TRANSITIONING A HIGH SCHOOL LIBRARY TO A LEARNING COMMONS:

AVOIDING THE TRAGEDY OF THE COMMONS

A thesis presented
by

Robin Cicchetti
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Abstract

This study focuses on the process of transitioning a traditional high school library to the learning commons service model. The study identifies the requirements of the model and the factors that either promote or undermine the success of the transition.

A general inductive approach based on qualitative research was used to collect and analyze data obtained from three high school librarians who self-identified as having successfully transitioned a high school library to a learning commons. The two research questions for the study were: (1) What factors determine a successful transition? (2) What factors undermine or threaten the transition? Data was collected through multiple methods including: field notes from site visits, review of participant created websites, as well as interviews conducted in person, by telephone, and by video conference. Coding was used to sort and evaluate data that identified categories and themes that influenced the success of the transition.

The transition to a learning commons is analyzed in the context of the tragedy of the commons scenario (Hardin, 1968). The tragedy scenario has its roots in pre-Roman England when farmers grazed their livestock in communally held fields. The growth in demand for the common fields led to increasing herd sizes with no corresponding incentive to maintain the shared resource, leading ultimately to overuse, depletion, herd starvation, and collapse. The tragedy scenario has been applied to analogous issues such as over-fishing, deforestation, and in this study, the highly demanded resources of a modern learning commons.

Keywords: library, school library, high school library, learning commons, information commons, transition, tragedy of the commons
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Chapter 1: Introduction

School libraries are iconic, and this is their strength as well as weakness. Everyone has a clear image of the high school library as a place of hushed silence where no food or drinks, or cell phones are allowed. The librarian rules over all from the circulation desk, and acts as a gatekeeper of resources.

In their pre-Internet role, libraries served as repositories of human thought, and as a point of public contact to access the trove of print resources. Between the years of 1993 and 2003 academic librarians noted a shift in usage (Beagle, 2009). This shift coincided with the advent of the Internet and search engines such as Google, traditional print sources were replaced by digital sources, and the library was no longer the only point of public access. Libraries began to respond to the shift by installing computer workstations, and the creation of community work areas that supported the integration of technology and the acquisition of the digital skills required in this new information environment. Libraries have been steadily evolving over the past three decades, and today provide patrons with skilled staff and services that range from technology instruction to assistance and instruction in information retrieval, processing, and presentation in a variety of formats (Beagle, 1999).

In response to dramatic changes in digital information and the new skills associated with the to access and synthesis of diverse resources, many academic libraries have transitioned to a new service model called the “learning commons” (Beagle, 1999). A learning commons is a technology rich environment where students can access material in diverse formats, engage in individual and collaborative work to synthesize and share their learning (Loertscher, Koechlin, & Zwan, 2008). The learning commons service model has migrated from colleges and universities,
and is now growing in popularity at the secondary school level. In high schools the learning commons offers traditional library services and instruction, but is also designed to promote enhanced support in accessing digital resources and diverse technologies. Additionally, it also serves as a place for community gathering, professional development, and media production (Diggs, 2009).

The Tragedy of the Commons

The seminal article *The Tragedy of the Commons* describes the unique challenge of maintaining a community-shared resource (Hardin, 1968). The “tragedy of the commons” was identified by Hardin as a phenomenon rooted in pre-Roman English agrarian tradition (Hardin, 1968). This phenomenon is centered on the tradition of common pastureland shared by village residents for the communal grazing of herds. For centuries herd sizes were naturally kept in check because of disease, predators, theft, and war. With improvements in animal husbandry and stabilization of society, herd sizes began to increase. Each farmer had incentive to increase herd size, but no obligation to contribute to the maintenance of the common pasture. Over time the pastures became overused and depleted, leading to their collapse and the destruction of this common asset. Hardin’s *tragedy of the commons* has been applied to other examples of commonly held assets such as the Amazon rainforest and the Atlantic fish stocks (Crowe, 1969).

As described by Hardin in his description of the tragedy, there was an evolution in the nature of the shared resource, and this evolution brought new demands and needs (1968). In 1989 Robert Lucky wrote, “Now we are too many for a village commons, and our issues are too complex for the few who govern. It knows no political boundaries, and will soon be available to everyone. Perhaps a new degree of human wisdom will eventually be enabled” (p. 125). Just as there were too many animals for the village commons, so, too, there are new categories of
demands and needs that threaten to overwhelm the traditional school library and undermine its effectiveness. This vision of networked access to digital information has come to pass, and now library patrons needed more than access. They require skilled support professionals to teach them the skills to access and use digital forms of information in an environment designed to support information gathering and production technologies. This evolution resulted in the learning commons.

The Problem

The problem addressed in this study is a lack of understanding of the various elements of the learning commons that are required for a successful transition and implementation of the model (Crowe, 1969). High school libraries are responding to changes in digital information and media literacy by moving away from the traditional service model towards a learning commons model that supports 21st century learning goals for students (Loertscher, Koechlin, & Zwaan, 2011). This transition involves systemic changes and a different approach towards long-term strategic planning, pedagogy, collaborative planning and teaching, budgeting, student scheduling, library technology infrastructure, ongoing technology support, and curriculum leadership (Koechlin, Rosenfeld, & Loertscher, 2010). Unless there is appropriate planning for a learning commons there are challenges that can undermine the success of such a transition.

Through the application of a post-positivist theoretical framework it will be possible to gather multiple perspectives from school librarian participants and through data gathering and synthesis, identify the potential challenges presented by a transition (Creswell, 2012). This knowledge will help school librarians and school principals develop communication and understanding of the challenges and needs of the learning commons model and prepare appropriately for a successful transition.
This research seeks to apply the phenomenon of the tragedy of the agricultural commons to the high school learning commons, which is also a shared community asset that can suffer from overuse, poor maintenance, and collapse. Determining the requirements of a successful transition, and the factors that can either support or undermine the transition, will assist school librarians in avoiding a tragedy scenario.

**Problem Statement**

Due to a lack of understanding between high school principals and high school librarians regarding the transitional and ongoing requirements of the learning commons service model, many schools may face unexpected challenges when they attempt the transition from the traditional library service model to a full implementation of the learning commons model. The problem of practice suggests that preparation for the transition needs to involve community stakeholders in all aspects of the change, and adequate planning for the various service and support domains required by the model, ranging from technology, systems, administration, and enhanced employee training and professional development (Baily & Tierney, 2002). Community stakeholders include the school librarian, students, principals, vice principals, teachers, technology specialists, other school specialists, support staff, volunteers, parents and community, and district administration (Koechlin, Rosenfeld, & Loertscher, 2010, p. 3). For schools that value and promote global connections and learning, stakeholders may also include experts and partners from around the world. To transition from traditional services to a learning commons model requires consideration across a range of issues that include changes in staff training from book-centric skills to technology based skills, changes in floor plan, changes in budgeting, administrative areas, and potentially other unidentified areas. A general inductive approach will be used to explore the experiences of three participating Massachusetts high school librarians.
who have engaged in a transition process, and thereby discover categories from the raw data that will indicate the most important themes for a school librarian to consider when planning a transition (Thomas, 2011).

**Significance Statement**

The evolution of the traditional library to the information or learning commons has created new paths of scholarly inquiry, and requires students to develop new information seeking skills (Labaree, 1996). School libraries have always been a common resource in schools, but as technology has increased the abundance and accessibility of information, it has also increased the speed and demand for space to work and digitally produce material that provides evidence of learning (Larabee, 2003). The conditions have increased pressure on school libraries to perform new services and provide new domains of support defined as the learning commons (Holmgren, 2010). If the new demands that are placed on the learning commons are not recognized and properly provisioned, this shared resource will not function properly and will fail to effectively support student learning.

The learning commons model is based on establishing a school-wide approach to teaching and learning for both students and teachers. This learning partnership revolves around the creation of shared goal of improving the learning and achievement of each student (Koechlin, Zwaan, & Loertscher, 2008). The model consists of a physical space that serves as a showcase for the best teaching and learning in the school. This may take the form of the display of student work, student presentations, and innovative professional development for teachers as well as students. It is a place where classroom teachers can gather to work collaboratively on new curricula and make use of the technology and the rich resources to “collaboratively design, build, implement, and assess knowledge-building learning activities (Koechlin et al., 2010, p. 10). The
learning commons values collaborative work, and the noise that accompanies this type of engagement. It also provides the technology tools required by such work in the form of a wireless network, access to computers, laptops, scanners, and printers. It also provides technology and skilled support for students engaged in video production and the associated tools and platforms required by such activities. The physical learning commons is also where educational and technology specialists gather for professional work, and to also work collaboratively to reduce professional isolation and increase communication, employ cooperative problem solving, explore innovative practices. It is a busy, dynamic area of school life, and an essential part of a student’s educational experience.

The learning commons is more than a physical space, but is also a virtual learning center. Student learning is ongoing and occurs in school, at home, and in other off-site locations. By providing 24/7/365 support, students can access the resources and digital tools made available by the learning commons to engage in learning and knowledge creation wherever they may be working.

In addition to the instruction, services, and supports provided by the model, the mandate of the learning commons is to prepare students for life long learning via four learning literacy keystones (Koechlin et al., 2008). The knowledge-building keystone focuses on inquiry skills that begin with establishing background knowledge and expand to questioning, finding and evaluating information, reading/viewing/listening to gain understanding, drawing conclusions, and sharing and assessing their inquiry process. Through this process student develop personal qualities that include positive attitudes toward learning, responsibility, ethical behavior, creativity, and self-assessment. Students are not only information-literate, but have the skills to
be life-long learners, and people that are ready for advanced education and problem-solving in the real world.

By serving as the center for school-wide efforts to improve teaching and learning, the learning commons is the center for collaborative work and serves as a learning laboratory. This is where innovation, experimentation, and learning strategies are developed, and action research is employed to evaluate progress and effectiveness. This focused, goal-oriented collaboration results in school-wide improvement (Koechlin et al., 2008).

The technology keystone features access to technology tools and platforms, but more importantly, the learning commons provides an environment that supports students in developing the digital skills to participate effectively in the digital world. The construction of personal information environments where they can organize and store information and resources, as well learn about ethical social networking skills, are part of the technology keystone domain (Koechlin et al., 2008)

Taking the physical and virtual learning commons, and the learning keystones, the model provides students with a comfortable environment to relax, learn, and create. It provides 24/7 digital-access to content and resources curated by the school librarian to support curricular and student needs. Assistance is readily available from skilled staff and technology is current and abundant (Koechlin et al., 2008). It is also a center of activity, display, student productions, and serves as the cultural heart of the school. Teachers view the learning commons as an extension of their classrooms and also utilize the 24/7 digital resources that support their curriculum. Teachers also turn to the learning commons for assistance for their students as well as for themselves, and value the cultural role that values and showcases student learning and achievement.
The benefits of transitioning to a learning commons include changing attitudes toward technology in education and learning, new information seeking behaviors, the acquisition of digital and media skills, and more opportunities for collaborative work in an environment that supports new types of student learning. Digital resources also provide increased accommodation of text-to-speech functionality for students with reading disabilities, and an overall increase in the vitality of the learning commons as an effective resource for students (Malenfant, 2006). The benefits of the transition are numerous, but also require new administrative considerations, new budgeting strategies, and staffing considerations that were not applicable in the traditional school library (Heitsch & Holley, 2011).

An example of an area of stress that threatens the viability of the learning commons is overuse by students who want to use the space to socialize, leaving no room for students intent on scholarly use (Schilling & Cousins, 1990). School librarians and administrators need to understand that transitioning from a traditional service model to a learning commons does not imply a transition of the space to a social area. Collaborative work and learning in a social setting are elements of the learning commons, but new policies need to be created that guide students in appropriate use, and protect the rights of all students.

Identifying the categories and themes that either contribute to a successful transition, or that undermine a successful transition, will be helpful to school librarian practitioners and their stake-holder partners embarking on implementing a learning commons service model in their own schools.

**Research Question**

The research questions are designed to explore the factors that positively or negatively influence the transition from a traditional high school library to a learning commons model.
What are the factors that influence a transition from a traditional high school library to a learning commons service model?

- What factors determine a successful transition?
- What factors undermine or threaten the transition?

This exploratory design allows for an “in-depth analysis of complex and layered issues” and a hypothesis on the requirements for success (Butin, 2010, p. 80).

**Positionality Statement**

A challenge faced in public high school libraries today is that while school librarians and school administrators understand that the world of information has changed from being book-based to digitally based, they are unsure how they should address these changes within their high schools. The learning commons is an established model that incorporates the 21st century digital information environment, and there is great curiosity as to what makes it different from a traditional high school library (Loertscher, Koechlin, & Zwann, 2008). While the literature is abundant on the benefits of the learning commons model, there is less information available on the specific requirements of a transition.

I transitioned my high school library to a learning commons in 2008, and in the years since have had numerous calls, emails and site visits from school librarians and their administrators seeking information on the model, and what it might look like in their schools. Ideally, visits involve the school librarian, principal, and an inter-disciplinary team who have all been briefed on the model, and are clear about the goals of the site visit. Their questions are specific and focus on topics such as the impact on curriculum, the integration of digital and media skills into student work, the role of the librarian as a collaborator, and the impact on school culture with regard to student use of the space, study halls, and student accountability.
Team visits indicate a school-wide interest in change, and a need for organizational planning based on specific student-based goals and outcomes. The discussion is rich, and the team leaves with a new level of understanding of the possibilities offered by the model, and questions and considerations for implementation in their own school.

Not all visits are as productive. When the librarian comes by him/herself, or with a principal or one cooperating teacher, there is less likelihood of a full, organizational response that includes curriculum and technology leaders as well as the administrative team. As the model is one designed to support schools in developing more collaborative practice, whole school change focused on technology rich, collaborative learning requires a shared vision (Koechlin et al., 2010). Team visits signal broader discussions within the school and increases the likelihood of a successful transition paired with the school goals. The problem addressed by my research topic has manifested itself repeatedly during the solo or small team visits; school librarians explain that their principal or superintendent has requested that the library “change” into a learning commons. These requests are frustrating for school librarians who feel they are unable to institute a transition for various reasons such as their library serves as a study hall location and there is no room for visiting classes, or they have no budget for technology or databases, and more commonly, that they have no voice in curriculum or school leadership. They may be able to change the name, but without understanding the changes in function and service, they cannot effectively address 21st century student learning outcomes, and will be unable to successfully transition to the new model. Exploring the categories and themes from school librarians who have engaged in the transition will increase understanding and awareness of possible barriers to implementation, and the conditions required for a successful transition.

**Professional Context**
In 2007 I was hired as the head librarian of Concord-Carlisle Regional High School (CCHS), in Massachusetts. CCHS is located about twenty miles west of Boston, and based on results from the Massachusetts Comprehensive Assessment System (MCAS), is a high achieving school.

Table 1

**MCAS Tests Spring 2014**

<table>
<thead>
<tr>
<th>Grade and Subject</th>
<th>Concord-Carlisle High Regional School Proficient or Higher</th>
<th>MA State Proficient or Higher</th>
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<tbody>
<tr>
<td>Grade 10 English Language Arts</td>
<td>97</td>
<td>90</td>
</tr>
<tr>
<td>Grade 10 Mathematics</td>
<td>95</td>
<td>79</td>
</tr>
<tr>
<td>Grade 10 Science and Tech/Eng</td>
<td>94</td>
<td>71</td>
</tr>
<tr>
<td>All High School Grades</td>
<td>97</td>
<td>90</td>
</tr>
<tr>
<td>English Language Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All High School Grades</td>
<td>95</td>
<td>79</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All High School Grades</td>
<td>94</td>
<td>71</td>
</tr>
</tbody>
</table>

Note: Data obtained from the Massachusetts Department of Elementary and Secondary Education

CCHS has participated in the Metropolitan for Educational Opportunity (Metco) program since it’s founding in 1966. The program is the longest continually running voluntary school desegregation program in the US. The mission of Metco is to “give students from Boston’s
under-performing school districts the opportunity to attend a high-performing school and increase their educational opportunities and to decrease racial isolation and increase diversity in the suburban schools (Metco Program, 2014).

The Concord-Carlisle core values, beliefs, and learning expectations statement says that the “CCHS community believes that it is our mission to inspire the students of Concord, Carlisle, and Boston to strive for and meet high levels of personal and academic achievement. We believe that the respectful, supportive, and engaging learning environment at CCHS instills intellectual curiosity, a passion for learning, as well as an understanding of one’s role in the local community and in a diverse global society” (Concord-Carlisle Regional High School, 2015).

