then invited to share her new knowledge and skills with the other teachers in her school at in-services and after school mini in-services. By having these opportunities to share her newfound expertise she was able to add to their skills and knowledge (Elmore, 2000).

Because the study school's environment supported risk takers, some trailblazing teachers followed the teacher-librarian's lead and became the first teachers to plan collaborative lessons with her. They were also the first to invite her to teach their students information literacy skills. As they began working on the teaching skills and professional relationships that they needed to integrate information literacy into their curriculum, both the teachers and the teacher-librarian took an evolutionary approach to what they were attempting to learn together (Goldenberg & Gallimore, 1991). In their interviews they stated that they felt that it was okay to make mistakes and that they believed that their principal and district administrators understood that when they made

mistakes they would learn from them. Elmore notes that in a school that practices distributed leadership teachers and administrators understand that "experimentation and occasional failure are expected and acceptable in the process of teacher learning" (Elmore, 2000, p. 15). Both the teachers and the teacher-librarian explained that when something did not work in a collaborative lesson they would discuss it and revise it for the next time. The data show that as they became better at collaborating, team teaching, and incorporating information literacy skills into their curriculum, other teachers began asking questions. Eventually some of these other teachers started dipping their toes in the library's collaborative waters. The information literacy program has grown from there.

Based on the participants' descriptions of the evolutionary development of the information literacy program, it seems that the library has become a learning laboratory for learning about learning for teachers and the teacher-librarian (Meier, 2002). What occurs among teachers, the teacher-librarian, and students in the study library sounds very much like Elmore's description of how teachers best learn new ways of teaching:

People make these fundamental transitions, by having **many** opportunities to be exposed to the ideas, to argue them into their own normative belief systems, to practice the behaviors that go with these values, to observe others practicing those behaviors, and, most importantly, to be successful at practicing in the presence of others (that is, to be seen to be successful). (2000, p. 31, emphasis in original).

One teacher described the administrative support for instructional change in his school and district as passive. "I think it's passive support – but if you're willing to go

180

out and try to get and do those things -- that they will give you all the leeway they can to do that for you (interview, November 22, 2005). The leeway that was and is provided by the building principal and district administrators for the ongoing development of the library's information literacy program has taken the form of help, support, and recognition (Elmore, 2000). It has created a school community in which the teachers and teacher-librarian feel free to be instructional leaders who take risks, make mistakes, and ultimately improve their instructional skills.

5.1.5   Conclusion #3

In order to prepare for and continue to play a leadership role in staff and program development the teacher-librarian must have numerous opportunities to engage in ongoing, high quality, off-site professional development to build and maintain her information literacy and technology skills.

5.1.6   Conclusion #3 implications

On-site professional development is crucial for developing an effective information literacy program (Oberg, 2001) and the teacher-librarian can often benefit from participating in professional development alongside her colleagues. However, the specialized nature of school library work and the staff-development role played by the teacher-librarian also necessitate that she have access to high quality, off-site learning opportunities (Haycock, 1990; McGhee & Jansen, 2005). These learning opportunities may take a variety of forms: workshops, networks, mentoring, study groups, conference

attendance and presentations, professional association memberships, electronic lists, university classes, online training, action research, and site visits (McGhee & Jansen, 2005).

During school hours the teacher-librarian in the study school regularly attended regional meetings held by her local ACCESS PA network and those hosted by her district's Intermediate Unit (a regional education service provider that offers specialized expertise to local school districts in Pennsylvania) to discuss recent developments in media and technology resources. The teacher-librarian belongs to her state's school library association (Pennsylvania School Librarians Association) and attends their annual conferences. She explained, "You network. You talk to others and….I'm always learning…. I pick brains, you know! You sit there and you go –well what do you do about this and what do you do about that? How do you get the teachers to do this? And it's fun! It's a good growth – professional development" (interview, September 2, 2005). Thus, by attending these different learning venues she benefits from both the explicit knowledge that she acquires and the tacit knowledge that she gleans from other participants (Fullan, 2001a).

Active involvement in professional associations (Oberg, 2006) and ongoing opportunities to engage in learning that is specific to a school library's information literacy needs "offers many benefits to the individual teacher-librarian, who is, more often than not, the only teacher-librarian in their school" (Spence, 2005, p. 144).

5.1.7 Conclusion #4

Continuous on-site high quality staff development and a strong staff development leadership role for the teacher-librarian were essential for the successful initiation and implementation of an integrated information literacy program.

5.1.8 Conclusion #4 implications

This study confirmed research that found that continuous high-quality staff development throughout the change process was essential for effecting change in the school's library program (Bishop, 2001; Donham, 2001; Haycock, 1995; Lumley, 1994; Willeke & Peterson, 1993). In the study school's district it was common practice for administrators to ask teachers about their needs and wants regarding offerings for in-service presentations. As a result, the teacher-librarian was regularly tapped to provide staff development (Glickman, 1991; Haycock, 1995; Lance & Loertscher, 2002; Lumley 1994) on information literacy topics related to teachers' perceived classroom needs (Goldenberg & Gallimore, 1991). The current study confirms earlier studies that found that in schools with exemplary library programs the teacher-librarian has an extensive staff development role (Haycock, 1995; Lance & Loertscher, 2202; Lumley, 1994).

The most effective forms of staff development, however, were the daily encounters (during planning periods or class visits) that took place in the library as teachers and the teacher-librarian worked together in pairs or groups to create and share knowledge about how to effectively integrate information literacy into their curriculum

(Fullan, 2001b; McKenzie, 2001). During these sessions staff members had an opportunity to observe each other's lessons, discuss what they learned or could learn from one another, coach one another, engage in group problem-solving sessions or curriculum work (Donham, 2001; Glickman, 1991; Lumley, 1994). In addition, they would engage in general discussions about teaching and learning, examine new resources, collaborate with one another (Fullan, 2001b), and consult with the teacher-librarian about lesson design (Loertscher, 2005). All of these activities helped program participants to develop a multilevel understanding of the information literacy initiative over time (Fullan, 1993a, 2001b). In addition, all of these activities were essential for the teachers and teacher-librarian to be successful in developing a new instructional practice that meaningfully built information literacy into the teaching and learning of their school (Fullan, 2001a).

The value of these daily encounters cannot be underestimated -- an environment in which teachers share their knowledge is key to implementing changes in library programs (Donham, 1999, 2001; Lumley, 1994; Muronaga & Harada, 1999; Oberg, 2001; Thompson & Henley, 2000). Fullan admonishes that "it is when we are learning in context that knowledge becomes specific and usable" (2001a, p. 104) and Elmore reminds us that "Improvement occurs through organized social learning" (2000, p. 25). The daily sharing that took place in the library was largely responsible for developing the school's knowledge base about how best to integrate information literacy into the curriculum (Fullan, 2002a).

Schools or districts that want to break down the walls of teacher isolation and establish a collaborative culture should seriously consider implementing an integrated approach to information literacy in order to enlist the expertise of their teacher-librarians to achieve this goal.

5.1.9   Conclusion #5

The staffing of an effective integrated information literacy program in a high school, in which the teacher-librarian routinely performs roles in staff development, resource development, lesson design, team teaching, lesson evaluation, grant writing, information sharing, and webpage development, with one full-time teacher librarian assisted by one full-time library secretary may not be adequate to sustain the roles and responsibilities required by the program.

5.1.10   Conclusion #5 implications

Views about staffing levels for school libraries have changed since the publication of *Information Power 1* in 1988. At that time the recommended guidelines for personnel were at least one full-time teacher-librarian for each school and at least one or more paid paraprofessionals. The 1988 guidelines also recommended that the number of students and teachers served and program requirements should be taken into account when staffing a school library. Ten years later, *Information Power 2* listed no specific staffing levels but stated: "An effective library media program requires a level of professional

185

and support staffing that is based upon a school's instructional programs, services, facilities, size, and number of students and teachers" (1998, p. 104).

The current study questions the adequacy of the staffing levels at the study school and recommends that administrators seriously consider following the recommendations of *Information Power 2*. This means that they should contemplate increasing staff levels to be more in line with the many instructional responsibilities of the teacher-librarian, the numerous teacher support services offered by the library, and the heavy usage patterns of the library. An increase in staffing levels would serve to ensure that the program could continue to operate at high levels during peak use times and during the current teacher-librarian's absence, as well as providing for continuity in the event that she leaves. At present, the teacher-librarian works non-stop – only breaking for lunch. Such an intensive work schedule can be a prescription for burnout.

Since the publication of *Information Power 2* numerous statewide studies have found relationships between the levels of professional and support staffing and student achievement. *The Second Colorado Study* (Lance, Rodney & Hamilton-Pennell, 2000a) found a positive relationship between the existence of adequate school library staffing and higher reading scores on the Colorado Student Assessment Program (CSAP). According to the findings of Pennsylvania's statewide study, *Measuring Up to Standards*:

- [PSSA] Reading scores increase with LMC [Library Media Center] staffing, information technology, and integration of information literacy with the curriculum.

- Activities that help to integrate information literacy with the curriculum include: teaching cooperatively with teachers as well as teaching alone, providing in-service training to teachers, serving on standards and curriculum committees, and managing information technology (Lance & Loertscher, 2002, p. 4).

The Pennsylvania study also found that a limited or non-existent support staff means that a teacher-librarian must spend most of her time engaged in warehousing duties. As a result, she is "not free to manage library expenditures, resources, and technology or to engage in key activities that ensure the integration of information literacy into a school's approaches to standards and curricula" (Lance, Rodney & Hamilton-Pennell, 2000b, p. 52).

Finally, Alaska's statewide study, *Information Empowered*, found that the greater the level of school librarian staffing, the larger percentage of staff hours spent on:

The study found that the more teacher-librarian time that was devoted to these activities, the higher students scored on achievement tests.

The staffing levels for the study high school were one fulltime teacher-librarian and one fulltime library secretary. The teacher-librarian was actively engaged in a variety of instructional roles, did extensive grant writing, and offered numerous library services to students and teachers. The more time that teachers and teacher-librarians have to work together to influence students, the greater the opportunity for a positive impact on their achievement (Hartzell, 2003).

5.1.11 Conclusion #6

The teacher-librarian's open and frequent communication style was very effective for enhancing the principal's knowledge of the library and the teacher-librarian's role and gaining his support for the information literacy program. In addition, her communication style played a key role in drawing teachers into the library to tentatively discuss and explore new library resources.

5.1.12 Conclusion #6 implications

This study confirmed previous research that found that quality communication is vital for developing and maintaining a good working partnership between the teacher-librarian and the principal (Campbell, 1991; Hay & Henri, Haycock, 1990; 1995; Oberg, 2006). This open and frequent communication fosters a trustful relationship between the principal and teacher-librarian and it bolsters the work done by each partner. "Principals and school library media specialists must work together to provide an understanding, set high expectations, to gather support, and to communicate these to the entire staff, the students, and the community" (Campbell, 1991, p. 70). Both the principal and the teacher-librarian in the study were supported in their partnership efforts by district administrators, the school board, and district policies (Oberg, 2006) – especially those that facilitated the practice of distributed leadership.