This was an in-district move, and after eight years as a K-5 school librarian, I was well known by our school and district administrators. This strong foundation provided me with an enormous amount of trust and support as I considered changes to the existing high school library program. In October of 2008 an article was published in School Library Journal that gave voice and structure to my vision of what a dynamic, 21st century high school library could look like, and the vocabulary and outcomes I needed in order to communicate my vision (Loertscher, 2008). The article, *Flip this library: School libraries need a revolution* by Dr. David Loertscher, described the high school learning commons as having domains of service, of existing as a physical space as well as a virtual space, as an experiential learning environment designed to support students as well as faculty and other learning specialists. As a technology rich hub it was also described as a place dedicated to the school community, and ownership of the program is described as shared, dynamic, and evolving. The article also contained a table that described the elements of the paradigm flip that the shift from library to learning commons required (Loertscher, 2008). Dr. Loertscher is a widely recognized leader in the field of school
librarianship, and the author the many textbooks used in school librarian certification programs. His article stated that the paradigm of traditional school library had been broken by disruptive technologies, such as Google and other online search tools. A revolution was required to meet the new learning goals for students in the digital era, and the new learning commons was the service model that would meet these new demands (Loertscher, 2008). This vision became the road map for change that I was able to share with my administrative team, and their enthusiastic support created a strong foundation for success. At the time I didn’t realize how crucial this trust and support would be to the transition process. As a scholar-practitioner this is important because it highlights the necessity of professional trust when implementing institutional change. When I shared the vision of the learning commons for CCHS my administrators responded with enthusiasm and offers of support, and that gave me the confidence to institute change. Not all school library practitioners have this exceptional level of support. Providing my fellow librarians with more detailed information and data will help them establish the conditions required for success, many of which I took for granted, and avoid the tragedy of an unsuccessful implementation of the learning commons service model.

Unsuccessful transitions are difficult to identify. At this time there are no state requirements for reporting on school libraries. The New England Association of Schools and Colleges (NEASC) accreditation standards include school libraries in Standard 6: School Resources for learning, and require that:

Library/media services are integrated into curriculum and instructional practices and have an adequate number of certified/licensed personnel and support staff who:

- Are actively engaged in the implementation of the school's curriculum
• Provide a wide range of materials, technologies, and other information services in support of the school's curriculum

• Ensure that the facility is available and staffed for students and teachers before, during, and after school

• Are responsive to students' interests and needs in order to support independent learning

• Conduct ongoing assessment using relevant data, including feedback from the school community, to improve services and ensure each student achieves the school’s 21st century learning expectations (New England Association of Schools and College Committee on Public Secondary Schools, 2011)

Accreditation does not depend on the state of the high school library, and it is possible for a school to be reaccredited with a sub-standard library. A school may be put on warning status in that standard, but there is no other consequence. This library data is not collected by the state, and is not aggregated by NEASC, so it is difficult to obtain data on school libraries with unsuccessful transition experiences. Those with positive transitions are eager to share within the professional community of school librarians, and self-identify as having successful transition experiences.

**Bias**

In order to be successful, it is important for me to thoroughly examine the potential for bias. If I do not adequately identify my bias, it is possible that my research will be compromised (Machi & McEvoy, 2009). While conducting this study, it was important for me to avoid the marginalization of the “other”, specifically with regard to school librarians who work in districts with constricted budgets and fewer economic resources, or those who have other systemic
barriers to their ability to enact the transition (Briscoe, 2005). Some school districts are more progressive and amenable to change and others more conservative and distrustful of change. There are also potential issues of privilege in the form of economic disparities, with schools from well-funded suburban towns better able to fund a transition than poorer urban and rural districts (Moser & Rubenstein, 2002). In gathering data, I tried to avoid assuming a universal perspective of privilege, because it can threaten to marginalize and disenfranchise others, identified as school librarians with barriers in understanding of the learning commons model, or who have barriers to implementation of the model. Another potential for bias lied in my enthusiasm for my topic, and preconceptions about what is “right”. These preconceptions are rooted in both my privileged background as a middle class white woman, and in my privilege of having experienced a successful, well-supported transition to a learning commons.

Participants

Potential participants are three professionally certified Massachusetts public high school librarians. The participants in the study were identified through professional membership to the MSLA, and participation was voluntary. Membership to the Massachusetts School Library Association (MSLA) indicated that the participants had a shared value for ongoing professional development in their field, as well as an interest in collegial engagement with fellow school library practitioners. This served as a commonality between the three sites despite potential differences in school building cultures.

Conclusion

In conclusion, my positionality was aligned with that of the study participants through our common roles as public high school librarians, but needed to be sensitive to the reality that conditions in school libraries vary greatly. I was careful in my data gathering not to assume
privilege, and I constructed questions that effectively probed the perceptions of the participants with a broad range of understanding, and different budgetary realities. I took special care not to allow my enthusiasm for my topic, or my preconceptions about the requirements to successfully transition from a traditional school library to a learning commons, influence the study.

**Theoretical Framework**

For this qualitative analysis the interpretive paradigm was used as it allowed the researcher to gather diverse sources of data and uncover patterns and themes that address the questions of factors that promote and undermine a successful transition (Burrell and Morgan, 1979). Through research into the experiences of the participating high school librarians it was possible to investigate their frame of reference as a participant in the transition process, and gain greater understanding into the dynamics and critical aspects of the process. Using an inductive approach, the researcher collected diverse forms of data that included documents, observed behavior, and interviews with participants (Creswell, 2012). In this way themes and categories were developed that identified the factors that either promote or undermine an effective transition.

In Ponterotto’s discussion of qualitative methods and research paradigms the importance of everyday language and situating the participants within the context of the research question is central to the collection, analysis and interpretation of data (2005). A general inductive approach builds upon the constructivist-interpretivist paradigm and lays the groundwork for a qualitative study that places the reality of the participant in the center of the inquiry (Thomas, 2011). The gathering of data through general inductive analysis allows the researcher to generate a theory within the context of the paradigm (Anfara & Mertz, 2006).
Chapter 2: Literature Review

This literature review establishes the learning commons as a shared resource, and identifies the unique considerations and needs required to establish it as a robust service model that supports student learning and school goals. It also covers the history of high school libraries in the U.S., and the influences that contributed toward the evolution of the learning commons model. The summation provides the requirements of the learning commons model, and the relevance to student learning.

The Learning Commons

In order to understand the requirements of the learning commons it is helpful to review the history of school libraries in the U.S., and how the learning commons evolved. This history also tracks the shift from libraries as repositories for print material to centers that facilitate and support access to purely digital resources. The shift in associated digital literacy skills and digital production skills are also part of the evolution.

School libraries are in the middle of massive and disruptive change. With the traditional role of libraries as storage spaces for books eroded by the shift towards new digital delivery of information in diverse formats, and new emphasis information and digital skills for students, librarians and school administrators are looking into new service models for libraries.

The strongest new high school model to emerge is the learning commons, based on the information commons, which has been widely implemented at the higher education level (Heitsch & Holley, 2011). There are profound differences between traditional school libraries and learning commons, and simply switching the name is insufficient to achieve the new mission (Beagle, 2009). These changes include increased technology, wireless access for mobile devices, new floor plans and furniture that support collaborative work, increased budgets for databases
and digital resources of information, increased professional development for library staff to manage the technology, increased administrative power and a role in school leadership for the librarian, and a commitment to collaboratively planned lessons that promote information and media literacy skills throughout the curriculum. School librarians and administrators are not always aware or appreciate these requirements for a successful transition from a traditional library to a learning commons (Koechlin, Zwann, & Loertscher, October 2008). Unless the learning commons is adequately provisioned to provide the new services required, there is the potential that student services will not be improved, and there will be a failure of the model (Hardin, 1968).

A clear understanding of how the learning commons benefits students is also the foundation for a successful transition. The literature indicates that libraries need to remain relevant and support learning in new ways (Todd & Kuhlthau, 2004). The challenge for school libraries is recognizing that because of the Internet and Web 2.0 applications, students have new powers and abilities that facilitate independent access to information (Watstein & Mitchell, 2006). Librarians no longer serve as gatekeepers and custodians of information, but facilitators who instruct independent users to access and evaluate resources for themselves. The commons model provides a way to consolidate diverse student support services such as writing centers, tutorial services, collaborative work spaces and computer labs, and also offers a space that supports students in multitasking between their digital work, and the work that occurs in classrooms (Spencer, 2006).

The circumstances that have created confusion about the current role and relevance of traditional high school libraries lie in the rise of Internet technologies that transformed the information landscape. Today information is central to every aspect of life, and because of
perceptions of ubiquitous access it is considered much like air in that it is pervasive, considered not to have cost associated with it, and taken for granted (Melody, 1987). Information is essentially a societal good, and a shared asset. The “broad information structures” upon which a national economy is built are also an information commons (Melody, 1987, p. 1317). The institutional changes this evolution has had on society and economies reverberate throughout the informational landscape, with profound implications for high school libraries.

**The History of U.S. High School Libraries**

School libraries have always served as a communal resource in schools, but as technology has increased the abundance and accessibility of information, it has also increased the speed and demand for space and the resources to work and digitally produce material that provide evidence of learning (Larabee, 2003). These conditions have increased pressure on school libraries to perform new services and provide new domains of support defined as the learning commons (Holmgren, 2010). If the new demands that are placed on the learning commons are not recognized and properly provisioned, this common resource will not function properly, and will fail to effectively support student learning.

**Dewey’s Model School**

John Dewey’s model school placed the library at the heart of the physical structure, positioned at the crossroads of all wings of the school. The mission of the school library was to support students in pursuit of their learning in order to better understand and make connections between the theoretical work of the classroom and, by facilitating connections with the broader community, assist student in establishing practical applications with the world at large (Dewey, 2001). Dewey perceived the high school librarian as a facilitator for students to acquire information to pursue a wide variety of interests, and he describes the library as the place
students turn to with problems, questions, and facts in order to discuss them with others through collaborative work, and in this way develop new understanding (Dewey, 2001). Dewey’s vision of the library as a collaborative hub of inter-disciplinary engagement was replaced by the library as a storage facility for curriculum support resources, and reflects the changes seen in the standardization of US educational system during the same period.

**Establishing School Libraries**

The National Council for Education (NCE) was established in 1857, with the mission to develop common standards for schools in the U.S. In 1892, committees reported on accreditation requirements and established the first standards for secondary schools. Between 1883-1892, the National Education Association (NEA) formed sub-committees to establish standards specifically for secondary school curriculum. The subcommittees for history, civic government, and political economy mentioned the essential need for school libraries, specifically in order for students to have access to reference materials and additional books beyond the class textbook (Cornelius, 2009). The sub-committee for English also recommended the establishment of school libraries to house literary masterpieces to supplement teacher assigned textbooks.

The school library at this point is focused on supporting curriculum and providing students access to various sections of the collection of books curated to support the school learning expectations. This paradigm of use led libraries to be book-centered, designed to prioritize the efficient organization of books rather than prioritizing the needs of the student-patrons (Heitsch & Holley, 2011). At this point, Dewey’s vision of a student-centered library that facilitates connections with the broader community is institutionally lost.
The Great Society and the Elementary and Secondary Education Act

On October 4, 1957, the Soviet Union successfully launched Sputnik, the first orbiting satellite. The US was shaken by the technological achievement of the Soviets, and the result was a widespread call for the government to take action. Overcoming long-held resistance to federal aid in education, the National Defense Education Act of 1958 was passed, and focused on funding targeted towards improving instruction in math and the sciences ("United States Senate History"). In 1965 the Elementary and Secondary Education Act (ESEA) followed, and the focus shifted from defense to the goals of President Johnson’s Great Society programs. The Great Society represented a legislative strategy to eliminate the underlying causes of poverty and promote educational opportunity (McGuinn & Hess, 2005). These programs were designed to allocate federal funding for primary and secondary schools, establish a national curriculum, establish methods to hold schools accountable for their performance, and increase educational equity across the nation ("Education," 2013). Title II of the ESEA of 1965 provides federal funding to stock school libraries, and for the first time establishes the role of school libraries at both the secondary and elementary levels (Bureau of School Systems, 1965). This act was a central component of President Johnson’s war on poverty and was the first significant federal initiative into what had previously been the sole domain of state and local authorities (McGuinn & Hess, 2005). This was a critical time for school libraries as it established the necessity of school libraries throughout the K-12 educational system in the US.

The Standards

The Certain Standards

The American Library Association (ALA) published their first school standards in 1920 in a report titled Standard Library Organization and Equipment for Secondary Schools (National...
Education Association of the United States Department of Secondary Teachers Committee on Library Organization and Equipment, 1920). The report provides guidelines for state high school library inspectors on standards the library collection and equipment, qualifications for the school librarian, information on the instructional use of the library and maintenance of the collection, and collection size guidelines based on the number of students enrolled in the school. That same year, the Chair of the NEA English sub-committee, Charles C. Certain, authored the Certain School Library Standards that focused on collection development and library management (Cornelius, 2009). In 1925 a companion report was issued establishing standards for elementary schools. The 1920 and 1925 Certain School Library Standards remained unchanged until after World War II. The standards were quantitative and focused on facility management issues such as reporting per student budget allocation and books per student (Cornelius, 2009). The Certain Standards were valuable because for the first time they call attention to the need for a professionally trained school librarian to maintain and manage the school collection, and highlighted that the specialized skills of a librarian were required to transform what was little more than a study room into a fully functional library focused on student inquiry.

The educational standards for school libraries were revised in 1945 to reflect the introduction of audiovisual equipment into the school library, and also broaden the role of the library as having the distinct purpose of helping students develop the skills and habits of using books and libraries to achieve goals throughout their lives. The 1945 standards also state that the school library falls under school board jurisdiction and must be part of district and school budgets, and that a school library does not exists without a librarian, a book collection, and library quarters (Roscello, 2004). The ALA published new standards in 1960 and again in 1969.
The 1969 standards changed the name of the school library to the media center, the school librarian was re-named the library-media specialist, and schools across the US widely adopted the new naming conventions. The standards published in 1975 focused on library design, consultation on curriculum, information skills instruction, and media center administration.

**Information Power**

*Information Power* was published by the American Association of School Librarians (AASL) in 1988, and revised again in 1998. These standards addressed the integration of digital information and media, and increased computerization. They represented a shift in objective from teaching students to find information, to teaching them how to use it more effectively, and present their learning in diverse formats (Cornelius, 2009). In 2006 the AASL published *Standards for the 21st Century Learner*, and focused on information, media and digital literacy skills for students, across a number of domains. In 2008 the AASL published a three-to-five year national implementation plan called Learning4Life (AASL Standards and Guidelines Implementation Task Force, 2008). The plan was designed to create a share vision for the 21st century learner based on the 2006 standards, and identifies strategies and tools to achieve the goals of the plan, and also build an evaluation process to assess school library programs for effective instruction and identify program exemplars that could be shared locally and nationally.

**The Emergence of the Learning Commons**

In the 1980s academic libraries saw a shift toward a more patron-friendly and learning centered service, generally described as the “library as a place” movement (Spencer, 2006). This “library as a place” emerged as a result of academic libraries experimenting with new uses for their library spaces that reflected the unique needs and interests of their communities (Freeman, 2005). Librarians became increasingly involved in creating new programs and services that
promoted the library as a social space devoted to supporting student learning outside the classroom. During the 1990s, the information commons developed to provide a technology rich environment for users to easily access digital resources, described as “a cluster of network access points and associated IT tools situated in the context of physical, digital, human, and social resources organized in support of learning” (Beagle, 2006, as cited by Heitsch & Holley, 2011, p. 65). The learning commons built upon the “support of learning” value, and enhanced services and skills instruction to create an environment that supported knowledge creation and self-directed learning (Heitsch & Holley, 2011). In this evolution library work was no longer primarily about information retrieval, but about assisting patrons in building a broad context of understanding, developing digital skills, and making connections, and through that process transforming information into new knowledge (Beagle, 1999).

Recognizing that the role and function of the 21st century school library had evolved because of advances in technology, the traditional school library as a warehouse of books was no longer a relevant service model (Heitsch & Holley, 2011). The transition to learning commons would also entail a focus on client-centered programs, access to global resources, and deep partnership with teacher technologists and other learning specialists (Koechlin et al., 2010). The first documented implementation of the learning commons model at the high school level occurred in 2009, in Chelmsford, MA. The transition involved a substantial renovation, new furnishings, investment in new technology, an active campaign to re-orient the school library program as being student-centered, and that built community within a social context, and the creation of fresh collaborative relationships with the academic departments (Diggs, 2009). This implementation was highlighted in school library publications and began to spread via articles and state and national conference presentations by the school librarian. Other researchers in the
field such as Dr. David Loertscher and Dr. Ross Todd also actively promoted the model in academic and professional publications and referenced the Chelmsford transition as a successful example of implementation of the learning commons model.

**Impact on Student Achievement**

The *Student Learning through Ohio School Libraries* research study was conducted from October 2002 – December 2003. The Ohio Educational Library Media Association (OELMA) conducted it in collaboration with the Ohio Department of Education, and designed the study to demonstrate the impact of school libraries on student achievement (Todd & Kuhlthau, 2004). This study validates the findings of a series of other statewide studies of school libraries conducted in Colorado, Alaska, Pennsylvania, New Mexico, Oregon, Massachusetts, Iowa, Michigan, North Carolina, Florida, and Texas.

The Ohio study involved 3000 schools with school libraries that provided service to over 3 million students, and focused on student perceptions of the help they received from the school library. It also assessed these perceptions against how the school library was provisioned in resources, information technology, space, information-learning leadership and information-learning initiatives. The aggregated data indicated that irrespective of socioeconomic indicators, academic success as measured by standardized test scores validated that the presence of a school library was a consistent predictor of academic achievement (Todd & Kuhlthau, 2004). The findings of the study were clear, that in schools with adequately provisioned school libraries (defined by the study as being staffed by a professional certified school librarians and as having a book and supply budget appropriate to the school size) students learn and achieve.