The study also corroborated research that found that principals rely on teacher-librarians to educate them about school library management and functions and keep them

abreast of current thinking about school libraries (Campbell, 1991; Oberg, 2006). The professional development that a teacher-librarian does for her principal is essential if the principal is to understand the teacher-librarian's vision of how the school's information literacy program can support the teaching and learning of the school (Oberg, 2006). In addition, it makes a principal aware of the different supports that the teacher-librarian needs in order to develop and maintain an effective program (Campbell, 1991; Hay & Henri, 1995; Oberg, 2006). The principal in the study was keenly aware of what the teacher-librarian was attempting to achieve through the school's information literacy program and he shared her vision. He also knew what resources and policies he needed to continue to provide in order to support her efforts.

The teacher-librarian in the study used a variety of communication methods to keep her principal, teachers, and district administrators informed about the school's information literacy program. She engaged in "assertive information sharing" (Lambert, 1998) to inform teachers about resources and services, to raise awareness of the library, to keep all administrators informed about resource and facility usage, and to advocate for the future of the information literacy program. She spoke to people face to face and sent numerous emails to teachers to interest them in visiting the library to examine new materials or ask questions about new databases or webpages. Once teachers came to the library the teacher-librarian used gentle support and encouragement to persuade them to plan collaborative lessons that would incorporate information literacy instruction and the materials (or databases, or webpages) that had originally interested them.

189

5.2   GUIDING RESEARCH QUESTION # 2

Do participants believe that the changes in the school library program have been or will be institutionalized? If so, how or why?

5.2.1   Conclusion #7

Two of the four of the participants believed that the changes in the library program were institutionalized, however, the evidence showed that that many of teachers at the study school were at different places on the institutionalization continuum. The program was still evolving, responding to new situations, and was not yet fully developed throughout the school.

5.2.2   Conclusion #7 implications

Although some teachers were very comfortable collaborating with the teacher-librarian in planning, teaching, and evaluating their lessons, others were more restrictive in the degree of collaboration in which they would engage. The present study showed that a majority of teachers were engaging in some degree of collaboration with the teacher-librarian (Carol, the teacher-librarian, reported 77%). However, a minority of teachers was still unaware of the resources and services of the information literacy program or declined to participate in them. Several study participants were amazed that there were teachers who were still uninformed about the program given the volume of

communications issued by the teacher-librarian. These participants believed that some teachers would never participate because they preferred to teach in isolation or they were not open to sharing and receiving knowledge about teaching (Elmore, 2000; Fullan, 2001b; Henri, 1998; Kolencik, 2001; Lumley, 1994; Peterson, 1999).

Those wishing to establish an integrated information literacy program in their school need understand that to continue their program they must deliberately work at creating sustainable leadership – leadership that will carry on the initiative after major founding members have left (the teacher-librarian, the principal, or key supporting teachers). This means that program initiators should work to establish a wide support base that deeply understands, values, and practices the initiative (Hay & Henri, 1995). This leadership base will work over time to continue to make the program viable and relevant to the school's changing educational needs (Hargreaves & Fink, 2003, 2004).

5.3   GUIDING RESEARCH QUESTION #3

What factors supported or impeded the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?

5.3.1   Conclusion #8

Time constraints, an already heavy workload, and the fear of changing one's approach to teaching were the most serious institutional and human barriers to the implementation and institutionalization of an integrated information literacy program.

5.3.2   Conclusion #8 implications

The study found that there were definite time constraints that impeded teachers and the teacher-librarian from getting together to plan collaborative lessons. Lack of time also prevented teachers from becoming more knowledgeable about new library materials and databases and prevented them from doing more resource-based projects in the library. Many library researchers have reported that sufficient time for planning and practice is a vital support for the development of an effective information literacy program in a school (Farwell, 1998; Henri, 1998; Henri et al, 2002; Kolencik, 2001; Kuhlthau, 2001; Lance & Loertscher, 2001; Lumley, 1994). Time is essential for creating meaningful connections between the library and the classroom. "Teachers need time to talk to each other, compare notes, encourage, discuss, revise, and try out new ideas" (Peterson, 1999, p. 155).

The existence of an already heavy workload also interfered with the operation of the information literacy program. All participants reported that there was heavy usage of the library and some noted that large class sizes often made it difficult for the teacher-librarian to give students the individualized attention that they needed to master the

information literacy skills that they were expected to learn. All participants suggested that a larger library staff was needed to keep pace with the volume of library usage and larger than ideal class sizes. Both Henri (1998) and Lumley (1994) found that a heavy workload impedes the successful implementation of an integrated information literacy program.

Three of the four participants reported that some teachers opted to not participate in the school's information literacy program because they were reluctant to change their approach to teaching. Building information literacy into one's curriculum may require changes in one's beliefs, teaching strategies, and use of materials (Fullan, 2001b). Changes of this magnitude can cause teachers to be fearful of venturing into the unknown. Other researchers have found that this fear can be a major impediment to the development of an integrated information literacy program (Bruce, 2002; Hancock, 1993; Peterson, 1999). McGregor offers some advice for encouraging teachers to try change – advice that the teacher-librarian at the study school already seems to know: "[T]here is no right or wrong way to makes things happen.… Attending to the specific needs of the staff and students in that school allows the change to be appropriate. There are no rules for creating a collaborative environment" (2003, p. 204).

5.3.3 Conclusion #9

Distributed leadership, a strong staff development leadership role for the teacher-librarian, access to sustained, teacher-driven, quality staff development, open and frequent communications, improving staff relationships, adequate monetary, resource,

and policy supports, and an evolutionary approach that allows for program development over time all combined to support the initiation, implementation and ongoing institutionalization of the study school's integrated information literacy program.

5.3.4 Conclusion #9 implications

Numerous support elements are needed to initiate and implement an information literacy program that will promote student achievement. These support elements are also interactive and cumulative in their effects. Each element depends on the others for its own effectiveness. Hartzell illustrates this point in this passage:

> External leadership opportunities won't increase faculty interaction opportunities if the library is impoverished. The most extensive collection will not produce maximal achievement results unless qualified teacher-librarians and support staff are available to help students and teachers use it. Enrichment services to targeted groups and administrative research support cannot be delivered if teacher-librarians are saddled with clerical duties. Principal support must be broad-based and multi-dimensional (Hartzell, 2003, How Can Principals Support Libraries? section, ¶5).

The teacher-librarian in the study school has had broad-based and multi-dimensional support for the school's information literacy program from her principal and district administrators. Some of the supports were in place before the program began (e.g., a large, well-planned, and attractive facility); others supports were opportunities that presented themselves that she wisely seized (e.g. ACCESS PA or a role in staff

development); and still others were things that she had to ask for or make a case for with her principal, superintendent, or school board (e.g. increased funding for online databases). All of these supports, however, would have been wasted if the teacher-librarian did not have a vision of what her role should be and an understanding of why and how her library program needed to change and adapt. Lastly, the teacher-librarian must have the knowledge and skills to work with others to effectively guide the change into an effective integrated information literacy program.

Thus, it appears that the quality of the teacher-librarian plays a tremendously important role in establishing the quality of a school's information literacy program (Farwell, 1998; Lumley, 1994). Graduate school administrators responsible for recruiting students for school library programs are encouraged to select the best candidates. Those chosen should have knowledge and intelligence and a desire to learn deeply as well as a good work ethic and organizational skills. To complement these traits candidates should also have well-developed social interaction and communication skills and not be afraid of experimenting and taking risks (Charter, 1982; Farwell, 1998). If prospective students are lacking in some of above-mentioned qualities, school library educators should work with them to develop an understanding of why these are important attributes to have and instill in students a desire to cultivate them. Finally, school administrators are advised to exercise great care in their choice of a teacher-librarian since the person that they select will have the potential to play a vital role in establishing norms of collaboration in their school and working with teachers to raise student achievement levels. The appointment

of a teacher-librarian is an opportunity – one that should be approached with knowledge and a vision of what a teacher-librarian's role can be.

5.4   GUIDING RESEARCH QUESTION #4

What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships among the various participants?

5.4.1   Conclusion #10

The roles of both school library and the teacher-librarian changed as a result of the successful implementation of the information literacy program. The school library program moved from the periphery of the school's instructional program to become an integral part of its teaching and learning. The teacher-librarian went from teaching library skills in isolation and out of context to assuming a professional development role and collaborating with teachers on lesson design, teaching, and lesson evaluation.

5.4.2   Conclusion #10 implications

All the participants described these role changes in their interviews. According to the participants, at the beginning of the initiative only a handful of pioneering teachers brought their classes to the library for resource-based collaborative projects with a built in information literacy focus. Now, increasing numbers of teachers and their classes

frequent the library. During two months of the 2004-2005 school year, the teacher-librarian documented that 12,000 students visited the library during the course of each month. When I first visited the library at the beginning of the current 2005-2006 school year the teacher-librarian showed me her library schedule for the upcoming year – it was already heavily scheduled for the entire first semester. This evidence indicates that the library is now an integral part of the instructional life of the school.

One of the first new roles assumed by the teacher-librarian after her library joined the ACCESS PA initiative was that of staff developer. When she first began doing staff development activities during in-services and mini in-services she introduced teachers to the ACCESS PA database and taught them how to search for and request materials via interlibrary loan. She also gave them their first instruction on how to use a personal computer, CD-ROMS, and printers. When the ACCESS PA initiative expanded to include an array of online subscription databases she taught teachers how to find journal and newspaper articles. When the worldwide web became commonplace she made teachers aware of the need to question information obtained from it and shared some basic webpage evaluation procedures with them. Finally, she focused teacher attention on the growing problem of student plagiarism and together they developed procedures to contain student plagiarism and prevent it from becoming a rampant problem in their school.

As a result of administrators encouraging and allowing the teacher-librarian to share her informational and technological expertise with other teachers during in-services and mini in-services, the teacher-librarian became an expert in these areas in the eyes of

her fellow teachers. Because of her perceived expertise, teachers went to the library to seek her help when they had a computer or electronic resource problem. The teacher-librarian used these technical consultations to show teachers new library materials and lay the groundwork for future instructional collaborations.

The study found that some teachers do engage in the full range of collaborative activities with the teacher-librarian. They work together to develop curricular content that integrates information literacy skills and to plan instructional activities, and the teacher-librarian identifies resources that support and enhance their curriculum (AASL & AECT, 1998). In addition, these teachers team-teach collaboratively designed lessons with the teacher-librarian and at the end of each lesson they evaluate the student products together and decide if the lesson should be refined for the next time that they teach it. Others are less collaborative with the teacher-librarian preferring to tap only her abilities to teach information literacy skills to students and identify appropriate resources.

Three of this study's four participants described the teacher-librarian as having a significant lesson design role in the school (Loertscher, 2005). As a testament to the teacher-librarian's expertise in lesson design, district administrators asked her to work with a teacher who had received a low rating in order to help her to design better quality lessons (Farwell, 1998). This and other evidence indicates that the role of the teacher-librarian has changed from one of isolation to one that is intimately involved in the instructional life of her school. This study confirms previous research that found that in schools with well-developed library programs the teacher-librarian has extensive roles in

staff development, curriculum development, and instructional development (Lance & Loertscher, 2002; Lumley, 1994).

5.4.3   Conclusion #11

Improved and closer relationships developed among teachers during the course of the initiation, implementation and ongoing institutionalization of their school's integrated information literacy program.

5.4.4   Conclusion #11 implications

The study data indicated that the participants believed that relationships had improved as a result of the school's integrated information literacy program. They reported that teachers now engage in more discussions about teaching and learning, work together to learn and practice new teaching approaches, and plan and coordinate more lessons together. The study supports research that found that improved staff relationships create a supportive and positively challenging environment that encourages teachers to take risks and helps them to feel safe as they try to master the new skills and professional relationships demanded by an educational innovation (Lambert, 1998; Newmann & Wehlage, 1995).

The study participants described a staff that was open to sharing knowledge with each other and learning from one another. The teacher-librarian worked to forge good but varied relationships with individual teachers – teachers diverse in their instructional

needs, educational beliefs, and approaches to teaching. As a result, teachers are now

more aware of the library and its resources, teachers now routinely engage in team

teaching with the teacher-librarian, and teachers work with the teacher-librarian and other

teachers to understand and master the new skills needed to implement an integrated

approach to information literacy. In the educational literature, relationships, such as

these, that are centered on teaching and learning are called *authentic relationships*

(Lambert, 1998), *communities of practice* (Sergiovanni, 2000), or *professional*

communities (Newmann & Wehlage, 1995). These relationships reach across

departmental and grade level borders and are nurtured by open and frequent

communications and by shared work and shared responsibilities (Lambert, 1998).

According to Lambert, they are relationships in which staff members "provide long-term

support for one another, challenging one another to improve and to question…[their]

current perceptions, and to learn together" (1998, p. 8). Such relationships were and are

critical for enhancing the capacity of the study school to master the many changes

required to integrate information literacy into their curriculum (Farwell, 1998).

School leaders who seek to improve the quality of teacher relationships, school

climate, and/or overall educational excellence should contemplate making their teacher-

librarian an active partner in the teaching and learning of their school and integrating

information literacy into their curriculum.

5.5   GUIDING RESEARCH QUESTION #5

How have the changes in the school library program impacted student learning?

5.5.1   Conclusion #12

The integrated information literacy program and the curricular, instructional, and staff development roles of the teacher-librarian contributed to improved teaching and learning in the school.

5.5.2   Conclusion #12 implications

As was discussed in Conclusion #11, the study participants believed that staff relationships improved as a result of their integrated information literacy initiative. The interview data described teachers and a teacher-librarian who are in relationship with one another (Lambert, 1998), they "learn together, share together, and research their practice together" (Sergiovanni, 2000, p. 140). In his article, *The Change Leader*, Fullan links the creation and sharing of knowledge that accompanies improved relationships to the development of better teachers and, ultimately, to sustained student achievement. He states: "The single factor common to successful change is that relationships improve. If relationships improve, schools get better" (2002a, Improving Relationships section, ¶ 1).

According to Newmann and Wehlage's study on successful school restructuring, teachers who work in a supportive and collaborative professional climate, like the one

described in the study data, "provide a consistently demanding and supportive environment that pushes students to do their best work (1995, p. 31). The educational environment depicted in the participants' interviews was one in which the teachers and teacher-librarian worked together to construct learning situations that would motivate and challenge students to use, interpret, and learn from information. They told about collaboratively designed lessons and units that cultivated students' abilities to use information from a variety of sources, required them to construct personal meanings, and gave students opportunities to create products that shared what they had learned with others. All of the participants expressed their dissatisfaction with assignments that require students to do little more than present the work of others. The two teachers who participated in the study indicated that they collaborate with the teacher-librarian to integrate information literacy into their teaching because they want to engage their students in critical thinking in order to develop their lifelong learning skills. They want their "students to think, to develop in-depth understanding, and to apply academic learning to important, realistic problems" (Newmann & Wehlage, 1995, p. 3). Newmann and Wehlage refer to this kind of learning as *authentic learning*. In their study of successful school restructuring (1995), they found that when students are engaged in authentic learning their achievement levels are boosted -- irrespective of their different social backgrounds. School and district leaders who want to raise achievement levels and make a difference in the lives of all their students should focus on implementing a curricularly integrated information literacy program since such programs (when they are

well supported and implemented) have been shown to positively impact student

achievement (Lance & Loertscher, 2002; Lance, Rodney & Hamilton-Pennell, 2000a).

5.6 RECOMMENDATIONS FOR FURTHER RESEARCH

5.6.1 Recommendation #1

It would be beneficial to conduct a multi-site, multi-district grounded theory study of

high schools which have successfully implemented curricularly integrated information

literacy programs. Such a study would help teacher-librarians, school administrators, and

school library educators learn more about the change process for successfully

implementing such programs and to better understand how such programs affect staff

relationships and impact student learning.

5.6.2 Recommendation #2

A larger, multi-year grounded theory study of a high school with an exemplary

curricularly integrated information literacy program should be undertaken. This study

would yield greater quantities of data about the change process and the program's impact

on staff relationships and student achievement. The study should be expanded to include

taped interviews with district administrators and non-participating teachers. Finally, to

augment the data gathered from taped interviews and the analysis of site documents and

records, the researcher should also conduct multiple, on-site observations of the information literacy program in action. The information obtained from this study would be helpful to teacher-librarians, school administrators, and school library educators interested in implementing such programs.

5.6.3 Recommendation #3

It would be informative to conduct a study of college students who attended high schools with exemplary curricularly integrated information literacy programs in order to determine if the programs have a positive impact on students' college experiences. Possible areas of investigation are: exploring students' beliefs about how well they were prepared for the demands of college research, gauging their levels of confidence in their research skills, and examining student attitudes toward and usage of their college libraries and the services that they offer. In addition, it may be helpful to compare and contrast these college students against students at the same college(s) whose high school libraries had lacking or limited school library programs. This information would help college administrators and librarians plan effective interventions to better augment incoming college students' information literacy skills (or lack of skills). It would also help high school administrators and teacher-librarians develop information literacy programs that more effectively prepare their students to meet research demands of college coursework.

5.6.4 Recommendation #4

A multi-site, multi-district grounded theory study of teacher-librarians with exemplary information literacy programs should be done. Participant teacher-librarians should be from the same school level (all high schools, middle schools or elementary schools) and should be the teacher-librarian who implemented the exemplary program. The purpose of the study would be to gain insight into their perspective on a successful change process for initiating, implementing, and sustaining an effective curricularly integrated information literacy program. In addition, the investigator should also examine the social interaction skills and communication styles of these teacher-librarians. The information obtained from this study would be helpful to teacher-librarians, school administrators, and school library educators who want to implement or assist in the implementation of similar programs. It would also help supervisors to better guide teacher-librarians who are trying to develop and implement effective information literacy programs.

5.6.5 Recommendation #5

It be beneficial to conduct a multi-site, multi-district grounded theory study of the leadership and communication styles of school and district administrators in schools that have effective integrated information literacy programs. Such a study would help teacher-librarians and school library educators to better understand the positive political environments and power structures and communication systems of such districts. Increased understanding of these phenomena would help teacher-librarians to better

direct their advocacy efforts for developing school library programs that are flexibly scheduled and integrated into the teaching and learning of their schools.

All of the studies recommended for further research are quantitative studies and should include the data gathering techniques of digitally recorded interviews and the collection and analysis of supporting documents and records. In addition, this researcher recommends that, whenever possible, investigators conduct on-site observations as an additional data gathering technique.

APPENDIX A. THE AASL/AECT NINE INFORMATION LITERACY STANDARDS FOR STUDENT LEARNING

The AASL/AECT Nine Information Literacy Standards for Student Learning

Information Literacy	Independent Learning	Social Responsibility
The student who is information literate accesses information efficiently and effectively	The student who is an independent learner is information literate and pursues information related to personal interests	The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society
The student who is information literate evaluates information critically and competently	The student who is an independent learner is information literate and appreciates literature and other creative expressions of information	The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology
The student who is information literate uses information accurately and creatively	The student who is an independent learner is information literate and strives for excellence in information seeking and knowledge generation	The student who contributes positively to the learning community and to society is information literate and participates effectively in groups to pursue and generate information

(AASL & AECT, 1998)

APPENDIX B. SITE SELECTION CRITERIA

SITE SELECTION CRITERIA

Please keep these information literacy best practices and essential school and library characteristics in mind as you make your choices.

Information Literacy Program Characteristics

✎ The school has an **articulated information literacy curriculum** with an Information Search Process **(ISP) model** as a key component of that curriculum.

✎ The school's teacher-librarian and "teachers collaborate on the use of the school library and instructional planning" (Todd & Kuhlthau, 2003, *Nomination Form*).

✎ The school's teacher-librarian, "in collaboration with the teachers in the building, provides information literacy instruction" (Todd & Kuhlthau, 2003, *Nomination Form*).

✎ The school's teacher-librarian "provides support and instruction in the use of electronic resources and library based technologies" (Todd & Kuhlthau, 2003, *Nomination Form*).

✎ The school's teacher-librarian "supports ethical practices in information use" (Todd & Kuhlthau, 2003, *Nomination Form*).

✎ An **integrated information literacy program** that has been in place for a **minimum of two years**.

School Characteristics
- 🖉 A grade arrangement of **nine through twelve** or **ten through twelve** with at least three grades housed in the same building.

- 🖉 Both the **principal and teacher-librarian who were responsible** for the initiation and implementation of the integrated information literacy program still remain in those positions.

School Library Characteristics
- 🖉 A library staff of **at least** one fulltime certified teacher-librarian and **adequate** clerical staffing to provide sufficient time for team planning and collaborative teaching.

- 🖉 A library that is **flexibly scheduled** and has been so for at least two years.

- 🖉 The school's **library collection** "has an up-to-date resource collection consisting of print, non-print and electronic resources" (Todd & Kuhlthau, 2003, *Nomination Form*).

- 🖉 The school's library collection supports the school curriculum and the state's standards.

- 🖉 The school's library collection provides materials for reading enrichment and personal enjoyment.

- 🖉 "The school's library provides adequate technological resources and functions as a gateway to information" (Todd & Kuhlthau, 2003, *Nomination Form*).