**Educational Equity**
The Internet has turned research into a more independent activity, and students require instruction in the information skills required to search effectively across diverse formats and in evaluating their search findings. Access to technology to learn these skills and gain practice and fluency is not available to all because of socioeconomic inequalities. Students from lower socioeconomic backgrounds, many of whom are students of color, are not developing Internet skills at the same rates as their white and more economically advantaged peers. More advantaged students have access to technology in their homes, or own personal devices, and this exposure gives them more opportunities to practice skills, participate in social media, and experience content creation. Student with less exposure to technology are at a disadvantage when applying to colleges and for jobs. Known as the “digital divide,” this gap is characterized by barriers to access, formal skill development, and a general lack of daily access to technology experienced by other students (Hargittai, 2010). This domain of inequity is one that can be uniquely addressed by the learning commons, and the technology rich environment designed to foster and support access and skill development for all (Loertscher, Koechlin, & Zwann, 2011).

Studies of Internet access and usage by young people in North America, the United Kingdom, and Europe show quickly increasing integration of information and communication technologies that indicate the digital divide is closing (Asselin & Doiron, 2008). However, a “participation divide” has emerged, based on socioeconomic status (Hargittai & Walejko, 2008, as cited by Asselin & Doiron). Students from higher socioeconomic classes are engaging in the creation of web content in greater numbers, and building the associated skills, at greater rates than students from lower economic classes. In what is referred to as the “era of informationalism” higher economic class students are developing communication skills, gaining experience in navigation across multiple platforms to engage in creative activities and problem-
solving, are making connections with people and content from global sources, and are generally more empowered and optimistic about their future potential as workers (Castells, 2000, as cited by Asselin & Doiron).

The digital and participation divide impacts people of color at higher rates than whites. In 2006 a study was conducted on the digital divide and academic achievement and explored the relationship between access to technology and academic achievement (Huang & Russell, 2006). The findings of the study showed that there was a digital divide that corresponded to socioeconomic factors, and that students from disadvantaged families with limited access to technology also had lower achievement rates than their financially better off peers. At the time of the study, Blacks and Hispanics had the lowest household Internet penetration rates of 23.5% and 23.6%, respectively. These rates were below the national Internet penetration rate of 41.5% (Huang & Russell). Another finding of the study was that school libraries, public libraries, and other public access points served those groups that did not have home access.

The high school library is a primary place for students to access the Internet and learn the information and digital literacy skills required to become proficient users, and close the participation divide (Asselin & Doiron, 2008). In Canada, school library researchers developed a study for a pedagogical framework for school library programs in an Internet 2.0 environment. The framework was based on three questions:

1. Who are the new learners of the Net Generation?
2. What literacies do today’s students need to live and work in the world?
3. How do we teach the new learners?

Data was gathered from an extensive literature review that focused on the three questions and involved national and international sources. Videotaped interviews of fourteen teenagers
were conducted to enrich the findings from the literature review, and small focus groups were held with students about their technology usage in school and at home (Asselin & Doiron, 2008).

The study revealed that despite claims that technology was embedded in schoolwork, in fact students did not get much exposure to the skills and platforms identified as critical for the Net Generation. Most students gained experience through home use with personal devices. Those students who had the most exposure to technology during school hours identified their school libraries as the source for engagement in social media and web-based creation platforms. School libraries provide students with access to technology to gain experience with technological literacy skills defined by the study as inquiry and problem solving, critical thinking and source evaluation, ethics and social responsibility, and creative representation (Asselin & Doiron, 2008).

Identifying the Elements of the Learning Commons

Physical Space

A learning commons values flexible space that is not dominated by either books or computers, but rather by collaborative groups engaged in a wide variety of activities. There are two simultaneous functions that coexist and also extend into a third, virtual realm. The first is the “open commons”, which is student-centered. In this wireless environment students and faculty engage in both collaborative and independent activities, with flexible access to the facility throughout the day. It is a collegial, social environment that is owned by the school community, and is one where people flow in and out, working in diverse ways, with unencumbered access (Loertscher, Koechlin, & Zwaan, 2011).

The second space is the experimental learning center that supports faculty in achieving their goals for their students, showcasing achievements, and facilitating professional
development in ways that range from locating scholarly resources to organizing and hosting professional development events, and serves as the heart of school improvement initiatives (Loertscher et al., 2011, p. 14). The third function is served by the virtual learning commons and supports both the open learning commons and the experimental learning center with access to digital content, librarian generated curated content in the form of pathfinders and customized information portals, tutorials, and librarian-facilitated virtual discussions in the form of blogs, wikis and other collaborative platforms. Together, these three domains constitute the learning commons (Loertscher et al., 2011).

A challenge is adapting traditional school libraries to accommodate the new services and functions of the learning commons. Pre-Internet libraries provided access to print and traditional reference services. The decline in traditional services was noted as occurring between 1993 and 2003, and is attributed to the increased use of online search engines like Google (Beagle, 2009). The learning commons staff supports this evolution in patron behavior by providing well-equipped work stations where students can engage in information searching, data gathering and analysis, activities that synthesize learning, and media presentation activities to share knowledge (Beagle, 2009, p. 16).

The learning commons model involves more librarian-student interaction that occurs around computers, so the design of the traditional, monolithic circulation desk with the librarian stationed behind it needs to evolve to desk spaces designed to provide side-by-side help for students (Whitchurch, Belliston, & Baer, 2006). It also requires a reassessment and deep weeding of the print and periodical collections. Spaces used for warehousing print collections crowd out other potential activities and must be reassessed. By reducing the print collection space can be reassigned and given over to collaborative work areas (Malenfant, 2006).
**Staffing**

*Nonprofessional staff*

The diverse service and resource demands of the learning commons require a technically proficient staff. When supporting students with information tasks, non-professional employees (library aides) must have basic proficiency in various database platforms, core software programs, and technology hardware in the form of desktop computers, laptops, tablets, scanners, and print stations (Whitchurch, Belliston, & Baer, 2006). This degree of engagement and support, and the associated skill sets, go beyond those required of traditional non-professional library staff. The challenge of staffing a learning commons lies in the ability of the school librarian to inspire and motivate support staff to undergo training to improve their ability to provide a range of services that go from new technologies, media and digital formats. Support staff is also required to facilitate the research and knowledge production goals of students and faculty (Beagle, 1999, p. 86). Not all library support staff members are resistant to change, but if there is resistance it can result in barriers to a successful transition to the learning commons model. In order to provide effective support for students, an effective high school librarian needs to develop the skills required to overcome staff resistance to change and improve staff technology skills.

A trained support staff is a critically important aspect of an effective learning commons because the librarian must be able to leave the facility to participate in various leadership activities (Everhart, 2007). Principals who see the school librarian engaging in curriculum collaboration and school leadership projects are more likely to have positive perceptions, and are more likely to support ongoing funding for adequate staffing, which in turn frees the librarian to increase participation in leadership activities within the school (Loertscher, 2009).
**Professionally Licensed Staff**

Data from a report from the National Center for Education Statistics provides estimates on staffing levels for school libraries during the 2003-2004 school year (US Department of Education, 2006, table 43).

Table 2

*Of schools with library media centers, characteristics of library media staff, by school type and selected school characteristics*

<table>
<thead>
<tr>
<th>All US public high schools</th>
</tr>
</thead>
<tbody>
<tr>
<td># Secondary schools</td>
</tr>
<tr>
<td># Schools with library media centers</td>
</tr>
<tr>
<td>Total number full-time, paid, state-certified library media specialists</td>
</tr>
<tr>
<td>Percent of paid professional library media staff with a master’s degree in a library-related education field</td>
</tr>
</tbody>
</table>

Note. This table focuses solely on public secondary school data.

The national data indicates a worrisome trend in shortfalls in providing US public secondary schools with school libraries, and shortfalls in staffing those libraries with professionally licensed school librarians. At the time of this study there is no data on Massachusetts staffing levels in school libraries, nor the percentage of school libraries staffed by professionally licensed school librarians. While a case can be made for the need for support staff with strong information and technology skills, they cannot replace the specialized training of a professionally licensed school librarian. The same report indicates that in all schools (the data in this instance was not dis-aggregated by grade level) the percent by student enrollment that employed professionally licensed librarians is similarly worrisome (US Department of Education, 2006, table 43).
Table 3

Of schools with library media centers, characteristics of library media staff, by school type and selected school characteristics

<table>
<thead>
<tr>
<th>Student Enrollment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100</td>
<td>27.8%</td>
</tr>
<tr>
<td>100 - 199</td>
<td>37.7%</td>
</tr>
<tr>
<td>200 - 499</td>
<td>50.2%</td>
</tr>
<tr>
<td>500 - 749</td>
<td>55.4%</td>
</tr>
<tr>
<td>750 - 999</td>
<td>60.5%</td>
</tr>
<tr>
<td>1,000 or more</td>
<td>68.1%</td>
</tr>
</tbody>
</table>

While it falls outside the parameters of this study, the librarian/student ratios revealed by this data are insufficient to meet the standards of effectiveness described in this literature review. This is noted as an area for future research and study.

**Librarian Leadership Attributes**

Spillane defines leadership as “a relationship of social influence” based on the various activities that drive the work central to the organization (2006, p. 10). Applying this relational definition, the work of a school is designed by the administration and faculty to motivate and develop the effectiveness of the other members, and ultimately improve professional practice. School librarians are typically solo practitioners in their schools, and some even provide services to multiple school libraries in a district. It is a common problem of practice to experience frustration regarding leadership opportunities within the organization (Belisle, 2004). After a review of school library leadership literature, themes emerged that identified barriers and strategies toward building leadership capabilities among school librarians.
Using distributed leadership theory Johnston conducted a study on opportunities for school librarians to assume leadership roles through technology integration, and identified specific enablers to successful leadership, as well as barriers (2012). The most frequently identified enablers were the presence of a supportive principal, opportunities for leadership roles and responsibilities, a desire on the part of the school librarian to make a positive impact on student achievement, ongoing professional development, and a personal sense of obligation to become more deeply involved in the school organization. The most frequent barriers were lack of leadership opportunities, lack of funding, and lack of support staff (Johnston, 2012).

**Perceptions**

The perceptions of building principals were found to be influenced by four forces: their own childhood experience with librarians where the library was peripheral to the classroom, lack of professional training in the role of the library in curriculum, the nature of the work of school librarians to enhance the skills and empowerment of others, and the low profile of librarianship in general education literature (Hartzell, 2002). The nature of the work of school librarians is to empower and increase the skills of students and teachers, and as a result these achievements are often viewed as part of overall teacher effectiveness, and tend to disappear as evidence of the concrete contributions of the school librarian. These forces contribute to an increase in the occupational invisibility of the school librarian within the school.

The perceptions of school principals and administrators regarding school librarians and their programs are overwhelmingly influential with regard to leadership opportunities and decisions on funding and staffing (Castiglione, 2006). Developing and implementing transformational leadership skills is the single most important act a school librarian can undertake in order to influence those perceptions (Shoaf, 2004). Advocacy as a strategy for
changing the perceptions of school administrators was identified as an important strategy for changing perceptions of the school librarian (Haycock, 2012). By educating principals and administrators on the impact of successful programs on student learning, improving communication between the school librarian and the principal, and increasing awareness of how administrators can effectively support their school library media programs, it is possible to improve perceptions, and thereby increase leadership opportunities for the school librarian (Levitov, 2009).

The demonstration of a forward thinking vision was also identified as a practice that positively influenced the perception of the school librarian. Principals who identified their school librarians as professionals who stayed current with research and trends, and who were able to articulate a vision for the future, were held in professional esteem that resulted in positive perceptions that also crossed over to favorable impressions of the school librarian as an effective instructional leader, and as effective in staff management (Shannon, 2009).

**Pre-service training**

Pre-service training in technology and instruction improves the level of professionalism in school librarianship, and increases the successful transition of traditional school libraries into learning commons (Hanson-Balduf & Hassell, 2008). In their 2008 study, Hanson-Balduf and Hassel determined that while the majority of teacher education programs required three or more credit hours of technology instruction, “pre-service and beginning teachers do not use technology significantly more than their more experienced colleagues” (Evans & Gunter, 2004 as cited by Hanson-Balduf & Hassell, p. 4). This is attributed to the fact that most teacher preparation programs focus on basic computing skills at greater rates than they address integrative technology uses. Conversely, the same study determined that because school librarian programs
are rooted in the twenty-first century information and digital literacy skills outlined in *Information Power: Building Partnerships for Learning* (2006), school librarians are uniquely skilled and situated within schools to fill the skills gap that exists in general teacher education training (Hanson-Baldauf & Hassell, 2008; Valenza, 2004).

In preparation for their 2008 study of pedagogical frameworks for school library programs, Asselin and Doiron determined that while technology was being used in schools the research tasks being assigned were primarily geared towards fact-finding and did not meet the criteria of meaningful inquiry (National School Boards Association, 2007). In this same study, teachers reported using the Internet in school assignments and also reported that they had no specific training in the skills of finding, locating and evaluating sources. Teachers had not received pre-service training in the specialized information and search skills designed to build meaningful inquiry (Asselin & Doiron, 2008). The study determined that typical use of the Internet in school assignments was as a virtual reference library for fact retrieval. This identified an instructional gap that leaves students with a deficit in the acquisition of these skills (Todd, 2008, as cited by Asselin & Doiron, 2008). School librarians learn how to teach search skills in pre-service training as well as the attitudes and behaviors students need to be successful users of information. These student information and research skills and attitudes include: engaging in prior search to establish knowledge context on the inquiry topic; employing search tool strategies that go beyond Google; identifying holes in their research; strategy development that include source evaluation for credibility, bias, accuracy, relevance, and reliability; advanced searches; an attitude of inquiry; a plan for success that includes a timeline for the work with time for refining, organizing, drafting and conclusion; and persistence (Valenza, 2004).
Technology training is an integral part of the pedagogy for pre-service school librarian training, and is also identified as a self-perceived attribute of transformational leadership (Smith, 2009). With appropriate pre-service training school librarians are able to assume technology leadership roles because they interact with all members of the school community. Through such specialized training, pre-service librarians learn to create staff development programs, model the ethical uses of technology for faculty, and advocate for equitable access to information and technology for all students (Everhart, 2007). Training also prepares them to be instructional leaders who have the skills to build strong collaborative relationships with teachers to integrate information literacy into the curriculum, and serve on critical curriculum development committees (Montiel-Overall & Hernandez, 2012). Pre-service technology training situates school librarians to be instructional leaders who facilitate school curriculum to move away from the “notion of covering the curriculum to the challenges of developing a transformative approach where students uncover the curriculum” (Asselin & Doiron, 2008, p. 13). By providing collaborative input to instructional goals and sharing instruction with teachers, all students benefit (Everhart, 2007).

**Administration and procedures**

High schools typically have leadership teams that include domains in learning and leadership, administration and organization, learning literacies, and technology (Koechlin et al., 2010, p. 24). Establishing partnerships with these various teams can improve communication with school leaders about the goals of the learning commons, and establish an understanding of how the model can improve student outcomes across the leadership domains. By establishing critical partnerships the school librarian is positioned to educate leaders and teachers on the
mission of the learning commons within the school organization, and the benefits for students and the broader school community.

The ability of the librarian to set procedure for the learning commons is important, and must feature a degree of autonomy from school-wide policies. Administration of a facility that supports diverse activities and goals requires specialized responsibilities. An example of autonomous procedure control is in the student use of cell phones. There may be a school-wide policy banning the use of cell phones, but as an informational technology device their use may be appropriate in the learning commons (Watstein & Mitchell, 2006). The effective school librarian can demonstrate that as a technology tool, web-enabled mobile devices can be used to access the library catalog, e-books, web-based audio books, MP3 audio books, and can also be used by students in the collection stacks as they search for print resources. Database apps can be accessed, as well as calendars and important notifications for school and home. Students involved in teams, clubs, study groups, and other activities can use cell phones in the learning commons in productive ways that can add to their productivity and organization. While a phone could pose distractions in the classroom, it can be a very useful tool in the learning commons. Through such a demonstration that showcases the benefits of cell phone use an effective case can be made for allowing a change of procedure to the school policy, and permit their use in the learning commons.

Another aspect of librarian control over the learning commons procedure is control of the calendar and scheduling. The librarian has administrative power and oversight of the diverse activities and events that occur within the learning commons, and in the digital space. This control is to maintain a collegial balance of student/faculty/community use that treats all constituents fairly, and focuses the use on student learning goals (Loertscher et al., 2011). If a
high school fills the library with study halls the possibility of flexible access for collaborative work or group instruction is crowded out, making it impossible to have a learning commons. An example of effective administrative control is the implementation of virtual calendars to facilitate and document the diverse demands of the learning commons, and increased understanding for the need for flexible scheduling (Koechlin et al., 2010). To create the appropriate environment the librarian requires the authority to influence school-based procedure to meet the needs of the learning commons model. This is accomplished by establishing a leadership role and an effective voice in school procedure and the decision-making of guidelines set within the school.

**Implementing a Successful Transition to a Learning Commons**

The learning commons improves student achievement by providing structured support of, and instruction for, the teachers in information and digital literacy skills in a student-centered environment, facilitates professional development in new skills, and also provides a collaborative space for faculty and students (Loertscher, Koechlin, & Zwann, 2011). As a common resource in the school, the learning commons is used extensively by a variety of student and faculty stakeholders, and is vulnerable to over use and under-provisioning. Failure to adequately provision the learning commons with an adequate budget, adequate staffing, and adequate autonomy in policy-making undermines the potential of a successful transition and implementation, and may foreshadow insufficient gains in student learning outcomes.

The requirements of the learning commons are adaptations to the physical space that prioritize collaboration over print collections, non-professional staff skilled in technology and information and media production platforms, and librarian leadership training in instruction, technology, and administration. Through effective advocacy, strong leadership, and collaboration
with administrators, the high school librarian can obtain the necessary resources for a successful transition (Castiglione, 2006).

**Attributes of a Successful Learning Commons**

The demands of the digital information environment require new methods of instruction and support for high school students. Traditional high school libraries need to transition to the learning commons model in order to help the school meet the learning goals of the 21st century, and to do so requires more than a simple name change.

The history of the school library in the U.S. has been one of continuous change, reflected in the evolving standards that shift away from a book repository, to a technology enhanced program that actively instructs and supports students and faculty in acquiring the digital literacy skills required in the new information age. Studies conducted by various state school library associations and state education departments reveal consistent findings that irrespective of socioeconomic factors, students in schools that have adequately provisioned school libraries have better achievement rates on standardized tests, the common measure of school effectiveness (Todd & Kuhlthau, 2004).

As a common resource that serves students and faculty both within the school and virtually, the learning commons has different requirements from a traditional school library. As part of the transition process a systemic overhaul is required. The overhaul will resituate the learning commons librarian as a key partner in curriculum and instruction, and will include establishing collaborative practices. Improvements in non-professional support staff training are necessary to provide motivation to learn and provide consistent quality support to students as they work in the learning commons, integrating new skills into learning activities (Shoaf, 2004).
There must be space changes to accommodate the collaborative learning groups and independent student work. Print collections must be evaluated and weeded to make room for collaborative groups and diverse school community activities. In order to meet school goals for improved student learning, the librarian must be available for student instruction, faculty collaboration, and faculty professional development.

**Implications of the Tragedy of the Commons**

As outlined by Hardin (1968), when a community shares a common asset there is a tendency for members of the community to use it in their own best interest, with disregard to the impact on the overall health of the common asset. The implications for a scenario of the “tragedy of the commons” are that by failing to establish the necessary conditions and resources, the learning commons has the potential to fail as a service model. Failure would take the form of a space that is underutilized and irrelevant to students and staff, an overall lack of instructional integration, a lack of professional development for faculty, and ultimately a lack of information and digital literacy skills for students. The mission of the learning commons is to provide a dynamic, technologically rich space for students to gain the skills to be proficient users and creators of information. As a common resource it requires thoughtful planning during the transition and implementation stage to ensure that the resources are there to serve students (databases, books, technology, trained support staff) and transform instruction (collaboratively planned curriculum with embedded technology, aligned with the school learning expectations). To achieve this goal requires an appropriately trained school librarian and support staff with access to the resources to achieve 21st century student learning goals.
Chapter 3: Methodology

Problem Statement

This research seeks to reveal the experiences and challenges faced by school librarians who engage in transitioning their traditional high school libraries to the learning commons service model. In order to succeed, this transition requires new responses from school administration, faculty, school culture, and stakeholders (Bailey & Tierney, 2002). The learning commons model features shared resources such as open access to wireless Internet, technology, databases, printing, collaborative workspace, and serves as a community gathering space (Loertscher, Koechlin, & Zwan, 2008). The model also relies on the establishment of critical partnerships between the school learning leadership team, organizational leadership team, learning literacy team, and the technology leadership team (Koechlin, Rosenfeld, & Loertscher, 2010). In serving so many diverse needs, if there has not been adequate planning for the various components required by the transition, the learning commons is at risk of critical underperformance. The failure to thrive and subsequent collapse due to poor provisioning and overuse is known as the tragedy of the commons (Beagle, 1999).

The Paradigm

This research is guided by the interpretive constructionist paradigm that will allow an exploration of the experiences of the school librarian participants as they plan and implement the transition (Burrell & Morgan, 1979). This paradigm supports the exploration of the experience and reality of the school librarian who endeavors to implement changes, and identifies the factors that either support or undermine those efforts for a successful transition and implementation of the learning commons model. By looking at a variety of transition experiences comprised of diverse perspectives, it will be possible to identify patterns that address the research questions
(Butin, 2010). This interpretive approach recognizes that there are no set plans or strategies for a transition in service models, but that through study of the experiences of school librarians it is possible to identify commonalities that can be identified for further study, as well as provide guidelines for those considering implementing a transition in their own high schools.

**Research Design**

The interpretive constructionist paradigm is the most appropriate design because it relies on the participant’s view of the situation in order to gain understanding of the world in which they work, and is suited to learning about the experiences of the participants in their transition process; therefore a qualitative project is the most appropriate (Creswell, 2012). The descriptions and analysis obtained from three high school librarians on their experience with the process of transition is best served using a qualitative, general inductive approach.

**Research Tradition**

**Qualitative research**

This study fits well with the characteristics of qualitative research and the four associated philosophical assumptions (Creswell, 2012, p. 21). The researcher reports on the different themes as they emerge from the findings (ontological), relies on quotes and evidence obtained through collaborative time with the participants (epistemological), openly discusses researcher values and interpretations with the participants (axiological), and also uses inductive logic that featured revisions based on the findings in the field, and had an emerging design.

**General inductive research**

Using a general inductive approach this study reveals the factors that most influence a successful transition, and those that undermine the success of a transition. This represents a complex, contemporary phenomenon that consists of multiple variables (support from school
administrators, instructional technology, curriculum development, budgets, staffing, student and community, etc.). From the raw data the researcher identified themes and categories that revealed a model for key requirements for a successful transition (Thomas, 2006). By taking a general inductive approach the researcher focused on one issue, in this case the transition of a high school library to a learning commons, and then focused on three bounded cases (the participating high school libraries over a one month period) to research, analyze, and establish assertions based on diverse data collected during the study (Creswell, 2012).

**Statement of Positionality**

A general inductive analysis depends on close reading of raw data to “derive concepts, themes, or a model through interpretations made from the raw data by an evaluator or researcher” (Thomas, 2011, p. 238). The researcher allowed the themes to emerge from the raw data, described the actual results, and did not tie them to the expected results. This “goal free” evaluation took into account unanticipated results (Scriven, 1991, p. 56; as cited by Thomas). In considering positionality, it was important for the researcher not to be influenced by anticipated results, or by unexpected data.

As a high school librarian who has experienced a transition, I knew that it was important to be aware of preconceptions based on personal experience. This prior experience did not influence the themes and categories that emerge from the raw data.

**Participants**

In a qualitative approach the focus is on understanding the meaning of the phenomenon as experienced by the various participants, from their multiple perspectives (Creswell, 2013). Using emergent design, the plan for this general inductive study was not tightly prescribed and
was adapted based on the unique characteristics of each school site, and the personal experiences and perceptions of the various participants.

Participants were recruited from the Massachusetts School Library Association (MSLA), the professional association of licensed school librarians in Massachusetts, in order to establish a purposeful sample (Creswell, 2013). The participants self-identified as working at a Massachusetts public high school level and as having experienced transitioning a school library into a learning commons. In order to maintain consistency of state educational frameworks and other state regulations between case studies, the participants experienced this transition in a Massachusetts public high school.

The confidentiality and anonymity of the site and participants was ensured through the use of pseudonyms and general indicators such as student population numbers, scheduling practices, technology integration, and administrative responsibilities. Within these general ranges, the experiences of the participating high school librarians on areas that either supported or undermined the successful implementation of the learning commons model was explored. Pseudonyms were used in order to protect the identities of the participants and their school districts, and to protect the participants from the possibility of supervisory consequences (DiCicco-Bloom & Crabtree, 2006). Participants were advised that they were free to withdraw or opt out of completion of the study at any time.

The objectives of the study was made clear to participants through a description of the purpose of the study, the anticipated time commitment of the survey and interview components, and how the conclusions would be shared. Accuracy of the data was ensured through rigorous adherence to interview protocols as well as regular member checks to verify the credibility of the findings (Thomas, 2011). When the researcher is the sole coder, member checks increase validity
by engaging the participants in the thought process behind some of the coding decisions (Saldana, 2013). In this study member checks were especially clarifying in exploring the leadership codes with each participant, and uncovering nuances in the school librarian and principal relationships. To ensure transparency, the sharing of the aggregated interview data will be included in a final report of the study distributed via the MSLA professional publication, The Forum. As a courtesy to the MSLA executive board, a formal copy of the results of the survey and interview data will be presented for their use and records.

Researcher bias was avoided through thoughtful construction of neutral interview questions that did not influence responses. The questions established ranges across general data points in order to draw conclusions relating to impact of population, budget, scheduling, technology integration and administrative duties, on the experiences of the participants perceptions of factors that supported or undermined the successful implementation of the learning commons model. The results of the study add to the literature by identifying categories and themes that contribute to success, and perceptions of the attributes of a successful implementation.

The Call for Participants (Appendix I) stated the criteria and included the statement: “Selection for the study is not guaranteed, but will be determined during a brief 5-10 minute intake call.”

During the intake call the researcher gave a brief overview of the project and then asked criteria-based questions (self-recording the participants answers). After determining if the high school librarian was an appropriate candidate, the researcher stated whether or not the school librarian qualified for the study.

Limitations
Because this study focused on three high school librarians and their experiences transitioning to the learning commons service model, it was not possible to capture a truly broad cross section of understanding. Every school is unique in terms of factors like school culture, budgets, community support, and leadership, and all of these influence the process of a transition in ways not addressed by this study. The three participants and their school communities had similarities, but there were many differences in school culture that yielded useful insights into the wide range of factors that must be addressed when planning a transition.

The study revealed commonalities in the transition process, and identified themes and categories that serve as a jumping off point for future research. This study was not designed for in depth analysis of the individual themes and/or categories.

**Recruitment and access**

Recruitment was via the MSLA electronic E-mail list serve and the MSLA Facebook group. Recruitment outreach included the goals of the study, participant requirements of professional licensure by the Commonwealth of Massachusetts and employment in a Massachusetts public high school along with the prior experience of transitioning the school library into a learning commons.

**Data collection**

Data comes from a number of sources including interviews with participants, review of documents related to the transition process, and discussions regarding budgets and the institutional position of the high school library. Site visits and Skype interviews provided data on the organization of the library and space utilization, technology inventory, as well as collection and circulation data. Digital resources such as the library website, databases, web traffic data, and media resources also informed the study.
Interviews

The participants were questioned in a series of two interviews, either in-person or via Skype or telephone. The first interview included a general audit of resources designed to establish baseline information on each learning commons (Appendix II). The first interview protocol also included a series of open-ended questions designed to prompt the participants to share their thoughts and experiences of their transition process through a narrative (Creswell, 2012, p. 164). In this role, the researcher observed as a complete participant who was fully engaged with the school librarians involved in the study (Creswell, 2012, p. 166). This engagement established a collaborative and collegial relationship, and this was helpful when it came time for member checks to determine accuracy and trustworthiness of the data and conclusions (Thomas, 2011, p. 243).

The second interview included a review of the baseline data for accuracy. It also included a review of the raw data obtained from the transcripts of the first meeting. The second interview was comprised of open-ended questions generated from the raw data, and was designed to elicit reflections on the emerging categories and themes.

Informed consent

The most important area of protection in this proposed study of Massachusetts’ public high school librarians was their privacy and the identification of their schools. If the participant shared information that reflected negatively on a district or administrator it was possible that the participant could face retribution in the form of a poor evaluation or, potentially, termination. Establishing trust through careful management of data and assurances of privacy was necessary for the success of the study.
Consent was required from the identified school librarian participants as well as their building principals. In order to gain access to the various school sites it was necessary to get consent from principals who serve as gatekeepers (Creswell, 2013). The consent form included the right of the participant to voluntarily withdraw from the study at any time, the protection and confidentiality of the respondents, the purpose of the study, data collection methods, data storage, the benefits of participation, and the potential risk of the study results being perceived in a negative light by school administrators. The school librarian, the school principal, the school superintendent, and the researcher all signed the consent form outlining these factors (Appendix III).

**Ethical Considerations**

This study did not include high school students so there was no need for the protection of minors. In order to protect the privacy of the participant and school site identities, the data was protected by the use of pseudonyms for the participants and school sites.

**Data Collection**

Data was collected through interviews and documents and artifacts provided by the participants that detailed the transition process. The data was digitally recorded using Audio Note and written field notes.

Data was collected during an initial interview and site visit. Audio Note was used to record the interview using the researcher’s iPad. The audio files were transferred to the researcher’s laptop computer and stored in a password protected file format.

**Validation**

Lincoln and Guba (1985; as cited by Thomas, 2011) describe the general types of qualitative trustworthiness as “credibility, transferability, dependability, and confirmability”
(Thomas, 2011, p. 243). Validation occurred through debriefs with the participants in the form of member checks throughout the process. Since the participants are professional high school librarians, checking conclusions also provided consistency checks (Thomas, 2011).

**Data Storage**

Data was stored digitally on the password protected personal devices of the researcher in the form of documents, transcripts, and PDF files. Audio recordings were destroyed after transcription. Backs up copies of all the documents are stored in Dropbox, a password protected cloud storage platform.

The data was used for the completion of the researcher’s doctoral thesis project and potentially for future journal publications and conference presentations. Participant confidentiality will be maintained in all future use. Once the thesis is complete the data will be removed from Dropbox and destroyed, removed from the researcher’s personal laptop and iPad, and stored on a USB drive that will remain in a locked safe deposit box in the researcher’s home. After a period of five years the data will be permanently destroyed.

**Data Confidentiality**

The data and documents that included the names of participants and school sites have been destroyed. Electronic data was deleted, and paper documents were shredded. The remaining data and documents refer only to participant and school pseudonyms. This is consistent with Creswell’s guidelines on protecting participant confidentiality (2013, p. 175).

**Data Analysis**

The strategy that was used in analyzing the data in this general inductive approach was multiple readings of the raw data to identify emerging patterns (Thomas, 2011, p. 239-240). This strategy was selected because it allowed the raw data to be condensed into a brief, summary
format. From this point, links between the summary findings of the raw data and the goals of the research were established, and the development of conclusions derived from the experiences of the participants was revealed (p. 237). In analysis, the general inductive approach was beneficial in the development of multiple categories and category descriptions that allowed the researcher to identify links and relationships between multiple categories. This allowed research findings to emerge from the themes embedded in the raw data without structures and protocols imposed by other, more structured methodologies (p. 238). Another benefit of using the general inductive approach in this study was that it provided the researcher with a straightforward option for analyzing qualitative data that reduced the risk of the researcher invoking expectations or specific findings, and supported the research goal of establishing a basic framework for transitioning to a learning commons model.

The collaborative feedback from participant member checks improved the overall trustworthiness of the findings. The researcher ultimately determined the most important themes from the data.

**Data Coding**

The data was coded and analyzed using MaxQDA, a qualitative data analysis software platform. The researcher used descriptive coding for data analysis as it was effective at categorizing data to provide the researcher with an understanding of the organization of the study (Saldana, 2013).

**Features of coding**

There are five key features for data coding in a general inductive approach (Thomas, 2011, p. 240). Coding in this research study will follow the protocol outlined by Thomas.

1. **Category label:** a word or phrase that briefly describes the category.
2. Category description: a description with key characteristics.

3. Text or data associated with the category.

4. Links: a diagram indicated relationships between categories.

5. Model in which the categories are embedded: the hierarchy of the school and the learning commons within the school. This is generated as a result of analysis, and occurs at the end of the research process.

**The process of inductive coding**

Coding featured close reading of text and the careful consideration of meanings contained within the text (Thomas, 2011, p. 241-242). The researcher identified meaningful text segments and created a label for a category to assign to the text segment. Pre-coding took place during the close reading of the raw data. The pre-coding was comprised of marking of the texts in various ways to indicate important comments or rich themes (Saldana, 2013). The researcher used procedures for coding the data that include:

1. Data cleaning in the form of common formatting (font, text size, etc.), the creation of back up copies and data files.

2. Close reading of text so the researcher could become deeply familiarized with the content and themes.

3. Creation of categories based on the close reading of the texts. *In vivo* coding was used during this stage. Analytic memos were kept in the researcher’s journal in order to facilitate reflection and generate meaningful connections between categories (Saldana, 2013, p. 42).
4. Identification of overlapping codes and un-coded text: identification codes that fit in multiple categories, as well as outlier text that contains codes that didn’t fit in any clear category.

5. Continued revision of categories: generation of sub-categories for additional insight and nuance.

The coding process was designed to generate between three to eight categories that identified the principle themes from the raw data.

**Data Management**

Data was coded and analyzed using MaxQDA, a qualitative data analysis software platform. The researcher used descriptive coding for data analysis as it was effective at categorizing data to provide the researcher with an understanding of the organization of the study (Saldana, 2013).