Source

Todd, R. J. & Kuhlthau, C. C. (2003). "Nominate your school library to participate in the Ohio school library research project"*. Student learning through Ohio school libraries.* Retrieved May 19, 2005, from http://www.oelma.org/studentlearning.htm

APPENDIX C. KUHLTHAU'S MODEL OF THE INFORMATION SEARCH PROCESS (ISP)

Kuhlthau's Model of the Information Search Process (ISP)

Tasks	Initiation	Selection	Exploration	Formulation	Collection	Presentation

Feelings
(affective)   uncertainty   optimism   confusion/   clarity   sense of direction   satisfaction or
                                                         frustration/doubt   /confidence   disappointment

Thoughts
(cognitive)   vague ---> focused
                                                                                    --->
                                                                                    increased interest

Actions
(physical)   seeking relevant information ---> seeking pertinent information
                           exploring   documenting
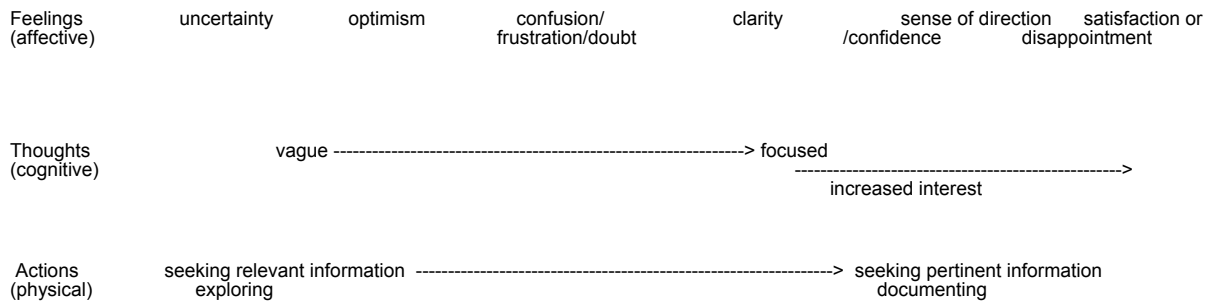
(Kuhlthau, 2004, p. 82)

APPENDIX D. EISENBERG AND BERKOWITZ: THE BIG6 SKILLS APPROACH TO INFORMATION PROBLEM-SOLVING

Eisenberg & Berkowitz: The Big6Ṛ Skills Approach to Information Problem-Solving:

1. Task Definition (determining the purpose and need for information)

    1.1 Define the problem.
    1.2 Identify the information requirements of the problem .

2. Information-Seeking Strategies (examining alternative approaches to acquiring the appropriate information to meet defined needs)

    2.1 Determine the range of possible sources.
    2.2 Evaluate the different possible sources to determine priorities.

3. Location and Access (locating information sources and information within sources)

    3.1 Locate sources (intellectually and physically).
    3.2 Find information within sources.

4. Information Use (using a source to gain information)

    4.1 Engage (read, hear, view) the information in a source.
    4.2 Extract information from a source.

5. Synthesis (integrating information drawn from a range of sources)

    5.1 Organize information from multiple sources.
    5.2 Present information.

6. Evaluation (making judgments based on a set of criteria)

    6.1 Judge the product (effectiveness).
    6.2 Judge the information problem-solving process (efficiency).

(As found in Eisenberg & Berkowitz's *Information problem-solving: the Big6 Skills Approach to library & information skills instruction,* 1990, pp. 22 and 24.)

APPENDIX E. SITE NOMINATION FORM

I wish to nominate the following high school as a site exemplifying the successful and effective integration of information literacy into the teaching and learning of an American high school:

Name of Nominator:	Title of Nominator:
High School Being Nominated:	Grade Levels:
School District:	Phone Number of Nominated School:
Address of Nominated School:	Fax Number of Nominated School:
Web Site of Nominated School (if applicable):	
Name of Principal:	Email Address of Principal:
Name of Teacher-Librarian:	Email Address of Teacher-Librarian: Phone Contact Information:
Other helpful information:	☺ *Thank you*☜

APPENDIX F. LIBRARY EXPERTS ASKED TO NOMINATE STUDY SITES

Dr. Mary Kay Biagini (LE)

Dr. Carolyn S. Brodie (LE)

Ms. Barbara Cole (SA)**

Ms. Magna Diaz (LP)

Dr. Carrie Gardner (recent LP; LE)

Dr. Deborah B. Gaspar (recent LP: CL)

Dr. Sarah Meghan Harper (LE)

Ms. LaDawna Harrington (LP; AO)

Dr. M. Kathryn Holland (LE)

Dr. Sandra Hughes-Hassell (LE)

Dr. Patricia Kolencik (recent LP; TE)

Dr. Carol Kuhlthau (LE)

Ms. Eloise Long (LE)

Ms. D'nis Lynch (LE)

Dr. Jacqueline C. Mancall (LE)

Dr. Andrea L. Miller (LE)

Ms. Lynn M. Moses (SA)**

Ms. Sally L. Myers (LP; AO; LE)

Dr. Celeste Nalwasky (LE; AO)

Dr. Delia Neuman (LE)

Ms. Geneva N. Reeder (LP; AO)

Ms. Beth Ann Sahd, (LP; LE)

Dr. Marilyn L. Shontz (LE)

Ms Suellyn Stotts (LP; AO; LE)

Dr. Margaret R. Tassia (LE)

Ms. Ann E. Tepe (SA)

Dr. Ross Todd (LE)

Ms. Cheryl Tunno (LP)

Ms. Joyce K. Valenza (LP; LE)

Ms. Anita L. Vance (LP; AO)

Dr. Ann Weeks (LE)

Dr. Holly Willett (LE)

LEGEND

AO = Association Officer (past or present)

CL= College Librarian

LE= Library Educator

LP= Library Practitioner

SA= State Agency Official

TE= Teacher Educator

*John Emerick (SA) collaborated with Barbara Coles and Lynn Moses on one set of site nomination forms

APPENDIX G. LETTER TO EXPERTS REQUESTING NOMINATIONS

June 16, 2005

Title First Last

Address

City, State Zip

Dear Title Last:

I am a doctoral student at the University of Pittsburgh and a practicing teacher-librarian in a high school near Pittsburgh, Pennsylvania. I am conducting a study to explore the effective implementation of a **curricularly integrated approach to information literacy programming in an American high school** in order to understand how successful implementation occurs and identify what factors affect its success. I plan to identify one site that exemplifies the successful and effective integration of information literacy into the teaching and learning of a high school.

Because of your leadership and expert knowledge of school librarianship, I am asking you to nominate up to 10 American high schools to form a selection pool for my study.

After comparing your list of nominations to the lists of others, I will contact those schools appearing most frequently for further information and to ascertain their willingness to participate in a research study. From the smaller pool that results I plan to select my study site for exploring the **elements of a successful change process** for implementing an integrated, collaborative, and process approach to information literacy.

Enclosed you will find my site selection criteria, site nomination forms, and a stamped, self-addressed envelope. Please provide as much information as possible (especially summer contact information). Your nominations will remain confidential. I hope to be able to make an initial visit to my study site later this summer. Your prompt attention will be greatly appreciated.

Sincerely (*and with my deepest thanks*),

Mary Cay Rojtas-Milliner

Address
Town
Phone Number
Email Address   Enclosures [Site Selection Criteria & Site Nomination Forms]

APPENDIX H. POSTCARDS TO EXPERTS REMINDING ABOUT
NOMINATIONS

July 4, 2005

Dear Title Last:

Two weeks ago I sent you a letter (with criteria and forms) asking you to identify schools exemplifying the successful and effective integration of information literacy into the teaching and learning of an American high school. You were contacted because you were recommended to me as an expert on school libraries.

If you have already completed and returned the forms please accept my sincere thanks. If not, please do so today. Because of your work on behalf of children and school libraries, I find it very important that your input be included in my study if the results are to be valid and meaningful to teacher-librarians.

If by some chance you did not receive my letter and enclosures or they have been misplaced, please email me at Email Address or call me right now, collect at Phone Number and I will mail or email you others.

I sincerely thank you for your time,

Mary Cay Rojtas-Milliner

APPENDIX I. LETTER TO THE TEACHER LIBRARIAN

July 24, 2005

Dear Name,

As you already know, I am conducting a study to explore the effective implementation of a **curricularly integrated approach to information literacy in an American high school**. I plan to identify one site that exemplifies the successful integration of information literacy into the teaching and learning of a high school. My purpose is to then study how successful implementation occurs and identify what factors affect its success. My study is a case study and is not meant to be evaluative in any way. It merely seeks to better understand the process of successful implementation.

Your school has had the distinct honor of being identified by several school library experts as one high school that exemplifies the effective integration of information literacy into the curriculum. In order to complete the selection process, I need to ask you some questions about your school library's information literacy program. These questions should take no more than five minutes of your time. Based upon the information that you give, I will then select a site for my study. As soon as it can be arranged, I will visit this site to interview participants about the process that led to the successful implementation of an integrated information literacy program.

Are you willing to answer some questions about your school and library program? I have included a copy of the questions that I will be asking. If you are willing to participate please let me know by replying "yes" to this email with your contact information (times and numbers) or call me collect at **Phone Number**. (If you are unable to participate at this time, a "no" response would be very helpful to me.)

I sincerely thank you for your time,

Mary Cay Rojtas-Milliner

Street
Town
Phone Number (Email Address)   Enclosure [Questions About Your School & Library]

APPENDIX J . TELEPHONE QUESTIONS

Hello, My name is Mary Cay Rojtas-Milliner.

I am the teacher-librarian from High School Name near Pittsburgh, Pennsylvania who contacted you about possibly participating in my study. Are you, _____, the teacher-librarian of _____ High School? If you recall, I am doing a case study that is not meant to be evaluative in anyway. The purpose of my study is to better understand the way that a school goes about successfully implementing an information literacy program that is integrated into the curriculum. Thank you for agreeing to answer my questions.

Information Literacy Program Characteristics
- Does your school have an **articulated information literacy curriculum** with an Information Search Process **(ISP) model** as a key component of that curriculum?

- Do you and the teachers in your school collaborate on the use of the library and instructional planning?

- Do you and the teachers in your school collaborate to provide information literacy instruction?

- Do you provide support and instruction in the use of electronic resources and library based technologies?

- Do you instruct students in the ethical practices of information use?

- Has your **integrated information literacy program** been in place for a **minimum of two years**?

School Characteristics
- What grade levels are in your school?

✎ Are you the teacher-librarian who was responsible for the initiation and implementation of the integrated information literacy program?

✎ Is the principal who was responsible for the initiation and implementation of the program still in that position?

School Library Characteristics

✎ Does your school library have **at least** one fulltime certified teacher-librarian and **adequate** clerical staffing to provide assistance?

✎ Is your school library **flexibly scheduled** and has it been so for at least two years?

✎ Does your school library have an up-to-date resource collection of print, non-print and electronic resources?

✎ Does your school library support the school curriculum and state standards?

✎ Does your school library collection provide materials for reading enrichment and personal enjoyment?

✎ Does your school library provide adequate technological resources and function as a gateway to information?

Possible Study Participation

✎ Would you be willing to participate in my study (by being interviewed, answering follow up questions at a later time & sharing relevant documents)?

✎ Do you believe that your principal would be willing to participate (by being interviewed, answering follow up questions, & sharing relevant documents)?

✎ Would you be willing to recommend other teachers as study participants – teachers who were instrumental in the initiation or implementation of your program or teachers who have become collaborators in the integration of information literacy?

✎ Would you be available for an interview later this summer?

Some of these questions were based on:
Todd, R. J. & Kuhlthau, C. C. (2003). "Nominate your school library to participate in the Ohio school library research project". *Student learning through Ohio school libraries.* Retrieved May 19, 2005, from http://www.oelma.org/studentlearning.htm

APPENDIX K. INTRODUCTION TO INTERVIEW QUESTIONS & INTERVIEW QUESTIONS

The term **information literacy** was first used in 1974. It referred to people who were trained to apply information resources to their work as "information literate". As you read the questions below, please think of an **information literate person** as one who recognizes when he/she needs information, knows where and how to find information, is able to evaluate and select relevant information, can organize new information to suit his/her needs, and can use new information effectively. Your school has been found to have an **integrated information literacy program** and, as such, it has many of the following characteristics:

√ The teachers and the teacher-librarian (school librarian) collaborate -- sharing the responsibilities of curriculum planning, lesson design, student instruction, student assessment, and lesson evaluation.

√ The teachers and the teacher-librarian both believe that it is important for students to learn how to evaluate, interpret, and use information.

√ The teachers and the teacher-librarian together often provide engaging problems or questions for students to explore.

√ The teachers and the teacher-librarian together often require students to create a product that shares what they have learned with others.

√ The students have access to a rich variety of resources (books, online databases, websites, journals, etc…).

√ The students have access to a modern and spacious library (one with space for reading, group projects, instruction, resource collections, and computers).

Initial Interview Questions

1. In your opinion, why was an integrated information literacy program initiated or begun in your school?

2. How do you remember this change being initiated or begun?

3. How was this change – this move toward an integrated information literacy program implemented or put into practice?

4. Do you believe that these changes in your school's library program have been institutionalized -- become a part of the everyday practice in your school? If so, how and why?

5. In your opinion, what factors supported the initiation, implementation, and, possibly, the institutionalization of your school's integrated information literacy program?

6. What factors, is any, impeded the initiation, implementation, and, perhaps, the institutionalization of your school's integrated information literacy program?

7. What changes, if any, occurred in the role of the teacher-librarian?

8. What changes, if any, occurred in the role of the school's library program?

9. What changes, if any, occurred in the relationships among the various staff members?

10 Is there anything else that you would like to share with me about your school's information literacy program?

APPENDIX L. STUDY DESCRIPTION

You are invited to be a part of a study of the change process undertaken to initiate and implement an integrated information literacy program in an American high school. I hope to study how successful implementation occurs and identify what factors affect its success by interviewing subjects who have been intimate participants in such a process. Since my study is a case study, it is not meant to be evaluative in any way. My central purpose for doing this study is to better understand the process of successful implementation of school library change.

If your decide to take part, you will be asked to participate in an individual interview at least once, and possibly twice. The researcher will contact you with the dates and times for the interview(s). The researcher will send you a list of questions for your consideration before the first individual interview. If there is a second interview, the researcher will send you a second set of questions that follow-up the first round of interviews. Each interview will be taped and should take no more than one hour. Later in the study, I may contact you by email or telephone (whichever is more convenient for you) to request additional information on specific topics. In addition, I may ask you for related documents or records that could provide additional or supporting data for the study. You may request a debriefing at the end of the study.

The researcher will code the transcription of each interview and phone conversation and email and will not have the participant's name on them. All data (digital recordings, transcriptions, emails, and documents) will be viewed only by the professional transcriber and the researcher and will be stored in a safe location. The researcher will not disclose the individual responses of a given participant. No subject will be identified in any report or publication of the study or its results.

If you decide to take part, you are free to withdraw at any time. Please know that this study does not provide financial compensation to subjects. The researcher has the right to stop your participation in the study at any time.

If you have any questions, now or in the future, please contact me. My contact information is: Mary Cay Rojtas-Milliner, Address, Town; Phone Number (call collect); (Email Addrsss). If you have additional questions about the study or the manner in which this research is conducted, you can contact my Faculty Mentor, Name, Administrative and Policy Studies, School of Education, University of Pittsburgh, (Phone Number).

APPENDIX M. PERMISSION TO QUOTE

The researcher may wish to quote the participant in the case study. If permission to quote is granted by the participant, confidentiality and all criteria included in the Study Description document will be observed. That is, all data (digital recordings, transcriptions, emails, and documents) will be viewed only by the professional transcriber and the researcher and will be stored in a safe location. The researcher will not disclose the individual responses of a given participant. No subject will be identified in any report or publication of the study or its results.

⌘⌘⌘

I have read the above statement regarding permission to quote, and I give my permission to be quoted.

_____

      Date   **Signature of Participant**

APPENDIX N. INITIAL LETTER TO THE PRINCIPAL

August 1, 2005

Title First Last
Address
City, State Zip

Dear Title Last:

I am a doctoral student in Administrative and Policy Studies at the University of Pittsburgh and a teacher-librarian High School Name near Pittsburgh, Pennsylvania.

I am conducting a study to explore the effective implementation of a **curricularly integrated approach to information literacy in an American high school**. I have been working at identifying one site that exemplifies the successful integration of information literacy into the teaching and learning of a high school. My purpose is to then study how successful implementation occurs and identify what factors affect its success. My study is a case study and is not meant to be evaluative in any way. It merely seeks to better understand the process of successful implementation.

Your school has had the distinct honor of being one of the final high schools chosen in the regional study that I am conducting. Your school was originally identified by a panel of school library experts as a high school that exemplifies the effective integration of information literacy into the curriculum. A final telephone interview with your teacher-librarian, {XXXXX}, to verify information about your school and your library's information literacy program completed the selection process. I would like your school to be the site for my doctoral research on *The Change Process and the Sociopolitical Realities of Implementing a Curricularly Integrated High School Information Literacy Program*.

The proposed study would involve individual interviews with you, {XXXXX}, the teacher-librarian, and 4-5 others that you and {XXXXX} identify as having been instrumental in the initiation or implementation of your program or key collaborators in the integration of information literacy. Each interview will be taped and should take no more than one hour. Some participants may be interviewed twice or contacted one or

two more times for additional information via email or telephone. In addition, participants may be asked for documents and records that are related to the program and, thus, may provide additional data for the study.

I am including two documents that give more information about the purpose and approach of my study: *Study Description* and *Permission to Quote*. I have also enclosed the list of interview questions that I would use during my initial interview with you and your staff, if I were permitted to use it as my research site. Please feel free to share these with anyone in your district.

On {Date} I was very pleased to discuss your school and library program with {XXXXX}. {Gender} assured me that I would be welcomed, if arrangements can be made for me to visit and study your school.

I plan to call you the latter part of this week after your have received and had time to look over the information that I have enclosed. With summer's end fast approaching, I feel a great need to quickly finalize the plans for a site visit.

Your participation will be sincerely appreciated. I look forward to talking with you.

Sincerely,

Mary Cay Rojtas-Milliner

Address
Town
Phone Number (Email Address)
Enclosures [Initial Interview Questions, Study Description, & Permission to Quote]

APPENDIX O. INITIAL LETTER TO THE SUPERINTENDENT

August 1, 2005

Title First Last
Address
City, State Zip

Dear Title Last:

I am a doctoral student in Administrative and Policy Studies at the University of Pittsburgh and a teacher-librarian at High School Name near Pittsburgh, Pennsylvania.

I am conducting a study to explore the effective implementation of a **curricularly integrated approach to information literacy in an American high school**. I have been working at identifying one site that exemplifies the successful integration of information literacy into the teaching and learning of a high school. My purpose is to then study how successful implementation occurs and identify what factors affect its success. My study is a case study and is not meant to be evaluative in any way. It merely seeks to better understand the process of successful implementation.

One of the schools in your school district has had the distinct honor of being one of the final high schools chosen in the regional study that I am conducting. {School Name} was originally identified by a panel of school library experts as a high school that exemplifies the effective integration of information literacy into the curriculum. I have spoken with {Principal} and {Teacher-Librarian} by telephone to verify school and library program information and to gauge their willingness to participate in my study. Both have indicated that they are willing to be participants in my study. I would like your permission for {School Name} to be the site for my doctoral research on *The Change Process and the Sociopolitical Realities of Implementing a Curricularly Integrated High School Information Literacy Program*.

The proposed study would involve individual interviews with {Principal}, {Teacher-Librarian }, and 4-5 others that they identify as having been instrumental in the initiation or implementation of the program or key collaborators in the integration of information literacy. Each interview will be taped and should take no more than one hour. Some

participants may be interviewed twice or contacted one or two more times for additional information via email or telephone. In addition, participants may be asked for documents and records that are related to the program and, thus, may provide additional data for the study.

I am including two documents that give more information about the purpose and approach of my study: *Study Description* and *Permission to Quote*. I have also enclosed the list of interview questions that I would use during my initial interview with the participants from {School Name}, if I were permitted to use it as my research site. Both {Principal} and {Teacher-Librarian} have assured me that I would be welcomed, if arrangements can be made for me to visit and study{ School Name}.

I plan to call you the latter part of this week after your have received and had time to look over the information that I have enclosed. With summer's end fast approaching, I feel a great need to quickly finalize the plans for a site visit.

Thank you for your time. Your thoughtful consideration of this matter will be greatly appreciated. I look forward to talking with you.

Sincerely,

Mary Cay Rojtas-Milliner

Address
Town
Phone Number (Email Address)

Enclosures [Initial Interview Questions, Study Description & Permission to Quote]

APPENDIX P. INITIAL LETTER TO THE TEACHER

August 8, 2005

Title First Last
Address
City, State Zip

Dear Title Last:

I am a doctoral student in Administrative and Policy Studies at the University of Pittsburgh and a teacher-librarian at a high school near Pittsburgh, Pennsylvania.

I am conducting a study to explore the effective implementation of a **curricularly integrated approach to information literacy in an American high school**. My purpose is to study how successful implementation occurs and identify what factors affect its success. My study is a case study and is not meant to be evaluative in any way. It merely seeks to better understand the process of successful implementation.

Your school has the distinct honor of the final high school chosen in the study that I am conducting. It was originally identified by a panel of school library experts as a high school that exemplifies the effective integration of information literacy into the curriculum. You were recommended to be a study participant by Principal's Name or Teacher-Librarian's Name because of your extensive involvement in your school's information literacy program. I hope that you will agree to participate in my doctoral study on *The Change Process and the Realities of Implementing a Curricularly Integrated High School Information Literacy Program*.

I am including two documents that give more information about the purpose and approach of my study: *Study Description* and *Permission to Quote*. I have also enclosed the list of interview questions that I will use during my initial interview with you, if you agree to participate.