**Trustworthiness**

In order to establish the trustworthiness of the researcher and the integrity of the research process the following steps were taken:

**Clarifying researcher bias:** The background of the researcher (white, middle class, middle aged woman, licensed school library media specialist, member of the MSLA executive board, experienced in transitioning a school library to a learning commons service model) was made clear in the initial Call for Participants. In considering positionality, the prior experience of the student researcher did not influence conclusions regarding the transition process of the participants.

**Member checks:** Participants were provided with the opportunity to review transcripts and data for internal verification in order to increase the trustworthiness and credibility of the
study (Creswell, 2013). Participants had the opportunity to provide feedback during debrief sessions, review the research and conclusions and, if necessary, provide additional feedback and clarification. Utilizing the skills of the school librarian participants with frequent member checks increased the trustworthiness and reliability of the study (Thomas, 2011).

**Rich, thick description:** Using a theoretical approach, the researcher included extensive discussion on the major themes that emerge from analysis of the data. Quotes and rich details that support the themes informed existing learning commons theory based on the views and experiences of the participants (Creswell, 2013).

**Additional Considerations to Ensure the Protection of Human Subject**

Before data collection a Doctoral Thesis Proposal (DTP) and an ‘Application for Approval for Use of Human Participation in Research’ was submitted to the Northeastern Institutional Review Board for evaluation. Acceptance demonstrated ethical research practices and the protection of all human subjects.

**Confidentiality**

Each participant study began with a statement of the purpose of the research, an explanation of steps to preserve confidentiality, affirmation that participation is voluntary, and that the participants were free to withdraw at any time. Participants also signed the Consent to Participate in Research form (Appendix IV), which contained the same information and indicated the willingness of the participant to participate in the study.

**Validation Strategies**

Multiple validation strategies are recommended in qualitative, inductive research in order to assess the accuracy of the findings (Creswell, 2013). Triangulation of data was used to assess codes from multiple sources of data and themes for comparison and cross-validation of findings.
Member checking was also included, and the researcher sought the input of the participants to verify the findings and interpretations of the study. This was done by including the participants in review of rough drafts of the research and input on language, insights, and conclusions. Rich, thick description also served as an additional validation strategy that allowed the reader to “transfer information to other settings and to determine whether the findings can be transferred” (Creswell, p. 252, 2013).

**Potential threats to internal validity**

To minimize potential threats to internal validity and increase reliability, the following steps were taken in the research design. High quality recording devices (researcher’s password protected iPad) and the Internet transcription service (Rev Transcription Service) were used (Creswell, 2013). An inter-coder agreement with Rev Transcription Service was completed prior to the uploading of audio files to verify the protection of the data.

The general inductive study was bounded by location (three high schools) and time (1 month) so maturation and subject attitude did pose a threat, however participant illness, mortality, or other unforeseen complications that could impede access to the participant or site presented a potential threat to the study. To minimize this threat back-up school locations and participants were identified in advance, so the study could have been conducted elsewhere if required.

**Researcher Bias**

The potential for bias existed because both the researcher and case study participants are currently employed, licensed high school librarians and professional peers. It was important that the researcher’s expectations did not influence the “conduct and conclusions of the study” and that negative conclusions were avoided (Maxwell, p. 108, 2005). This was addressed through
regular and ongoing member checks so conclusions were shared and understood within context and through protection of participant and site identity, decreasing the potential for bias in the analysis of the data.

Conclusion

This study addressed the components of a methodology for a qualitative general inductive study that asked, “What is the process of transitioning a traditional high school library to a learning commons service model? What factors determine a successful transition? What factors undermine the success of a transition?” The participants, three high school librarians employed in the Massachusetts public school system, are all professionally licensed and working in accredited schools.

The methodology of the study, research design, paradigm and tradition were addressed. An overview of the methods used in data collection, management, storage, analysis, reliability and trustworthiness, along with the plan for the protection of human subjects have been provided.
Chapter 4: Report of Research Findings

Introduction

The objective of this general inductive qualitative study was to develop greater understanding around the process of the transition from a traditional high school library to the learning commons service model. The research focuses on the school librarian practitioner and is designed to identify factors that either promote a successful transition, or undermine the success of the transition. The first section will provide an overview of the domains identified in the literature review, and situate the experiences of the participants within those domains. The second section will provide an overview of the themes that emerged from the data, and will identify new domains not previously identified. The final section will present a summary of the research findings.

The data was collected and analyzed to answer the two research questions developed at the start of this study:

- What factors promote a successful transition?
- What factors undermine or threaten a successful transition?

Participants of this study consisted of three high school library media specialists from three different Massachusetts public high schools. The five domains that were explored with the participants were:

1. Professional background (education, years as practitioner, previous work experience)
2. School description (demographics, school culture)
3. Learning commons (personal perspective, position within school culture)
4. Administration and leadership (school district and building-based, position within school culture)

5. Changes made for transition (administrative changes, curricular changes)

Professional background

The three participants come from very different background experiences. Jane, in her fourth year at South Meadow High School (pseudonyms are used for all participants and school names) came to the professional of school librarianship after working in business and obtaining a Masters of Business Administration. Jane switched careers and obtained a masters degree in Library Information Science as well as her teaching license and immediately gained employment at South Meadow High School. This year, with the endorsement of her principal, Jane anticipates that she will move from non-professional to professional teacher licensure status. Rose, from North High School, worked previously in marketing and sales, and is in her seventh year as a professionally licensed school librarian. Rose has also received a certificate in advanced graduate studies in education, media, and technology. Rose worked previously in a district where she transitioned the high school to a learning commons, and is in her first year in a new district where she will be conducting another transition from library to learning commons. Karl is also in a new position at Atlantic High School, and is transitioning to a learning commons. Karl was part of a team that successfully transitioned his previous school library to a learning commons, and is actively transitioning his new school. Karl has been a professionally licensed school librarian for seventeen years.

School Descriptions

Enrollment data obtained from the Massachusetts Department of Elementary and Secondary Education indicates that all three public high schools have a lower percentage of
African-American students than the Massachusetts state average. South Meadow High School has a far higher average of Asian student than the other two schools, and with 20% enrollment they far exceed the state school enrollment of 6.1%. All three schools fall well below the state average for Hispanic students, but match or exceed the state average for white students. South Meadow and Atlantic High Schools both exceed the state average for students identified as multi-race, non-Hispanic.

South Meadow High School has 11.7% of students identified as low income, and 4.2% as English Language Learners (ELL). Atlantic High School has 11.5% students in the low-income category, and 2.3% ELL. North High School has 12.5% low-income students, and 0.4% ELL.

Table 4

<table>
<thead>
<tr>
<th>Race</th>
<th>% Of School</th>
<th>% Of MA State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South Meadow High School</td>
<td>Atlantic High School</td>
</tr>
<tr>
<td>African American</td>
<td>4.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Asian</td>
<td>20.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6.0</td>
<td>7.7</td>
</tr>
<tr>
<td>Native American</td>
<td>0.1</td>
<td>2.6</td>
</tr>
<tr>
<td>White</td>
<td>65.1</td>
<td>80.8</td>
</tr>
<tr>
<td>Native Hawaiian, Pacific Islander</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Multi-Race, Non-Hispanic</td>
<td>4.0</td>
<td>4.5</td>
</tr>
</tbody>
</table>
Analysis of the school demographic and performance data shows that the three schools have a lot in common in that they are all overwhelmingly white and have similar percentages of low-income students, while North High School has the lowest percentage of ELL students. All three schools outperform the state averages on MCAS test results. In assessing the process of transition from school library to learning commons, all three sites are well matched and provide a firm basis for comparison.

Table 6

**Staffing Levels**

<table>
<thead>
<tr>
<th></th>
<th>South Meadow</th>
<th>Atlantic</th>
<th>North</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>1,779</td>
<td>687</td>
<td>1,530</td>
</tr>
<tr>
<td>Total student population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Media</td>
<td>2.5 (Split)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Specialist(s)</td>
<td>between 3 licensed school librarians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aides (non-professional)</td>
<td>1 full-time aide (Split between 2 people)</td>
<td>1 full-time aide (recent position)</td>
<td>1 part-time clerk</td>
</tr>
</tbody>
</table>

The school librarian as a solo-practitioner who never leaves the library is at odds with the collaborative requirements of the learning commons model, and adequate support staff is identified as an important administrative obligation (Shoaf, 2004). Support staff can play an important role in developing an energetic environment in the learning commons, and can have a profound impact in meeting school goals, and positively influencing student achievement and the perceptions of administrators (Castiglione, 2006). While all three schools have support staff, when compared to South Meadow, North High School is comparatively under-staffed given the size of their student census. There are no state guidelines for the recommended or suggested numbers of school library support staff for Massachusetts school libraries.

**Learning Commons**

This domain encompassed the perceptions of the participants with respect to the transition, and how they managed the transition with school administration, faculty, and students.

**The library collection and floor plan**

The data revealed similarities in the starting point for each participant, which featured a traditional school library that prioritized books over flexible space for students. One of the first steps of each transition process was to decrease the size of the collection, refocusing the print
collection away from reference and informational nonfiction, and prioritize high interest fiction and narrative nonfiction.

In the state of Massachusetts many school districts subscribe to the Massachusetts Association of School Committees Online Policy Manual (MASC) ("Massachusetts Association of School Committees Online Policy Manual"). A review of the online policy manual for districts across the state indicates consistent use of the same Library Materials Selection policy, and Library Resources policy. These policies are based on the American Library Association (ALA) Bill of Rights and are “guided by the goals of public education as defined in the Massachusetts Common Core of Learning and by the needs of the individual Education Reform Act” ("Massachusetts Association of School Committees Online Policy Manual"). While not every participant district subscribes to the MASC Online Policy Manual, all participant districts have the MASC Policy Manual available on their School Committee Policy websites, demonstrating consistent adherence to policy regarding collection evaluation and weeding. The re-evaluation of library collections is necessary in order to maintain a relevant and active collection. Criteria for weeding features the following guidelines:

- Curricular changes have rendered superfluous some materials (or multiple copies of materials) formerly used but no longer in demand.

- Some materials contain factual material that is no longer accurate nor current.

- Some materials intended for recreational reading have become dated or unattractive and are no longer in demand. (Some such books, which are deemed “standards” or “classics”, will be retained even though they rarely circulate).
• Some materials have become worn out, damaged or physically deteriorated and have lost utility and/or appeal.

• Some materials have been superseded by newer items, which present the same information, but in superior format.

Withdrawn library/media center materials are processed in one or more of the following ways:

• Made available to be used as resource or supplementary material by teachers.

• Offered to other media centers in the District, as it is possible that a material, which lacks utility in one building, may have some usefulness in another.

• Contributed to appropriate charitable or educational agencies.

• Discarded, when warranted.

All study participants adhered to their school committee policy regarding library resource selection, evaluation, and weeding.

Karl reported that on his first visit to Atlantic High School that he “walked in and it was just like a warehouse of books. It was like stacks of books. At least half of the library was filled with stacks.” The predominance of books, and the priority of the library collection over other types of student-based activities were also reported by Jane and Rose. Jane stated that it was a matter of “shifting the emphasis, this physical impression of the library away from large reference resources and towards reading for pleasure, whereby we’re highlighting the fiction collection front and center.”
The process of weeding, or removing books from the library collection, has been extensive and ongoing at two of the sites. Over the past four years, following school committee guidelines, South Meadow High School has reduced their collection by approximately 50%, going from a collection size of approximately 20,000 volumes to approximately 10,000. This reduction allowed them to remove the tall, built in wooden cases that filled the space, and increase student seating with an innovative approach of café style counters and stools that look out over the school grounds. The new, low-profile bookcases provide “a much better vantage point and line of sight throughout the whole library for supervisory purposes…and also allow us to do a lot more display of books than we could with the tall shelves.” The new shelves also have built-in wheels that allow them to be moved when needed, and to experiment with different floor layouts.

The shift towards high interest fiction and narrative nonfiction in collection development has resulted in increases in circulation statistics, indicating increases in student use. In South Meadow:

Circulation has risen, especially circulation of fiction since we rearranged the library and focused not only just displaying our fiction and putting it front and center, but also our purchasing has skewed much more towards popular young adult, popular fiction, whereas when I arrived a lot of the fiction was either outdated or traditional classic literature and not as much young adult stuff, and not as much popular fiction. Since we’ve changed what we’re buying and now we’re displaying it, circulation has increased.

With the re-focus of the collection towards pleasure reading and new genres, such as graphic novels, South Meadow has seen an increase in requests from English teachers for
recommendations and titles to update class lists and projects “because we’re able to satisfy the demand for what kids like.”

At Atlantic High School Karl said, “It was pretty easy to know what to do first…the first few months were just weeding. Lots of weeding.” Karl was concerned about resistance from within the school towards getting rid of so many books, but after he engaged in discussions with faculty and explained his reasons for reducing the size of the collection, he found that the school community was willing to listen. Following school committee guidelines, Karl reported that it took half a year to reduce the size of the collection from almost 27,000 to approximately 13,000 volumes.

The North High School Library had a traditional collection that took up most of the floor space, and as was the case at South Meadow, blocked light from the windows. The previous librarian (who left due to retirement) had aggressively weeded, and the collection size is a manageable 13,000 volumes. Rose described the reaction of the faculty to the changes she made in floor layout and her reorganization of the collection:

All of the space that was right here, that’s now all tables and one row of computers, were all bookshelves, all the way up to the windows. What I’ve heard is that everyone felt that it was very dark and didn’t leave much room. Now, opening up the space allows them to do so much more. Right in the front area I pulled several of the comfortable seats. There are seven chairs up front that they can use as their reading area. The fiction and nonfiction books were both together in that large section of books, but now the nonfiction and reference section are together on the other side of the room. We also got one of the schools to donate the shorter stack shelves. That opened up a line of vision.
Previously, the North High School collection had been dispersed across all the floor-to-ceiling shelves and took up much of the floor space, so Rose moved shelving to the sides of the area and condensed the collection, allowing her to get rid of a number of the tall shelves and create more open space for students. Future collection development will focus on independent pleasure reading and increasing online resources for nonfiction and research.

Changes to the physical layout have been critical in the transition process, and reducing the collection size in order to create more flexible and open space was seen as a priority in all three schools. All three sites had positive student, faculty, and administrative feedback as a result of the physical changes to their libraries.

The virtual learning commons

In addition to physical changes to the site, South Meadow High School also overhauled their digital space. Previously the library platform was Dreamweaver, and one librarian served as a gatekeeper who was responsible for curating all the online resources and updates. As part of the transition process, two years ago they shifted to the platform LibGuides, and “all three librarians became facile with that tool.” Because it is “a more user-friendly platform we could make a lot more resources available to our teachers 24/7 than we previously had done.” Jane lists the social media activities and interfaces now available (Twitter, Facebook, a student book review blog) and reflected that “All of those things we sort of had going on in the background, but having a user-friendly tool for the site allowed us to put it all in one place and have that 24/7 access…to communicate with our community, whether it be faculty, parents, or students.”

The priority given to developing a robust digital learning commons is also seen on the Atlantic and North High School websites. Karl and Rose are in the early stages of their
transition, but their websites already offer robust access to curriculum and student support resources.

**Student use**

**Study halls**

The system of study halls was different in each school, yet had an enormous impact on how students used the learning commons. In South Meadow High School there is open campus for second semester sophomores and the upper grades, with parental permission. Freshmen do not have open campus. Students with open campus can access the learning commons at anytime they have a free block. Also, South Meadow has a policy of not hiring short-term substitute teachers, so if a teacher is absent those students are dismissed, and if they have open campus those students can go anywhere within the school or off campus. Jane reports that “The library happens to be a very popular destination for students to come to do school work, to meet with their friends, usually both at the same time, hard to distinguish what they’re doing, to access technology, to use their own technology, to read, research, create, etc.”

At North High School, Rose describes a traditional study hall practice where students are scheduled, and there is no open campus. Study halls are scheduled in classrooms, have about 30 students per study hall section, and teachers are assigned study hall duties. Studies are not scheduled in the learning commons, although students are able to get a pass to leave their study to go to the learning commons. Passes are available in the morning, and are limited in number. The learning commons staff can control and reduce the number of passes available if there are instructional classes already booked into the space. Student use consists of socializing, gaming, reading, studying, and research activities. Rose recognizes that the study hall system is part of the culture of the school, and “that’s what works here for now.”
Students at Atlantic High School are fully scheduled with what are otherwise known as study halls, but which they refer to as “learning centers.” Approximately half the students at Atlantic have scheduled learning center time, and it is designed for independent project work. Students are allowed to obtain a pass to the learning commons during this time. Teachers may bring students to select books for class reading assignments, and to conduct research. There is also an active mentorship program with area businesses, and senior students establish strong connections and work study programs that may keep them out of school for up to two days per week. It is otherwise a closed campus.

The ability of students to roam the building is very different in each school, and is driven by school study hall and open/off campus policies. South Meadow provides students with a great deal of latitude in moving around the building or leaving campus, and North High School provides very little student freedom in moving around the building. Rose is able to effectively monitor and control student access through the pass system, ensuring that classes are not crowded out or negatively impacted by casual student use. At Atlantic, Karl is also able to use the learning center pass system to maintain a productive environment for learning.