Your participation in my research study will be sincerely appreciated. I look forward to meeting with you.

Sincerely (*and with my deepest thanks*),

Mary Cay Rojtas-Milliner

Address
Town
Phone Number (Email Address)
Enclosures [Initial Interview Questions, Study Description, & Permission to Quote]

APPENDIX Q. CORRESPONDENCE BETWEEN INTERVIEW AND RESEARCH QUESTIONS

Initial Interview Questions	Guiding Research Questions
1 In your opinion, why was an integrated information literacy program initiated or begun in your school?	1. Why and how was an integrated approach to information literacy initiated and implemented in the school library program?
2. How do you remember this change being initiated or begun?	1. Why and how was an integrated approach to information literacy initiated and implemented in the school library program?
3. How was this change – this move toward an integrated information literacy program – implemented or put into practice?	1. Why and how was an integrated approach to information literacy initiated and implemented in the school library program?
4. Do you believe that these changes in your school's library program have been institutionalized -- become a part of the everyday practice in your school? If so, how and why?	2. Do participants believe that the changes in the school library program have been or will be institutionalized? If so, how and why?
5. In your opinion, what factors supported the initiation, implementation, and, possibly, the institutionalization of your school's integrated information literacy program?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?

Initial Interview Questions	Guiding Research Questions
6. What factors, if any, impeded the initiation, implementation, and, perhaps, the institutionalization of your school's integrated information literacy program?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?
7. What changes, if any, occurred in the role of the teacher-librarian?	4. What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships among the various participants?
8. What changes, if any, occurred in the role of the school's library program?	4. What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships among the various participants?
9. What changes, if any, occurred in the relationships among the various staff members?	4. What changes, if any, occurred in the role of the teacher-librarian and the school library program, and in the relationships among the various participants?
10. Is there anything else that you would like to share with me about your school's information literacy program?	Questions 1-5

Second Interview Questions	Guiding Research Questions
1. Each of you described an environment in which staff members can engage in the sharing of ideas and information. In what ways, if any, (and by whom?) have the staff members in your school been encouraged to share knowledge?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?
2. In your opinion, has your curricularly integrated information literacy program had a positive impact on the achievement of your students? If so, in what ways?	5. How have the changes in the school's library program impacted student learning?
3. Each of you discussed the importance of open and frequent communication between the teacher-librarian and other staff members. Could you tell me why you believe that this is so important?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?
4. Integrating information literacy into the curriculum requires that some changes be made in one's teaching style. What kind of support, if any, has there been for moving away from a self-contained, textbook-oriented teaching style and toward a more collaborative, resource-based teaching style?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?
5. In your discussion of your school's information literacy program, each of you alluded to an environment in which people share leadership and respect the expertise of others. Could you tell me more about this?	3. What factors supported the initiation, implementation, and, perhaps, institutionalization of the school library's integrated information literacy program?
6. Each of you discussed the importance of preparing students for life after high school. In what ways, if any, does your school's information literacy program prepare students for their futures?	5. How have the changes in the school's library program impacted student learning?

Second Interview Questions	Guiding Research Questions
7. School library experts have described your current information literacy program as "exemplary". In your opinion, what must be done to sustain its effectiveness and continued growth in the future?	Questions 2 and 3

APPENDIX R. INTERVIEW INFORMATION SHEET

Respondent # _____

Date: _____ Time: _____ Phase of Study _____

Location: _____ Length of Interview _____

Type of Respondent: Level

____ Administrator   ____ Building

____ Teacher-Librarian   ____ District

____ Teacher   ____ Other (explain) _____

____ Other (explain) _____

Purpose of the Interview:

(Adapted from Lumley, 1994.)

APPENDIX S. DOCUMENT INFORMATION SHEET

Document # _____

Site Location: _____ Date received: _____

1. Name or description of the document:

2. Event or contact with which the document is associated:

3. Significance of the document:

4. Brief summary of the contents of the document:

(Adapted from Lumley, 1994.)

274

APPENDIX T. MEDIA CENTER LESSON PLAN

Appendix T

Media Center Lesson Plan
MEDIA CENTER
http://

Teacher:_____   Date:_____
Periods: *1 2 3 4 5 6 7 8*_____   Topic:_____
Course:_____   Grade(s) *7 8 9 10 11 12*_____
Standards: (7,8) ___1.1.8 A ___1.2.8 A ___1.3.8 A ___1.3.8 F ___1.8.8 A ___1.8.8 B ___1.8.8 C
Standards: (9,10,11,12) ___1.1 A ___1.2 A ___1.3 A ___1.3 F ___1.8 A ___1.8 B ___1.8 C
Lesson
overview:_____

Specific Topic List: ___See attached   ___Will submit by_____[Date]_____

OBJECTIVES:
To familiarize students with various sources available at the   Media Center
To integrate information and technology literacy into the curriculum

PURPOSE: To develop an understanding of support materials in the   Media Center.

SUGGESTED SEARCH
TERMS:_____

MATERIALS

		RESOURCES
POWER Library		
	Art / Music	__Grove Art Online __Grove Music Online
	Auto Repair	__Auto Repair Reference Center
	Biography	__AP Multimedia Archive __Biography Reference Bank __Contemporary Authors
	Business	__Business Source Premier __Regional Business News
	Children's Resources	__AP Multimedia Archive __EBSCO Animals __Facts For Learning __Middle Search Plus __NoveList K-8 __Primary Search __Searchasaurus __SIRS Discoverer
	Education	__ERIC __Professional Development Collection
	Find A Book	__Access Pennsylvania Database __BookSource: Nonfiction __netLibrary __NoveList __NoveList K-8

	Foreign Languages	__EBSCOhost Español __EBSCOhost Francais
	General Reference	__EBSCOhost __Facts For Learning __Funk & Wagnall's New World Encyclopedia __Oxford Reference Online __SIRS Discoverer
	Health / Science	__Clinical Pharmacology __EBSCO Animals __Facts For Learning __Health Source Plus: Consumer __Health Source: Nursing/Academic __streaMed Patient Education Solution
	History	__History Reference Center
	Literature	__Contemporary Authors __netLibrary __NoveList __NoveList K-8 __Oxford Reference Online __LitFinder __Poetry Finder __Essay Finder __Short Story Finder
	Newspapers / Magazines	__AP Multimedia Archive __MAS Online Plus __MasterFILE Premier __Newspaper Source __Searchasaurus __SIRS Discoverer
Galenet		
	Student Resource Center Silver	__Magazines, Newspapers, Biographies, etc.
	Gale Virtual Reference Library	**History** __Americans at War 4v, 2005 __Bowling, Beatniks, and Bell-Bottoms: Pop Culture of 20th-__ Century America 5v, 2002 **Medicine** __Encyclopedia of Drugs, Alcohol, and Addictive Behavior 2nd ed., 4v, 2001 **Nation and World** __Junior Worldmark Encyclopedia of Physical Geography 5v, 2003 **Social Science** __Encyclopedia of Children and Childhood in History and Society 3v, 2004
Career		
	Choices and eChoices	__Career Information
	Institute for Research	__Career Information
	Chronicle of Guidance	__Career Information

Other		
	Internet	__Teacher Requested Links on ClassLinks Page __Web Page done for teacher __Students Search

	SIRS
	**[Social Issues Research
	Series]**
		Conduct one of the following searches:
		  a. Keyword
		  b. Topic
		  c. Subject

Books		
	Search Plus Web Collection Plus	Search by: ___Subject___Title___Author___Series___Call# __Keyword
	Access PA	Use for resources we do not have
Additional Resources		
	Suggestions	_____ _____ _____

Procedures:

_____
_____
_____
_____
_____

*Students must have an AUP on file in the library before they are permitted on the Internet.

EVALUATION_____

_____
_____
_____
_____

APPENDIX U. MONTHLY REPORT

Monthly Report

May/June 2005
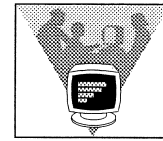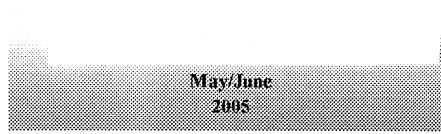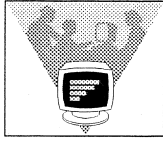
		Totals
Total Number of Students:		10,088
Study Hall Students	1,939	
Ten Minute Passes	2,823	
Classes	5,326	
Total Circulation		17,401
*In House Circulation	15,978	
Regular Circulation	1,423	
Online Resource Searches		13,452
Total Computer Printouts		3,913
Teachers Bringing Classes to Library		69
Total Number of Classes:		295

*See attached worksheet for detailed breakdown

Teachers Requesting Reserves in Library:	3
Number of Periods library was scheduled for	0
"Other than library use"	

*In house circulation: These books are reserved and used by classes. The total is estimated by multiplying the number of classes times three sources per day times the number of students per research class.

We are happy to report that we had a very successful Book Fair this year. We received $411.00 in cash profits and $100.00 in paperback books. Scholastic also gave us $100.00 that we could use for prizes. We used this money to give $10.00 gift certificates to each of our Book Fair volunteers. Each principal received a $25.00 gift certificate.

Our inventory reveals that we lost 44 titles this school year. The inventory report is attached. I marvel at the fact that even with a security system, we lose books.

We are sorry to lose   . She has done an incredible job. We are excited; however, that we will be able to collaborate with her science classes on units of study.

We welcome   to Media Center. We look forward to working with her.