Procedure

Managing student use of the learning commons required a shift in procedure from the prior library practice. In South Meadow, Jane states:

When I first arrived I think they had a maximum of four students to a table. Maybe five. That’s crept up to six per table. We have a very defined and much more clearly labeled quiet study area because with a learning commons approach we’re recognizing that learning is often a collaborative and social process. We want to have space for that, but
we don’t want to totally lose the opportunity for quiet, reflective individual study so the space over there is the quiet, as best we can, study space.

At North High School, Rose also eased up on procedures and allows students to talk without worry about being shushed. The volume in the learning commons has gone up. She believes that the learning commons “should be a place that they’re collaborating and communicating with teachers and students.” The change had been popular with faculty as well and Rose reported that recently she showed a faculty member the quiet staff area in the back, and was told, “No, I want to be in the middle of the students.”

When he began at Atlantic High School Karl felt some general resistance to the library from students, and that it was not a popular destination. He began by saying “yes to almost everything just to flip the expectations around. Now we have students working in the library, and there is a book club started. We have a couple of kids that come behind the desk…and they’re actually allowed back there. They’re allowed to do a lot of things they didn’t used to be allowed to do.”

Karl noted that there were risks to opening the space to students and loosening procedures. At his previous school they “wanted to highlight that this is a student-centered library. It’s not the librarian’s space. This is a double-edged sword.” His previous school did not have the students fully scheduled, had open campus, and during free blocks students “would come in and attack it, and sometimes not in good ways.” By “amplifying the attractiveness of the space” they became overwhelmed with students who weren’t allowed to congregate in hallways because they could disturb classes. Nor were students allowed in the cafeteria unless it was during a scheduled lunch, and freshmen and sophomores couldn’t leave the building. The learning commons was one of the few places students were allowed to be, and “we were just
getting inundated with kids.” From this experience Karl noted that a social learning environment could be supported only if the number of students doesn’t get too high. At his previous school he described times where there were so many students that there were large groups sitting on the floor, and “even the most well-intentioned, focused kid is going to be either distracted or not able to concentrate.” In this set of circumstances, Karl said it was key to have strong administrative support.

If the library is the heart of the school then it’s basically like you’re having a heart attack. If it’s being overwhelmed with stress then the school needs to do something to address it. It gets beyond the ability of just the librarians working on their own to really address that in a systemic way.

Karl has kept in touch with his former school and reported that, while there have been improvements in the situation the issue is not yet resolved. “I think it is a function of the schedule, which is a monster, as you know, and to a lesser degree, the culture of the school, the way that the campus is, whether it is opened or closed, that type of thing.”

**Faculty use**

Faculty use of the learning commons varies between the three sites, reflecting the different stages of transition at each school. Jane is four years into the transition, and has seen a rich and vibrant increase in collaborative relationships with faculty. Rose and Karl each completed the transition at their previous schools, and are in the very early stages of transition in their current positions.

At South Meadow High School, Jane describes having “a large number of very committed collaborators” in the History, English, and World Languages departments “because their resource needs and project types tend to work well with what we can offer.” There is
collaboration across all the academic departments (Science, Family Consumer Science, Fine Arts, and Math), but not to the same high level of the Humanities and World Languages.

Managing the increased collaborative faculty use was an area of change for South Meadow as they transitioned to the learning commons model. Historically, the library maintained a paper calendar and scheduling system where teachers would come to the library to book a time for their class to visit. This provided the opportunity for a face-to-face discussion where the librarian could ask about the project, and offer advice or generate a collaborative opportunity to insert information skills to the project. Jane insisted that as part of their overall transition to a digital, 24/7 philosophy that the scheduling system also be digitized, whereby teachers could still stop by and book a time in person, but would “give the opportunity to teachers who thought of this at night or on the weekend, to be able to book it right away.” The calendar includes an online form that requires the teacher to provide information about the project and describe their technology needs, and teachers can also attach a document with the lesson plan or assignment. The South Meadow librarians get an email notification and can review the calendar request, and the teacher gets an email confirmation when the request is approved. This provides the communication venue, and also documentation on the curriculum work being conducted in the learning commons. By receiving the lesson plan and goals ahead of time, the librarians are able to make suggestions on ways to enrich the experience with lessons in things such as more advanced search skills, source evaluation, and citation. Jane says that this allows them to “be that gatekeeper, not in a negative way, but to make sure that they’re using us as a collaborative opportunity for teaching, and not as a lab.” Teachers who want to book space purely for keyboarding are allowed to do so only on a last minute basis. This keeps the technology and
collaborative opportunities available for higher-level curriculum work, and minimizes richer activities from being closed out by less demanding activities.

At North High School, teachers are reserving space primarily for students to access the laptops and desktop computers for students to write papers. At this time their personal use of the learning commons is greater than curricular use, and includes grading papers, accessing the printers, using the laminator, and checking out AV equipment, although this last activity is becoming increasingly rare. Rose described faculty use of the learning commons at North High School as very service oriented.

The Atlantic High School the faculty uses the learning commons for accessing technology because many do not have computers at their disposal, or have offices in areas of the school with a poor wireless connection. Faculty can also be found using the learning commons as a space to do grading and write progress reports. The technology department is located upstairs in the learning commons, so teachers looking for technology support generate a certain amount of foot traffic through the space. Karl described a recent afternoon when there were two teachers who brought their classes for instruction and to conduct project work, and three teachers doing their own professional work.

Karl’s vision for supporting teachers through the introduction of project-based learning via the learning commons model is still in the formative stage. While he actively supports teachers interested in project-based learning, he has recognized that this is not the norm with all teachers. He identified a level of teacher anxiety about “feeling like they would be admitting that they didn’t know something, or didn’t understand a skill,” if they asked for Karl to collaborate with them to teach the skill. An example Karl cited was the lack of teacher requests for lessons in citation, an area that had been a very active jumping off point in collaborative planning in his
previous school, and that Jane also indicated as a primary starting point in establishing a collaborative discussion around project planning at South Meadow High School.

In his previous school Karl described rich, collaborative projects where it was a partnership of learning and experimentation between him, the teacher, and students. An example he cited was the re-envisioning of a biology project on the human system. He worked with the teacher to use a wiki platform for students to create an online resource that would grow and iterate over the years. At Atlantic High School he has made progress with technology-related projects such as video creation and tools like Voice Thread, and uses these opportunities to teach both the students and the teacher.

**Curriculum leadership**

Collaborative curriculum development is practiced at all three school sites. Jane describes collaborative planning at South Meadow as occurring on a case-by-case basis, with individual teachers. Evidence of this is provided in the extensive list of individualized resource guides developed for each assignment. Three years ago Jane purchased a subscription to the citation platform EasyBib. Prior to this, there was no district-wide citation platform, and “students were pretty much on their own.” The acquisition of the EasyBib platform has been transformational for the collaborative development of curriculum at South Meadow.

Just having that tool and introducing it to the staff and getting them on board to use it for all their projects and having a consistent tool for creating citations and for taking notes has gotten us into these projects on a more consistent basis now because the teachers recognize the value of their students using this tool.

Presentation tools have also provided collaborative opportunities, and Jane is working with teachers to shift away from traditional paper posters towards digital tools. This support is in
the form of helping teachers identify appropriate digital alternatives, and troubleshooting when students encounter problems. Jane doesn’t classify this domain of collaboration as truly curriculum, but rather about increasing student engagement and satisfying different student learning styles.

At North High School, Rose is working on shifting teacher practice away from the traditional library lessons that focus on overviews of resources and introductory lessons on databases, and towards developing a more individualized, one-to-one collaborative approach within the parameters of scheduled class visits. At this point in time scheduled classes are coming primarily to learn about the various resources available in the learning commons, and how to locate them. Rose envisions this shift in approach as key to the learning commons model, and more effective at delivering a higher level of instruction and skill development that is rooted in curricular activities. With a 1:1530 teaching ratio this is an ambitious and long-term goal.

When he was hired, Karl found that Atlantic High School did not have a strong collaborative culture. He described a fairly recent situation with a former assistant superintendent who demanded that teachers submit their detailed curriculum plans, and the plans would become part of the teacher evaluation process. In a culture where teachers did not open “their classrooms in general to each other, or to outsiders,” this was not a policy that was well received by the faculty. Since that administrator has left the “whole district is moving towards a more open, more collaborative, more of a supportive environment.” However, many teachers are still reticent about working collaboratively. Karl is actively working to increase a more collaborative culture by initiating guided discussions between students and teachers. He described facilitating a mixed teacher-student discussion session about the use of Twitter in an English classroom, and having a student design some tweets that helped the group develop a vision for how the platform could be
used to enrich the study of a recently assigned novel. Another example Karl provided was a
teacher-only professional development session on the merits of the flipped classroom. In this
way he is demonstrating curriculum leadership through the introduction of innovative practices,
and at the same time modeling the benefits of a more collaborative professional environment
within the school.

Karl has identified a potential problem in that he is designing the new learning commons
to support project-based learning in a school that hasn’t widely adopted this practice. “One
concern I have is…if I design it and it’s too far ahead of where people are, the last thing I want to
do is have people come in and take over the space and use it for what it is not designed for, but
you also want a lot of people to use it.” The tension between his vision and the current practice
of the faculty is an area that he has identified as a priority in addressing and moving forward.

**Administration and leadership**

**Building trust**

Rose, who is implementing the learning commons transition for the second time, provides
a vivid illustration on the power of building trust with her administrators. In 2009 Rose attended
a one-day conference sponsored by the American Library Association, in collaboration with the
New England School Library Association. The focus of the conference was the future of the
school library, and the learning commons model. She began to research the model, and began to
talk to teachers in her school (her first school) about what their school needed, where they
wanted to go, and what would work best for them as educators. “I put together a team of
teachers. We created a plan of everything that we wanted to see and looked at what we currently
had that was working well, and what wasn’t working well.” Rose had assembled her team at a
time of change in principals. The new principal was “completely on board with making changes.
He pushed us forward to go to the School Improvement Team. The School Improvement Team agreed. Then the next step was to go to the superintendent. The superintendent said that if we hadn’t come forward with the idea, that the library would have been forgotten.” The superintendent was actively making plans for large-scale renovations and changes for the school, and those plans did not include a re-envisioning of the library. Rose’s proposal placed the learning commons renovation at the center of the vision for the future of the high school.

At her current school, North High School, Rose was hired in a climate of change. During the hiring process the North High School principal insisted on speaking to Rose’s former principal. The trust Rose had built through her work with her previous principal transferred to her current principal, and has provided the strong base of administrative support required for a successful transition. “I am very, very fortunate that I have an unbelievably supportive principal. He is completely onboard with everything I do. I started off my first day here with the words ‘I trust you.’”

**Use of data**

South Meadow High School has developed a strong culture of collecting data, and has leveraged it to build trust and support with their building administrators. Jane’s annual report over the past four years is data-driven, with no narrative. This is a conscious decision that Jane made, and she describes the narrative as “the voice over if I got a chance to sit down with the principal. Half the time we do get a chance to sit down with him live, but it’s charts and year over year information on patrons, circulation and classes.” Jane’s belief the data is valued by the principal is evidenced “when he is advocating or bragging” about their work, and “he spouts off the statistics when we’re talking to the Parent Teacher School Organization (PTSO), so he must have read it somewhere.”
Another example of the value the South Meadow High School principal places on the data collected by the librarians is highlighted by this anecdote:

Just the other day an administrator from the district happened to be in the building. It was an assistant superintendent. He loves the fact that we do custom research guides for all our classes. He likes to show them “Look how many they’re doing right now. Look, every department. Look at all the departments.” Then he goes, “Oh, where is that list of the ones you’ve ever done?” We say, “Oh, you mean the archives,” and we click on that page. We say, “Okay, these are all the ones we’ve done in the last three years in each department.” He goes “See? See what they’re doing?” He knows it’s there and he knows that we’re doing a lot of work.

When asked for an example of her use of data that resulted in an increase in trust and advocacy from her principal, Rose recalled that at her previous school it was generally accepted that the collection was old and not very relevant to the school curriculum. When she generated a collection report that quantified the age of collection and provided specific evidence on areas that needed updating, the result was a much-needed increase in the library materials budget. This use of data formed the basis upon which Rose continued to establish perceptions of her leadership qualities, and built administrative advocacy and trust that would be critical when she presented her plan for transitioning to the learning commons model.

Karl’s use of data is ongoing and part of his general practice. He shares quarterly reports with his principal that describe and/or highlight various aspects of the program at the time, and as he is in a phase of grant writing for the renovation of the learning commons his data gathering includes various surveys on current usage of the learning commons, technology usage and requests, and focus groups on what the school community would like to see for Atlantic High
School in the future. This regular and ongoing data-driven practice has had an impact beyond that of the learning commons, and has situated Karl in a leadership position within the school at large.

I think outside of any of the results of the data, I think that taking initiative to collect data on your program shows that you’re adept at data collection in general. I think that that’s something that a lot of school leaders are looking for. I just participated in an exclusive round of interviews with superintendents and principals, and that comes up in every interview. They talk about how their decisions are informed by data, and the get excited about schools that are using data to make their decisions…So when administrators, when they discover that some of their staff is a bit of a data person [sic], I think if they’re smart they look at them as a partner in school leadership. So I think if it’s outside of whatever results you’re getting from your data, just accomplishing that data collection goal will, for good or ill, put you in a leadership position.

**Funding the transition process**

Administrative support has been key in acquiring the funding for all three sites to implement their transitions. At South Meadow High School, Jane describes how four years ago the library staff wrote a white paper describing the learning commons model, the request for a renovation for their space, and a wish list of items such that would facilitate the transitions (Chrome books, iPads and an iPad storage/charging cart, new shelving, and furnishings). The white paper and wish list explained why these requests were necessary to implement the new model. The list, budget, and rationale provided the principal with a clear understanding of the vision behind the model. An initial request for grant funding to the community education fund was declined, but Jane stated “a year later the principal was undeterred, and decided to go to the
Parent Teacher Support Organization (PTSO) instead.” There was initial reluctance as the South Meadow PTSO traditionally funded projects that served the entire student community, such as proms, and they expressed concern about funding something they perceived as potentially serving a minority of students in the school. The principal had the library staff update their original white paper, and the data collected on patron counts provided the evidence that the library was a heavily used by the majority of the students in the school; the PTSO agreed to fund the request. Data on patron statistics shows that since that time there has been continued and ongoing growth in student usage.

North High School is at a crossroads as the district and community are engaged in deciding whether the school will undergo a sizeable renovation, or seek to rebuild. While the decision process continues Rose is seeking community grant funding to develop an Innovation Center that will include a refurbishment of the open-plan television studio that is also located in the learning commons. She is developing a wish list and plan, similar to the South Meadow white paper, that will outline the vision, rationale, and costs associated with the project.

One of Karl’s early changes at Atlantic High School was to establish a Library Improvement Committee, comprised of the assistant superintendent, two teachers, two students, two parents, another school librarian and the building principal. In implementing the transition to a learning commons, Karl is working with his committee, and the goals outlined in the Atlantic School Improvement Plan, to earmark funding of about $18,000 to bring in architectural consultants and design a learning commons based on the recommendations of the committee. Karl has identified a potential architectural firm based on the writing of one of the principal architects who prioritizes the need for school learning spaces to reflect 21st century learning. One of the aspects of this particular firm that Karl finds compelling is that after the space is designed
the firm will bring in trainers to provide professional development to teachers on how to effectively use the space. By leveraging the opportunities for professional development provided by the newly designed space, school pedagogy and practice within the school can also evolve. This will also address Karl’s worries about designing a space that is coopted for other uses because of a lack of a common vision between him as the librarian, and the faculty.

**Leadership**

The transition to the learning commons model has not provided the same leadership opportunities in each site. At South Meadow, Jane recounted that five or six years ago (before she was hired), the librarian was considered a department head that participated in school governance with other academic department heads. The position as department head was eliminated due to budget cuts and has never been reinstated. “We lost our place at the table and that’s unfortunate, and it does make it harder to participate in things like developing curriculum because we’re just less aware.” Jane and the other South Meadow High School librarians try to compensate by visiting each department once or twice a year to share resources or tools with teachers, and promote the collaborative opportunities available through the library.

In her previous school, Rose was a member of the School Improvement Team, and at that time the focus of the group was on changes to the school. This was an important role for Rose and it placed her plans for the transition to a learning commons at the center of the overall plan for systemic change. She also met regularly with department directors in identifying and procuring new resources as part of the changes planned for the school. In her new position she does not yet have a defined leadership role. However, the school uses professional learning groups (PLC) for ongoing faculty professional development, and Rose is grouped with the school
technology integration specialist. She is also in the early stages of reaching out to department directors to begin the process of building relationships and improving communication.

At Atlantic High School, Karl was hired to replace the retiring librarian. Karl was told that the administration had been waiting for this change and planned for a transition of the library to a new model as a central responsibility of the new librarian. The transformation was a clear goal in the School Improvement Plan, described as “transforming the library into a 21st century learning program.” Karl questioned what was meant by the term 21st century skills and felt it was appropriate to learn more about how the Atlantic High School community defined the term, and learn more about how their perceptions informed their goals.