Submitted By:

MONTHLY REPORT   May/June 05

Teacher	Subject	Grade	Number of Visits	Total Students	Weekly Totals		Passes
5/2/05-5/5/05							
	English	7	6	112			
	Cons. Sci.	10,11,12	3	45			
	English	7	6	121			
	Spanish	11,12	4	40			
	L.S.	8	3	26			
	L.S.	8	1	10			
	L.S.	10,11,12	4	20			
	English	10,11,12	2	48			
	Biology	10,11	8	180			
	L.S.	7,8	4	48			
	Life Skills	9,10,11,12	2	24			
	History	11,12	4	60			
	History	10,11,12	2	46			
	L.S.	7	1	5			
	L.S.	7	1	9			
	Geography	8	1	23			
	Reading	7	12	240			
Total			64	1057	1057		
5/8/05-5/13/05							
	English	7	6	112			
	L.S.	7	1	5			
	L.S.	7	1	9			
	L.S.	7,8	1	13			
	English	7	6	121			
	Life Skills	7,8,9,10,11,12	1	12			
	L.S.	8	3	26			
	English	8	6	114			
	English	8	6	113			
	Music	7	9	180			
	History	10,11	2	46			
	Biology	10,11	1	24			
	English	10,11,12	3	62			
	Math	7	1	22			
	French	11,12	3	55			
	Geography	8	6	119			
	Faculty Meeting		1	45			
Total			57	1078	1078		
5/16/05-5/20/05							
	English	8	27	508			
	Reading	7	1	20			
	English	11,12	4	96			
	Cons. Sci.	11,12	5	75			
	English	11,12	6	120			
	English	11	3	60			
	Life Skills	7,8,9,10,11,12	1	12			
	Reading	7	3	75			
	Geography	8	6	119			
	Spanish	11,12	2	20			
Total			58	1105	1105	Ten Min.	
5/23/05-5/27/05						.SH	1256
	Geography	7	24	492		.MS	1567
	English	11,12	1	20		Total	2823
	English	9	1	21			
	Physics	10,11,12	2	24		Study Hall	
	Reading	7	8	180		.SH	1816
	Spanish	11,12	2	20		.MS	123
	Life Skills	7,8,9,10,11,12	1	12		Total	1939
	Cons. Sci.	10,11,12	3	60			
	English	8	2	46			
	English	10,11,12	2	40			
	L.S.	8	16	168			
	Faculty Meeting		1	75			
Total			63	1158	1158		
5/31/05-5/31/05							
	English	10,11,12	2	40			
	English	7	6	121			
	Spanish	11,12	1	10			
Total			9	171	171		
6/1/05-6/10/05							
	English	7	6	112			
	English	9	1	21			
	Life Skills	7,8,9,10,11,12	1	12			
	Spanish	11,12	1	10			
	English	10,11,12	9	198			
	Broadcasting	10,11,12	5	75			
	English	10,11,12	6	120			
	L.S.	7,8	6	40			
	English	10,11	4	80			
	Social Studies	11,12	4	84			
	L.S.	7	1	5			
Total			44	757	757		
Class/Student Total			295	5326	5326		
MONTHLY	TOTAL	BY	SCHOOL	Student subtotal		Student Total	4762
.MS	6324		62%				
.SH	3759		38%				
Total Number of Students	10083						
Book Circulation							
Circulation Plus Circulation		1423					
In House Circulation		15978					