Because that’s a buzzword, so I needed to get into my head what people were thinking when they said that. I saw myself defining it for people. I think a lot of people have an idea, and in order to make over the plan we needed to come up with a common definition of what we meant by that…it’s one of our jobs. It’s to really define what the vision was.

Through his formation of the Library Improvement Committee, the mission of transformation has become more focused. The committee spent the past year articulating a set of recommendations for the future of the library, and this has been incorporated into the new School Improvement Plan for next year.

Karl reflected that being hired as someone who would implement change has thrust him into a number of leadership positions, such as membership on the new superintendent search committee. In thinking about this unexpected role, he said,

I don’t know why, because all I’ve done is reach out to the community to ask questions so far. We have made a lot of good changes, but that helps. The transition period has put me in the middle of things. It is good for the library because I think we are all starting to
see the culture change now. The library really is the central part of the school. It’s a lightning rod for a lot of things that are going on.

Changes made for the transition

Buy-in

All three participants discussed resistance to change, and their experiences with recognizing that change is hard for some people. Rose has encountered resistance to the transition in both her buildings. In both schools she had the support of her administrators, but recognized this wasn’t enough.

I want to say that the school that I was at before, there were a lot of people in the building who wanted to make change, but then there were others that were very resistant because they wanted a traditional library. They didn’t want anything to change. Here, some things were already changing. I want to say that there was a lot of trepidation because they weren’t changing they way they wanted them to, but then now they’re happy.

Rose credits the increase in what she refers to as “happiness” about the transition to her outreach, “openness of listening to ideas, trying to get information from people about what they’re looking for.” She states that the outreach should involve “as many people in your building as possible to make sure that the vision for what you’re doing specifically relates to that of the school building or the town. Each school and each building is different in what their needs are. It’s got to be very flexible as to plan for future changes.” Of all the constituents in the community, Rose identified the support and buy-in of the building principal and superintendent as essential.

Student buy-in is also a key aspect of Rose’s transition planning. In her previous school she conducted student surveys and engaged in one-to-one discussions. She is currently conducting one-to-one interviews in North High School, and is planning on student surveys to
find out more about what they would like to see changed. She wants to specifically learn more about student opinions regarding changing resources, an example being the reduction in magazine subscriptions. “I need to find out if they are still reading them and what they’re reading so that I’ll be able to order magazines that work for them, instead of just ordering the ones that we currently have.”

Rose already had a successful transition to a learning commons in her old school. One of the markers of success she noted was a change in student and teacher behavior. Before the transition “they were just talking to each other socially.” After the transition “the conversations between the students changed, even down to the ELL students, whose language was not proficient. Intellectually it was really stimulating watching those little groups of students, just everything that they were talking about for their classes.”

Similar to Rose, Karl’s use of surveys with students and faculty provided his school community with an opportunity to reflect on their use of the library and technology systems (specific attention was given to the need for improved wireless technology), and to think about new options. Given that Karl was hired to implement a transformation, he has seen his role leveraged to introduce other transitions. His practice of using surveys has expanded to video interviews.

This year we’ve actually been filming interviews, for a couple of reasons. Those have been a little bit more broad, about their impressions of the school, what they’d like to see different about the school. Interviewing alumni about what they would have liked to see different [sic], now that they’ve had a couple of years behind them. In Karl’s practice of using surveys and interviews to gather information he has seen discussions about the library “turn into conversations about the entire school, in the way that we teach and
learn, and how we need to adapt to somebody’s ideas that are floating out there that are good, that people might not be aware of. And then, how does that translate into our own local situation? There’s always unique things that effect those decisions.”

**Branding**

While all three sites clearly identify their transition as a shift towards a learning commons model, not all have adopted the name within their school. Jane did not feel it was necessary to change the name from “library” to “learning commons” because the motivation for the transition felt like a natural evolution to “what a library should be.”

I believe every high school library should be a learning commons so I’d rather have people think of library in this vibrant way than to think of a library as a stuffy old warehouse for books. I’d rather have them transition their idea of what a library is by continuing to call it a library. It didn’t seem a battle worth fighting. I want to change what the place really is.

Rose was very clear in her first transition that the library be re-named as a learning commons. She had educated her administrators, faculty, and students in the new model, and there was widespread buy-in and support for the new name. On her second transition at North High School, she is less wedded to the name.

I’m very indecisive about what I want to do with the name. I mean, a lot of people have asked me, this is definitely not the same, what are you calling it? I would say learning commons, but the name is like all over the place with what the principal is going for, but I think he might be on board…he might be will to call it the learning commons.

Rose stated that while she likes the term, she “doesn’t think anymore it has to be that way. It’s that model but it doesn’t need the name to run that way.”
In his previous school Karl also recounted the transition as stemming from the creative, collaborative work they were already doing, so the change was “sort of a natural progression of things.” The decision to re-brand and formally change the name from library to learning commons reflected the transition, but also coincided with a move to a new building. In designing the new space Karl recalled “it was almost like we were in a pilot project period without really planning it that way. A lot of it was we realized was [sic] just reacting to opportunities that came up, and a lot of us felt like it matched the learning commons.” Changing the name was also a way to highlight the new activities and skills being taught, and reposition the learning commons philosophy in the “public and community consciousness.” When the new building opened they had a ribbon cutting ceremony to open the learning commons, attended by members of school committee, the board of selectmen, and members of the community.

At Atlantic High School, Karl is clearly transitioning to a learning commons model, but at this time it is unclear whether he will re-brand with the term or choose another naming convention.

I think it’s really political, more than anything. If you’re doing it but by renaming and you’re highlighting what you want people to think about what’s different about the library, because, hopefully all libraries are different now…It’s however you want to enter peoples consciousness with that idea. The learning commons is really well suited to that, I think because it highlights the active, collaborative, community aspect of it, which is all the new stuff.

Another name Karl is considering is “Global Learning Center.” The idea of being connected to the entire world, through the library, resonates with his planning. To break down the isolation of learning through greater technological connectedness is a powerful idea to
introduce into the school and community consciousness. “The Global Learning Center would highlight that. This is a learning space for the community to access the world…I haven’t really decided what we would call it, but I think I feel the weight this time, and so we re-designed the library in a more dramatic way to open up in a different name.”

**Looking ahead**

As they reduced their print collections, all three schools plan on increasing their collections with digital materials and databases. E-book purchasing is planned to support research and inquiry activities. South Meadow has been implementing a platform called Overdrive, developed more for pleasure reading, and found frequently in the public library sector. Their goal over the next year is to heavily market the new digital resources, and then collect data on usage to evaluate whether or not usage is increasing or not. Student and faculty surveys are being developed and will be implemented at the start of next school year and again at the end of the school year. They surveys are being designed to gauge shifts in attitudes towards e-books and digital resources for both research and pleasure reading.

Ongoing changes to the physical space and increased services are planned for all three school-sites. At South Meadow there are two major projects in the early stages of development. Jane and her library colleagues are writing a grant to take a portion of their space and develop a “Creation Studio.” This space will include a green screen, lighting and audio equipment that will enhance the capabilities of their iPads, and video recorders for students to use to create video-based projects for both curricular and extracurricular projects.

The South Meadow principal is also seeking a way to embed the instructional technology specialists within the library-learning commons to increase their visibility, and incorporate their expertise into the learning commons services for students and faculty. Additionally, an
administrator in Information Technology has begun discussions about creating a Genius Bar, staffed by students, in the learning commons. This is an example of the vision of the administrators dovetailing with the vision of the learning commons, and together meeting the improvement goals for the school.

At North High School, Rose has been looking at other learning commons programs, and is actively planning to replace the computer lab with her vision for the Innovation Center. The plans for the Innovation Center include a refurbishment and expansion of the open-plan television studio, and will be designed to provide students with instruction, technology, and support to engage with more video production to share their learning.

In addition to the planned renovation of the library, Karl is working toward his vision of a school-wide transformation of teaching and learning. Since he was hired there has also been a change in principals, and the new principal is interested in “taking risks that are in the best interest of what he feels are for the students in the school. He is very open to suggestions from the staff. He’s a really good listener.” Karl has developed a proposal that would strengthen the learning center program at Atlantic, and will require that students articulate a project and present the work to the school community at the end of each semester. This is an early step in his vision of an overall transition towards project-based learning. He describes his proposal as an aggressive way to institute the change he believes is best for students, with the library at the center of the shift and serving as the hub for resources, as well as the venue for student presentations that serve as the formative assessment of the work.

Themes

Through inductive coding, the researcher developed categories that emerged from close reading of the raw data. Subsequent In Vivo coding revealed themes indicating areas of over-
lapping codes. This section of analysis focuses on the primary attribute codes that were identified as essential to the areas of change. With all three participants, the coding process revealed clusters around areas of change in the initial core codes, overlaid with the attribute codes of vision, data, and trust.

**Vision**

In all three sites, school administrators looked to the librarian to articulate the change in vision and mission for the school library. Each participant had a great deal of autonomy in developing the vision for a re-imagined library, and a great deal of latitude in the implementation of the transition. Jane, at South Meadow, wrote a white paper that clearly described the vision of the learning commons, and mapped the steps and budget to implement the change. With the white paper in hand, the principal “was undeterred” and advocated with two different granting organizations to obtain the funds required to initiate the change.

Rose was hired in her current position based on the success of the transition at her previous school. Her practice of outreach to faculty and students to learn about their needs, and sharing her vision for what could be accomplished, has built the trust of both administrators and the faculty in her previous school, and she is working to establish that trust in her current school. In her previous school she was able to communicate her vision embedded in the work of the School Improvement Team. Rose’s vision became central to the School Improvement Plan, and changed the future direction of this school. Her current school is in an environment of change as they discuss renovation options, and whether they want to rebuild. It remains to be seen how Rose will integrate her vision into this process, but her outreach strategy has been effective in the past.
Karl was hired as an agent of change, in a period of significant administrative turn over. His ability to clearly articulate his vision for the learning commons has placed him in the center of all change-related discussions. This clear articulation placed him on the hiring committees for the new superintendent, the new principal, and was the basis of his creating of the Library Improvement Committee. The work of this committee has now placed plans for a substantial renovation of the learning commons as a high priority of the School Improvement Plan. His vision extends beyond the learning commons and aspires to transition the entire school towards a more project-based learning practice, with the learning commons serving as the hub for resources, performance assessment, and global communication.

Data driven practice and clear reporting, attributes of all three participants, increased the effective communication of vision. Jane’s annual reports and regular practice of data collection enable her principal to provide powerful advocacy for the learning commons program. Rose provided the research and data needed to successfully embed the transition to a learning commons into the School Improvement Plan, the renovation of the new facility, and the vision for the school. In her new position she is actively laying the groundwork for her school and the transition to a learning commons by preparing a plan for the Innovation Center and renovated television studio. Karl’s Library Improvement Committee and data-driven planning have generated the plans and cost estimates required to put the renovation of the learning commons into the School Improvement Plan. The renovation discussions are being leveraged to launch broader discussions about project-based learning that will influence the entire school.

The ability to clearly and concisely articulate a vision is a critical feature in a successful transition process. It builds confidence in the professionalism of the librarian, and establishes a base line of trust in future innovation and ongoing change. The school administrators of all three
participants looked to the librarian practitioner to articulate a vision, and provided the necessary support to achieve the goal of transitioning to a learning commons.

**Communication**

The ability to communicate effectively emerged as a strong attribute code, and manifested itself in different ways.

**Data**

Jane’s practice of data collection inspires the confidence of her principal that the work being done in the learning commons is rigorous, ongoing, and effective. Basic statistics such as gate count, circulation, and class bookings show steady growth. Jane provides the data in an easy to read format, and saves the narrative for more meaningful face-to-face discussions. To compensate for the loss of “a place at the table” with department directors, Jane reaches out directly to departments to share updates and improve awareness of all the resources available to faculty and students. The online calendar system developed and implemented has proved to be effective at facilitating communication between teachers and librarians around project goals, and provides greater opportunities for collaborative planning. The online calendar also provides the data that feeds the reports so valued by the principal.

In her first school Rose used data to provide her principal with insight into the state of the library, and establish a preliminary round of change. She cited an early report on the average age of the library collection as a key moment in building trust and advocacy with her administration. It was generally perceived that the book collection was aged, “but they didn’t actually realize it until they actually saw the numbers.” By clearly and definitively communicating data about the age of the collection, Rose inspired confidence in her principal for her broader vision for the transition to a learning commons.
While Karl has provided evidence of data-driven practice, he does not generate many formal reports. Instead, he distributes quarterly reports designed to provide his principal with an update on the changes being implemented, and how things are going in the transition. He is also applying the information he gathers to local grant applications. This flow of updates keeps his principal informed and part of the dynamic process of change in the learning commons, and situates Karl in the ongoing school-wide discussions of change.

When asked about his perceptions about how his practice of data collection has influenced his relationships with his administration, Karl was careful to separate the practice of data collection from the results of the data. “I think outside of any of the results of the data, I think that taking initiative to collect data on your program shows that you’re adept at data collection in general.” As a member of the hiring committees for the new school principal and assistant superintendent, Karl recounted that the use of data came up in every interview. “They talk about how their decisions are informed by data, and they get excited about schools that are using data to make their decisions.” Karl noted that his practice of data collection marked him as a faculty member adept in data gathering practices, and that this has evolved into an active partnership with his school administration leadership team as they plan for school-wide change.

**Consensus**

For the purposes of this study, consensus is defined as a general agreement about something. Consensus was an attribute that appeared most often in relation to teacher and student buy-in with the transition. A necessary element of a successful transition, consensus is achieved by creating an atmosphere and academic program that is valued by faculty and students, and that generates positive feelings within the community. This study does not include a formal metric for establishing consensus. In this study, consensus has been based upon participant reports.
across the following measures: gate count, scheduled classes, circulation statistics, and a general sense of appreciation for the changes that accompanied the transition.

At South Meadow consensus can be measured by the steady increase in collaborative lesson planning with academic departments, and by steadily increasing student usage as a result of the diverse changes instituted in the process of the transition. This was accomplished by working within the study hall and open campus systems to tailor the learning commons space to honor the diversity of student usage. There are areas for quiet study, social working groups, and areas within the social footprint for students to sit at café seating and look out the windows. The two classroom spaces provide the instructional areas required by teachers, and the planned additions of a Genius Bar and Technology Specialists help area will add to the broad range of services and support for the community.

In her previous school Rose demonstrated consensus for the transition through her acts of sharing what she learned about the learning commons model, and establishing a practice of discussions with faculty, students, and administration to seek their thoughts and input about what benefits the model could bring to the school, and reflecting that feedback into the School Improvement Plan and the implementation plan for the transition. Through her practice of outreach and communication with faculty and students, Rose is working to establish consensus for the learning commons vision in her current school. In the meantime, she has changed the layout of the library to increase light, increase comfortable seating, and establish the value placed on social learning for students. The shift from dark and quiet to noisy and bright has shown immediate benefits with increased usage. This positive shift in perception is the foundation for obtaining broad buy-in and long-term consensus for later evolutions in her vision for the learning commons.
Karl was hired with the expectation of implementing change. In this role Karl, has established consensus for his vision from administration, and while he has some buy-in from faculty, he still has more work to do if his goal for school-wide project-based learning is to become a reality. Karl is in the process of creating focus groups and surveys to solicit feedback, and also to create consensus for the goals of the transition and renovation.

By opening the space and making it more welcoming to students he has established effective buy-in, and has repositioned what was formerly a very dark and quiet library into a bustling, early-stage learning commons. Karl needs to establish broader consensus among the faculty as he moves forward with his planned renovations, or his fear of the newly designed space being co-opted for other uses could be a real concern, and potentially undermine the success of his vision.

**Summary of research findings**

The purpose of this study was to identify the factors that promote or undermine a successful transition from a traditional high school library to a learning commons service model. The findings of this study are based on the experiences of three school library practitioners who have each successfully implemented a transition. Two of the participants have moved on from their original transition school, are in new positions, and are actively engaged in transitioning their new schools. The findings of this study are based on the experiences and words of these participants, in different school communities, and include reflections on their experiences from across a period of years. The data indicate that there are factors that can promote a successful transition, and factors that can undermine a transition.

**Vision**
The ability of the school librarian to clearly articulate a vision, and provide data and a plan to achieve the transition, are essential to success. In the experiences recounted by the participants, their school administrators demonstrated openness and enthusiasm for a clear vision for their school libraries. When provided with documentation, such as Jane’s white paper, the principal developed the confidence to become an enthusiastic advocate and supporter for the learning commons model.

Data

An ongoing practice of collecting data in diverse ways and evidence of data-driven practice and decision-making are identified as a key component that supports a successful transition. The school librarians in this study all recognized the value in providing a road map with cost analysis in making their case for a transition to the learning commons. In this context, data also included research on the model and examples from other communities that have engaged in the transition process. Evidence of data collection of traditional services such as gate count, book circulation, and classes taught, all foster administrative confidence in the effectiveness of the learning commons and the school librarian practitioners. The confidence inspired by data-driven practice has resulted in administrative support, advocacy, and leadership opportunities for the school librarian. It also bodes well for ongoing support for the learning commons to continue to evolve and diversify services that support student and faculty learning.