281

		*Sessions	**Searches				
Total Book Circulation		17401					
On Line Resourses							
Number of:		*Sessions	**Searches				
Galenet		1255	11388				
SIRS Knowledge Source							
School Access		108	1108				
Home Access		N/A	N/A				
POWER Library							
Accunet/AP Multimedia		N/A	N/A				
eLibrary Elementary		N/A	N/A				
SIRS Discoverer							
School Access		100	238				
Home Access		N/A	N/A	*Sessions - The number of students who login			
EBSCO		476	1826				
Grove		N/A	N/A	**Searches - The number of searches submitted			
Gale Group		N/A	N/A				
Total On Line Resourses		1363	13452				
Computer Printouts							
Internet Printouts		1122					
Other Printouts		2672					
Total Computer Printouts		3913					

```
----------------------------------------------------------------------------
Range      Total Circs       Yearly Circs      Monthly Circs     Collection
----------------------------------------------------------------------------
000-099       359  (0.2%)       46  (0.3%)        1  (0.0%)        98  (0.4%)
100-199      1313  (1.0%)      100  (0.6%)        3  (0.2%)       243  (1.0%)
200-299      1216  (0.9%)      133  (0.8%)        4  (0.2%)       289  (1.2%)
300-399      7987  (6.3%)      553  (3.6%)       21  (1.5%)      2407 (10.1%)
400-499       351  (0.2%)       25  (0.1%)        3  (0.2%)       132  (0.5%)
500-599      2799  (2.2%)      399  (2.6%)       51  (3.7%)       951  (4.0%)
600-699      3626  (2.8%)      516  (3.3%)       34  (2.5%)      1044  (4.4%)
700-799      3531  (2.7%)      523  (3.4%)       57  (4.2%)      1179  (4.9%)
800-899      2784  (2.1%)      122  (0.8%)       12  (0.8%)      1256  (5.3%)
900-999      8624  (6.8%)      699  (4.6%)      104  (7.6%)      3487 (14.7%)


ALH           153  (0.1%)       48  (0.3%)        0  (0.0%)        18  (0.0%)
B            5720  (4.5%)      613  (4.0%)       21  (1.5%)      1443  (6.1%)
CAL           596  (0.4%)      147  (0.9%)       23  (1.6%)         7  (0.0%)
CAM           224  (0.1%)       26  (0.1%)        7  (0.5%)         2  (0.0%)
CD            330  (0.2%)        3  (0.0%)        1  (0.0%)        50  (0.2%)
CQR           125  (0.0%)        0  (0.0%)        0  (0.0%)         0  (0.0%)
CTC             0  (0.0%)        0  (0.0%)        0  (0.0%)         1  (0.0%)
DVP            36  (0.0%)        5  (0.0%)        0  (0.0%)         1  (0.0%)
FIC         16761 (13.2%)     3937 (25.9%)      412 (30.4%)      3609 (15.2%)
HDP            13  (0.0%)        7  (0.0%)        2  (0.1%)         3  (0.0%)
ILL           117  (0.0%)       25  (0.1%)        1  (0.0%)        20  (0.0%)
KIT             0  (0.0%)        0  (0.0%)        0  (0.0%)         2  (0.0%)
LCD            38  (0.0%)       17  (0.1%)        3  (0.2%)         3  (0.0%)
LEY           731  (0.5%)      309  (2.0%)        0  (0.0%)       176  (0.7%)
MAG           136  (0.1%)      136  (0.8%)       26  (1.9%)       278  (1.1%)
MEN             0  (0.0%)        0  (0.0%)        0  (0.0%)         0  (0.0%)
NEW           202  (0.1%)      186  (1.2%)       30  (2.2%)         4  (0.0%)
NSP           642  (0.5%)      102  (0.6%)        0  (0.0%)         0  (0.0%)
OHP             3  (0.0%)        0  (0.0%)        0  (0.0%)         1  (0.0%)
OTH          6815  (5.3%)      137  (0.9%)        2  (0.1%)         0  (0.0%)
PB          31473 (24.8%)     5199 (34.2%)      395 (29.1%)      3681 (15.5%)
PER           530  (0.4%)      149  (0.9%)        3  (0.2%)        64  (0.2%)
PIC             0  (0.0%)        0  (0.0%)        0  (0.0%)         4  (0.0%)
PRO           226  (0.1%)       28  (0.1%)        1  (0.0%)       139  (0.5%)
REF          8678  (6.8%)      668  (4.3%)       72  (5.3%)      2533 (10.7%)
REM            53  (0.0%)       10  (0.0%)        0  (0.0%)         5  (0.0%)
SC            707  (0.5%)      110  (0.7%)        8  (0.5%)       307  (1.2%)
SD              3  (0.0%)        3  (0.0%)        3  (0.2%)         4  (0.0%)
STD           237  (0.1%)        0  (0.0%)        0  (0.0%)         0  (0.0%)
TB             31  (0.0%)       18  (0.1%)        0  (0.0%)        23  (0.0%)
TEM            23  (0.0%)        0  (0.0%)        0  (0.0%)         0  (0.0%)
TV             46  (0.0%)       17  (0.1%)        2  (0.1%)         1  (0.0%)
TXT           166  (0.1%)      166  (1.0%)       51  (3.7%)        20  (0.0%)
VCR            30  (0.0%)        6  (0.0%)        1  (0.0%)         1  (0.0%)
VF              5  (0.0%)        0  (0.0%)        0  (0.0%)        42  (0.1%)
VHS            13  (0.0%)        5  (0.0%)        0  (0.0%)        33  (0.1%)
WL              2  (0.0%)        0  (0.0%)        0  (0.0%)        24  (0.1%)
YRB             1  (0.0%)        1  (0.0%)        0  (0.0%)        38  (0.1%)
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Range   Total Circs   Yearly Circs   Monthly Circs   Collection
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             107456   15194   1354   23623

Note - Statistics for Dewey call number ranges do not include statistics
for copies that have been weeded from the collection.

Range	Total Circs		Yearly Circs		Monthly Circs		Collection	
000-099	359	(0.2%)	46	(0.3%)	0	(0.0%)	98	(0.4%)
100-199	1313	(1.0%)	100	(0.6%)	0	(0.0%)	243	(1.0%)
200-299	1216	(0.9%)	133	(0.8%)	0	(0.0%)	289	(1.2%)
300-399	7989	(6.3%)	555	(3.6%)	2	(2.8%)	2407	(10.8%)
400-499	351	(0.2%)	25	(0.1%)	0	(0.0%)	132	(0.5%)
500-599	2733	(2.1%)	403	(2.6%)	4	(5.7%)	868	(3.9%)
600-699	3622	(2.8%)	516	(3.3%)	0	(0.0%)	1041	(4.6%)
700-799	3531	(2.7%)	523	(3.4%)	0	(0.0%)	1179	(5.3%)
800-899	2704	(2.1%)	125	(0.8%)	3	(4.3%)	1192	(5.3%)
900-999	8165	(6.4%)	704	(4.6%)	4	(5.7%)	3017	(13.5%)
ALH	153	(0.1%)	48	(0.3%)	0	(0.0%)	18	(0.0%)
B	5722	(4.5%)	615	(4.0%)	2	(2.8%)	1443	(6.4%)
CAL	599	(0.4%)	150	(0.9%)	3	(4.3%)	9	(0.0%)
CAM	229	(0.1%)	31	(0.2%)	5	(7.2%)	2	(0.0%)
CD	330	(0.2%)	3	(0.0%)	0	(0.0%)	50	(0.2%)
CQR	125	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
CTC	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.0%)
DVP	36	(0.0%)	5	(0.0%)	0	(0.0%)	1	(0.0%)
FIC	16774	(13.2%)	3950	(25.8%)	13	(18.8%)	3085	(13.8%)
HDP	13	(0.0%)	7	(0.0%)	0	(0.0%)	3	(0.0%)
ILL	117	(0.0%)	25	(0.1%)	0	(0.0%)	10	(0.0%)
KIT	0	(0.0%)	0	(0.0%)	0	(0.0%)	2	(0.0%)
LCD	38	(0.0%)	17	(0.1%)	0	(0.0%)	3	(0.0%)
LEY	731	(0.5%)	309	(2.0%)	0	(0.0%)	176	(0.7%)
MAG	148	(0.1%)	148	(0.9%)	12	(17.3%)	278	(1.2%)
MEN	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
NEW	207	(0.1%)	191	(1.2%)	5	(7.2%)	4	(0.0%)
NSP	642	(0.5%)	102	(0.6%)	0	(0.0%)	0	(0.0%)
OHP	3	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.0%)
OTH	6815	(5.3%)	137	(0.8%)	0	(0.0%)	0	(0.0%)
PB	31484	(24.8%)	5210	(34.1%)	11	(15.9%)	3569	(16.0%)
PER	530	(0.4%)	149	(0.9%)	0	(0.0%)	10	(0.0%)
PIC	0	(0.0%)	0	(0.0%)	0	(0.0%)	4	(0.0%)
PRO	226	(0.1%)	28	(0.1%)	0	(0.0%)	139	(0.6%)
REF	8679	(6.8%)	669	(4.3%)	1	(1.4%)	2466	(11.0%)
REM	53	(0.0%)	10	(0.0%)	0	(0.0%)	5	(0.0%)
SC	709	(0.5%)	112	(0.7%)	2	(2.8%)	307	(1.3%)
SD	3	(0.0%)	3	(0.0%)	0	(0.0%)	4	(0.0%)
STD	237	(0.1%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
TB	31	(0.0%)	18	(0.1%)	0	(0.0%)	23	(0.1%)
TEM	23	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
TV	46	(0.0%)	17	(0.1%)	0	(0.0%)	1	(0.0%)
TXT	168	(0.1%)	168	(1.1%)	2	(2.8%)	20	(0.0%)
VCR	30	(0.0%)	6	(0.0%)	0	(0.0%)	1	(0.0%)
VF	5	(0.0%)	0	(0.0%)	0	(0.0%)	42	(0.1%)
VHS	13	(0.0%)	5	(0.0%)	0	(0.0%)	33	(0.1%)
WL	2	(0.0%)	0	(0.0%)	0	(0.0%)	24	(0.1%)
YRB	1	(0.0%)	1	(0.0%)	0	(0.0%)	39	(0.1%)

Range   Total Circs   Yearly Circs   Monthly Circs   Collection
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           106905   15264   69   22239

Note - Statistics for Dewey call number ranges do not include statistics
for copies that have been weeded from the collection.

*June

Student Name	Pages	Internet	Sirs	Access Pa	EBSCO	Galenet	Choices	Other
June	1,063	159						904

* pages printed from library computers

SIRS Web Usage Statistics Report
Report from 05/01/05 to 05/31/05

Site Name: MEDIA CENTER
Customer Number:
Consortium Name/Number:

SIRS Knowledge Source

Total Accesses to SIRS Knowledge Source: 2054
Total Number of Sessions: 108
Total Number of Reference Materials Viewed: 295
Total Number of Searches: 1108
Total Number of Full Text Searches: 406
Total Number of Subject Heading Searches: 496
Total Number of Advanced Searches: 183
Total Number of Topic Browse Searches: 18
Total Number of Full Text Articles Viewed: 189
Total Number of Database Features Searches: 5
Total Number of Sources/Summaries/Descriptors Viewed: 16
Total Number of Articles Printed/E-mailed: 32

SIRS Discoverer

Total Accesses to Discoverer: 1407
Total Number of Sessions: 170
Total Number of Reference Materials Viewed: 504
Total Number of Searches: 530
Total Number of Full Text Searches: 329
Total Number of Subject Heading Searches: 66
Total Number of Subject Tree Searches: 68
Total Number of Full Text Articles Viewed: 417
Total Number of Database Features Searches: 67
Total Number of Summaries/Sources Viewed: 6
Total Number of Graphics Viewed: 80
Total Number of Articles Printed/E-mailed: 35

Total accesses - Includes all searches, requests, downloaded pages, and reference materials
Session - Time from a single login to exit or timeout
Reference Materials - Includes full-text articles, articles, summaries, sources, graphics, charts, maps
View(ed) - Viewed On-screen (downloaded pages)
Total number of searches - User enters a search term and submits or chooses and selects a topic in a topic browse
search.

6/6/200:

THOMSON
GALE

Report Type: **USAGE SUMMARY**

Library Name: **Media Center**
Library ID:

Date Period: **May 1 2005 - June 12 2005**

	Inside Usage	Remote Usage	Total Usage
Total Sessions	1251	4	1255
Total Connect Time (min)	12410	51	12461
Average Session Time (min)	10	13	10
Total Fulltext	1672	15	1687
Total Retrievals	3636	18	3654
Total Searches	11338	50	11388
Total Turnaways	0	0	0

http://web7.infotrac.galegroup.com/infotrac_config/session   6/14/2005

EBSCOadmin Security | Support & Training | Help | Logout

Welcome: Primary Administrator

Current Site: MEDIA CENTER

Site/Group Maintenance

Reports & Statistics

Database Usage Report Site: MEDIA CENTER Detail Level: Database Period: May 2005

Database Name	Sessions	Searches	Total Full Text	PDF Full Text	HTML Full Text	Image/Video	Smart Link	Custom Link	Abstract
						Requests			
American Heritage Children's Dictionary	2	5	0	0	0	0	0	0	0
Book Index with Reviews	7	27	0	0	0	0	0	0	29
BookSource: Nonfiction	6	32	0	0	0	0	0	0	0
Business Source Premier	7	33	4	3	1	0	0	0	10
Clinical Pharmacology	8	38	0	0	0	0	0	0	0
EBSCO Animals	41	219	329	0	329	0	0	0	4
ERIC	7	46	0	0	0	0	2	0	10
Funk & Wagnalls New World Encyclopedia	25	71	58	0	58	0	0	0	18
Health Source - Consumer Edition	7	34	0	0	0	0	0	0	1
Health Source: Nursing/Academic Edition	6	33	3	1	2	0	0	0	1
Image Collection	68	431	645	0	0	645	0	0	0
MAS Online Plus	9	36	7	0	7	0	0	0	14
MasterFILE Premier	158	557	465	34	431	0	2	0	533
Middle Search Plus	8	35	0	0	0	0	0	0	1
Newspaper Source	13	54	15	0	15	0	0	0	16
NoveList	5	12	0	0	0	0	0	0	2
NoveList K-8	3	7	0	0	0	0	0	0	3
Primary Search	16	57	22	3	19	0	2	0	15

Professional Development Collection	11	50	12	7	5	0	0	0	4
Regional Business News	5	31	0	0	0	0	0	0	0
Grand Total	412	1808	1560	48	867	645	6	0	661

Close

Page 1 of 1

Top of Page

EBSCO**admin** Security | Support & Training | Help | Logout

Welcome: Primary Administrator

Current Site: MEDIA CENTER

Site/Group Maintenance

Reports & Statistics

Session Usage Report Site: MEDIA CENTER Detail Level: Site Period: May 2005 - June 2005

Site	Sessions			Requests						
	Count	Average Length	Searches	Total Full Text	PDF Full Text	HTML Full Text	Image/Video	Smart Link	Custom Link	Abstract
MEDIA CENTER	476	42	1826	1574	53	871	650	6	0	664

Close

Page 1 of 1

Top of Page

APPENDIX V. SPANISH LESSON #1

#1

Spanish Lesson #1

Para la segunda nueve semanas:
Proyecto individual:
La música

You will research one of the following musicians or musical styles and prepare a 4-6 minute presentation with 5-7 Power Point pages and a worksheet (for the students to follow along) en español. You should include:

- o artist biography or style history,
- o the period of time,
- o famous people within the genre,
- o most popular works/artists,
- o instruments used,
- o significant vocabulary,
- o sample of the music (if possible),
- o pictures/drawings (if available),
- o interesting facts, etc.

➤ You will have 2 days to research your topic in the library, November 10 and 11. The rest of the project you must prepare outside of class. You must submit an outline of what you plan to present (via email or on disk) by December 1. Your outline should be in Spanish, and should contain words and expressions—not sentences or paragraphs.

➤ You will have two days to prepare your Power Point presentation, December 7 and 8. At this time, I will give you a Power Point slide template to use. The remainder of the project you must prepare outside of class. You must submit your Power Point slides (via email or on disk) by December 17. Your Power Point should contain only Spanish words. Do not use English. Do not write sentences.

➤ The worksheet is a guide for the students who will listen to your presentation. Include a Spanish-English glossary for terms you will use in your presentation. Include no more than 10 words. For the worksheet, you can use any type of activity: fill-ins, true/false, multiple choice, Q & A, etc. You should have 10 questions/activities about the most important information that you will convey. You must submit your worksheet to me (via email or on disk) by December 21. Use only Spanish on your worksheet, unless supplying a glossary.

➤ A bibliography must accompany the project, and you must use at least one non-Internet resource. Your bibliography should contain at least 3 sources. You must submit your bibliography (via email or on disk) by December 21.

➤ You will present the project to the class beginning January 10. You will choose a date and time for your presentation when you have submitted all the components mentioned above.

➤ All of your work should be of the highest quality: accurate use of Spanish language, organized information, neat presentation, insightful questions, professional project, etc.

1. Andrés Segovia	9. Enrique Iglesias
2. Francisco Tárrega	10. Pablo Casals
3. Isaac Albéniz	11. Placido Domingo
4. Joaquin Rodrigo	12. Tito Puente (American)
5. José Carreras	13. Flamenco, Fandango
6. Juan Luis Guerra	14. Tango, Mambo, Rumba, Salsa
7. José Feliciano	(choose 3)
8. Julio Iglesias	

APPENDIX W. SPANISH LESSON #2

Spanish Lesson #1   #9

LA CLASE DE ESPAÑOL 5:
un estudios de los grupos (primarios) indígenas en México, la América Central y la América del Sur

Task: Prepare a Power Point presentation that explains the following information about your people group:

- Time period in which the group lived
- Map of the area where the group lived
- Basic history from formation to end (most important stages/events)
- Common foods
- Common housing
- Common clothing/jewelry
- Family structure
- Daily life
- Government/ruling system
- Primary occupations
- Religious practices

- Accomplishments (architecture, science, math, astronomical…)
- Things we've (European conquerors to the present) gained/learned from them (food, science, medicine, materials…)
- Are there any descendants of the group now? Where do they live? What language do they speak? Do they maintain any parts of the original group culture?
- - Anything else that you find interesting about the group

NOTES:
1. Be thorough! Learn as much as possible about your group, and communicate it so that others can learn as well.
2. Use as many visual aids as you can—map, timeline, photos of architecture, drawings/representations of items, etc. I would prefer a visual aid for each page. Write at least 4-6 sentences for each category in Spanish (history should be longer). Keep the sentences simple, and grammatically correct. **Some of your visual aids may be physical objects rather than pictures on Power Point.
3. Use a common design theme/style and writing font/size for all aspects of your group's slide pages. Be sure that the final presentation will look magnificent! Check it to see if you can read it on my television.
4. Create a follow-along worksheet for the class—fill-ins, true/false, multiple choice, etc. The goal of the worksheet is to assist students in learning/understanding the information. **All the questions on the follow-along worksheet should follow the order of your presentation.
5. Organize the slide presentation and prepare to speak. Your group will present orally to augment the information on the slide show. You should be prepared to talk about your indigenous group, using the pages on Power Point as a reference point. **The speaking part of the presentation should contain **MUCH MORE INFORMATION** than the Power Point. DO NOT just read sentences from the P/P.
6. Supply a bibliography (at least 5 sources). Create one bibliography page for your group and display it as part of your slide presentation. Sources: use the sources in the library and on the Class Links web page. Other sources must be pre-approved before you can use them.

Days to work in the library: _____

Days to work in the writing lab: _____

MAYA _____   INCA

297

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