“I trust you”

This statement made by the principal of North High School on Rose’s first day encapsulates the core factor that will either support or undermine a transition. Trust provides the librarian the freedom to make the decision that pave the way for school change and the ongoing evolution of the school learning commons. In the early stages of each of the school transitions,
administrators demonstrated trust in their school librarians when they gave approval to reduced
the size of book collections in favor of creating new spaces for students to gather, learn, and
create. Had this trust not been established, and approval to weed and reduce the library collection
(in accordance with school policy guidelines) withheld, the first goal of the transition would have
been undermined, threatening the success of the rest of the transition.

The trust was demonstrated when the librarians introduced new floor plans, re-organized
space, ordered new technology and furnishings, and as they continue to pursue new changes in
the form of Innovation and Creativity Labs, Global Learning Centers, and Genius Bars. If
administrative support was withheld, that would have undermined access to funding, advocacy
for grants, and support for systemic and school-wide support in the form of the staffing and
budget changes required to support the changes and proposed innovative services. This domain
of trust is critical to a successful transition.

Trust is also important in addressing problems that may arise. In his previous position,
Karl spoke of being “too successful” in making the learning commons a popular location for
students. Being inundated by students began to undermine the environment designed to promote
social learning, and negatively impacted the mission of the learning commons as a place for
academic pursuit. Karl highlighted the need to recognize that the problem was systemic and
rooted in the open campus system and the lack of viable options for students when not in a
scheduled class. The problem was not one that could be solely attributed to the learning
commons or solely solved by the learning commons. Having a trust-based relationship with
administrators allows problems to be addressed more effectively by looking at the issue from a
school-wide perspective, and not in the isolation of the learning commons.
This trust is paramount as these school librarians demonstrated when they introduced new practices such as digital creation tools, social media platforms such as Twitter, and new pedagogy such as project-based learning. By trusting their school librarians, administrators are also communicating trust to their faculty that innovation and experimentation are valued and supported. This helps promote a school-wide culture of trust for teachers to participate in exploration and innovation of new practice and pedagogy. Without this trust it is not possible to achieve the goals set for school-wide student achievement, and the transition to a learning commons would be tragically undermined.

**Conclusion**

A successful transition requires that the school librarian have a clear and well-articulated vision supported by data and research that will build enthusiasm and advocacy for the transition with school administrators. Strong communication skills in the form of out-reach to faculty and students to articulate the vision and change process, and a practice of ongoing data collection and data sharing, all help build consensus among the school community to embrace the change. Without these attributes the fate of a successful transition process can be undermined and not fully implemented, or not implemented in a manner that allows for ongoing evolution and change. With these factors in place, the newly transitioned learning commons has an excellent chance of continued growth, and of taking a central role in school change and student achievement into the future.
Chapter 5: Discussion of Research Findings

Revisiting the Problem of Practice

Successfully transitioning to a learning commons service model requires new approaches and systemic change within a school. The problem of practice focuses on the need to increase awareness of these requirements for school librarians and the administrators who will provide the necessary funding, leadership, and collaborative curriculum planning opportunities that are features of the model.

Review of the Research Questions

The research questions were designed to discover the factors that positively or negatively impact the transition process.

• What factors determine a successful transition?
• What factors undermine or threaten a successful transition?

The open-ended interview questions provided the three participants a great deal of latitude to reflect on their experiences and identify aspects of their experiences that went well, that did not go well, and the impact on the success of each of their transitions.

Discussion of Major Findings

The major finding of the study is that the most important factor in a successful transition is the trust of the school principal in the school librarian. The school librarian establishes this trust through:

• Data driven practice
• The ability to communicate a clear vision
• The ability to provide a detailed plan on how to implement the vision
• The ability to generate positive consensus for the transition
This administrative trust is the foundation for a successful transition because it is the basis for decision making on budgets, advocacy for additional funding, vision for the school in general, the role of the learning commons within the school community, and for the role the learning commons will play in future. Trust is the basis for the autonomy required for the school librarian to set procedure for the learning commons, and also for the systemic, school-wide policy changes that may be required to support the learning commons as a central part of the school environment and culture.

Lack of trust undermines a successful transition by isolating the learning commons from leadership discussions that situate the program at the center of innovation and school change. This isolation can also be seen in low levels of collaboration with other teachers, and low integration of information and technology skills in the school curriculum, as seen with the initial lack of citation skill integration at North and Atlantic High Schools.

**Discussion of the Findings in Relation to the General Inductive Approach**

Using a general inductive approach allowed for the raw data to be condensed into a brief summary that established links between the experiences of the participants. The research findings identified “trust” as the primary factor for predicting success. This theory emerged from the data through experiences of the participants, as revealed by their practice and the successful outcomes of their transition processes.

The coding process of the raw data revealed common categories between the three participants in terms of their process. These included reduction of the size of the library collection, creation of more open and collaborative space that included renovation and the introduction of diverse seating options, changes in procedure that provide more flexible access
for students (within the parameters set by study halls within each school), increases in collaborative practices with teachers, and data driven practice.

The coding process also revealed common themes between the participants that included vision, communication, and consensus. These themes proved to be influential in establishing the trust of their school administrators, and ensuring the acceptance of the transition by the school community.

Member-checks were conducted with the interview transcripts and draft of the initial findings. The member–checks allowed the participants to reflect and clarify or expound on their experiences, and reaffirmed the category coding decisions made by the researcher.

**Discussion of the Findings in Relation to the Literature Review**

The findings of this study correlate well to the literature review. The themes identified in the literature review were:

- The learning commons model situated within the history of school libraries in the United states
- The elements of the learning commons model
- Attributes of a successful learning commons

**History of School Libraries**

The service model for school libraries in the US has continually evolved over time. The research indicates that in order to stay relevant, school libraries must adapt their service models to support ongoing changes in digital information and diverse technologies (Beagle, 1999). The participants each reflected that their school library programs had been evolving, and that the formal switch to the learning commons model was in recognition of the changes that were already underway.
During their first transition, Rose and Karl had formally changed the name from “school library” to “learning commons.” They each indicated that they felt that re-branding was an important strategy to signal the importance of the new mission of their programs to the school community. Jane did not feel the same way. She kept the label “library”, and chose to focus on shifting the perceptions and attitudes of her school community about what a library was, and what it could offer.

In their current schools Rose and Karl are committed to the learning commons model, but less committed about maintaining the naming convention. Karl believes that the name should communicate the goals of the program, and is a useful strategy in guiding long-term goals for school change. Rose is aware of her principal’s goals for school change, and expressed the desire of choosing a name that reinforces those goals. At the time of the study she was unsure whether or not her principal would keep “learning commons” or choose another name for the school library.

The last time there was a widespread change in the naming convention was 1945, when the term “media center” was added to the school library mission. It remains to be seen if there will be a widespread shift towards the use of “learning commons” in the naming convention within schools. Looking ahead, it is possible that the program and service centers we currently identify as “libraries” will embrace the learning commons model, but with a diversity of names that reflect the long-term goals of the school.

Elements of the Learning Commons Model

The transition process of all three participants aligned well with the elements identified in the literature review. All three de-emphasized their print collections in favor of creating more open, flexible, and collaborative work areas, and described the new areas as no longer being
“owned” by the school librarian, but as being “owned” by the school community and available to all for diverse forms of work. This open-access, wireless environment is identified as a core attribute of the learning commons model (Loertscher et al., 2011).

The learning commons as an experimental learning center is also identified as a key feature, and this attribute is seen in all three sites (Loertscher et al., 2011). At Atlantic High School Karl has initiated a practice of showcasing student work, as well as facilitating professional development in student/faculty exploration of Twitter in the English classroom, and for the school faculty in learning more about the strategies associated with the flipped classroom. Karl has situated his learning commons in the heart of the school change initiatives, and is deeply involved with discussions on long-term change. Jane and Rose value this aspect of the model, and through expansion, renovation, and grant writing are building these aspects of their programs in the form of new and upgraded video production services, Genius Bars, and Innovation Labs. These innovations will bring a variety of specialists into the footprint of the learning commons, and is consistent with the experimental learning center element.

The third element is the virtual learning commons, which supports both the open learning commons and the experimental learning center with access to digital content, and curated content aligned to school curriculum. The curated content is in the form of pathfinders, LibGuides developed for lessons that contain embedded database widgets and other digital resources, tutorials, and other collaborative productivity and presentation platforms.

Jane is furthest along in this domain of the transition process, and has embraced and promoted a shift towards more digital systems and practices. The virtual learning commons is seen through the active promotion of a core, school-wide web-based citation platform that ensures consistent instruction for all students, as well as the shift to an electronic calendar that
facilitates collaborative planning with teachers and also generates the data she uses to provide evidence of impact on student learning. Both Karl and Rose have developed robust web portals that signify the importance of this element of the learning commons model.

**Attributes of a Successful Learning Commons**

The study findings are consistent with the attributes identified in the literature review as key to a successful implementation of the model. The primary attribute was leadership, described as social influence that drives the work of the organization (Spillane, 2006). The librarian leadership attributes identified in the literature were the presence of a supportive principal, opportunities for leadership roles and responsibilities, a desire on the part of the school librarian to make positive impacts on student achievement, ongoing professional development, and a personal sense of obligation to become deeply engaged with the school organization (Johnston, 2012). Based on these leadership attributes, all three participants have provided evidence of strong leadership within their schools.

Rose and Karl have been able to effectively communicate the vision and plans for renovation and construction projects centered on the transition to the learning commons model, and have leveraged these plans into positions of leadership within their schools. As members of school improvement committees, the learning commons model has been central to the change driven goals of their principals.

Due to budget cuts before Jane’s arrival, the school librarian as a member of the department chairs leadership team was cut. Jane recognizes that when they lost that seat, they lost an important leadership role in the life of the school. Loss of that seat makes collaboration more challenging, but she and her colleagues work hard to compensate through outreach during regularly scheduled department meetings.
The autonomy of the school librarian to set procedures for the learning commons, as well as maintain control over scheduling, are attributes that promote a successful implementation of the model (Koechlin et al., 2010). All three participants clearly have a great deal of autonomy in setting procedure, managing their calendar and class schedules, and control over their virtual space. This allows them to manage student use and crowding and balance the diverse needs of students and faculty. Karl articulated the challenges faced when student use becomes overwhelming, and the need to respond with a systemic, school-wide approach. At his first school the open campus and school culture of free movement of students around the school resulted in over-use of the learning commons. This stress was a factor that undermined the success of the model. Since leaving for his current position, he reported that his previous school has created a new student lounge for students not in a scheduled class, and this alternative space has taken some of the pressure off the learning commons. He is aware that over use by students is a factor that can undermine the success of the transition, and is planning carefully as he moves forward with his current transition.

The tragedy of the commons serves as a cautionary tale for school librarians and administrators in considering a transition to the learning commons model. Examples of the factors that, if absent, can undermine the success of the transition include:

- Student over-use
- Lack of curricular collaboration because of lack of faculty consensus
- Insufficient collaborative space
- Insufficient technology resources
- Lack of librarian autonomy in setting procedures
• Lack of administrative support in creating systemic school-wide policy to support the learning commons model

Limitations

The results of this study show similar themes between the participants that reflect the findings of the literature review. However, a limitation of the study is the similarity of the participant schools. All three schools have a majority of white students and low levels of African-American or Hispanic diversity when compared to state averages within Massachusetts. All three schools come from communities that range from middle class to affluent. Additionally, all three participants self-identified as having a successful transition experience, and had positive feelings about the process.

The study may have been strengthened by the participation of a school librarian who was disappointed with the outcome of his/her transition process and investigate the reasons why the transition was less than successful. Is there an example of a supportive administrator but inability to provide necessary funding for technology, new furnishings for casual seating, shelving, or a renovation? What is the impact of faculty resistance or rejection on the success of the transition? Will the transition succeed if there is rigid curriculum that undermines the potential for collaborative curriculum planning? How would a transition be impacted by poor school technology infrastructure? A participant with these challenges may have introduced further insight into the factors that promote or undermine a successful transition to the model.

Future Research Considerations

Attributes

To expand on the factors that promote or undermine a transition to the learning commons model, more research needs to be conducted on each of the individual attributes, and how
successful school librarians develop these as areas of professional strength. Research would include pre-service training, professional development experiences, and access to professional development focused on leadership attributes within school organizations.

**Inputs**

Longitudinal research is needed on the relative impact of the inputs that come as a result of the leadership attributes (opportunities for curriculum leadership, collaborative leadership, funding, support for change, technology, space renovation) and how they impact the long-term success of a transition.

**Specific Requirements**

A study of successful transitions that includes staffing levels based on school size, collection size and budgets, database budgets, technology infrastructure, and other quantifiable inputs will clarify the requirements of a successful transition, and provide school librarians with guidelines as they develop their own strategic plans for change. These guidelines would be very useful to school librarians as they develop their vision for a transition, and the implementation plans that would build trust with their principals.

**School Librarian Staffing Ratios**

At this time there are no guidelines or recommendations for staffing ratios for high school librarians. National data on school staffing ratios obtained from the US Department of Education indicates very high ratios for school librarians. As seen with Rose at North High School, a teacher ratio of 1:1,530 makes it very difficult to achieve the goal of personalized instruction. A study that evaluates ratios and makes specific recommendations would be invaluable to the field of school librarianship.

**Consensus**
Further research into establishing measureable benchmarks for school-wide consensus on the learning commons model would be very useful for school librarians to establish progress, potential growth areas, and impact on student achievement. In addition to familiar statistics (gate count, circulation, scheduled classes) new categories of data can be identified that could provide evidence of richer activities such as collaboration, communication, presentation, and creativity. With greater insight into the activities and events that generate consensus it will be possible to more broadly and consistently position the learning commons at the center of school change.

**Significance of the Study to the Field**

The findings of the study indicate that the school librarian is the primary driver in motivating change in the vision for the school library. Administrators who want change need to rely on the school librarian to articulate the change, and tailor it to the needs of the school community and culture. The responsibility for building consensus within the school community also lies with the school librarian, and is a key component in a time of school-wide change. Through her outreach and use of surveys to determine what faculty and students valued and wanted, Rose was also able to effectively communicate the value of the learning commons model, and allay more general fears caused by the climate of change initiated by the North High School principal. Karl is also using surveys and interviews to build consensus for the transition to the learning commons, as well as increase communication about the goals for broader school-wide change. Jane has already situated the South Meadow Library within school-wide plans for innovation and change, clearly establishing the learning commons model as a core component of on-going change within the school.
Conclusion

Through analysis of the transition experiences of the three participants, the trust of the building principal was identified as the primary hallmark of success. The attributes of the school librarian that positively influence the trust of principals are identified as vision and an implementation plan, data-driven practice, communication, and consensus building skills.

Based on research relating to the learning commons service model, a successful transition includes a reduction and reorganization of the book collection to increase space for collaborative activities. An integral part of the shift in the mission of the library collection is a de-emphasis on print reference and a transition to e-books to replace print reference, and a priority given to purchasing high interest young adult fiction and narrative nonfiction to promote curriculum and pleasure reading for students.

The revitalization of the former school library to a learning commons requires diverse seating, working, and production options for students, as well as access to technology for equity, learning, creation, and sharing. The virtual learning commons is a space that promotes curated access to curriculum content as well as communication and scheduling for students and faculty.

In conclusion, the learning commons is a model designed to support student learning and achievement in a period of evolving and dynamic change in curriculum and digital information and presentation technologies. This study situates the learning commons as central to school change, and identifies the factors that promote a successful transition. The tragedy of the commons scenario represents a transition process that is undermined by lack of support in key domains. Without the trust of the building principal, the school librarian faces challenges in implementing the model, and positioning the learning commons at the heart of student and
faculty work within the school. With trust, the learning commons can play a central role in school goals, school change, and student achievement.
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Appendix A Call for Participants

Are you a certified high school librarian in the state of Massachusetts who has implemented a transition from traditional school library to the learning commons service model? Please consider participating in this study to learn more about the requirements of a successful transition.

A study is being conducted to gain insight into the factors that promote a successful transition to the learning commons model, and the factors that can undermine a successful transition.

Potential high school librarian participants must hold Massachusetts teacher certification and an active membership in the Massachusetts School Library Association. Potential participants will have engaged in a transition from school library to learning commons service model.

The study consists of two interviews, which may be conducted either by phone, Skype®, or in person. The first interview focuses on the participant’s experience with the transition process (approximately 60-90 minutes); the second interview will allow the participant to reflect upon the transition based on the first interview, and provide additional detail or reflection (approximately 60 minutes). Participants who complete both interviews will receive one $25 gift card to either Amazon.com or iTunes.

If you or someone you know would like to participate in this study or learn more, please email cicchetti.r@husky.neu.edu or call 978-371-9819. Selection for the study is not guaranteed, but will be determined during a brief 5-10 minute intake call.

Confidentiality is guaranteed, and participants’ names or school names will never be shared with others or used in the published results.

This study is conducted by Robin Cicchetti, an EdD doctoral candidate at Northeastern University. This study has been approved by Northeastern University’s Institutional Review Board for research ethics (IRB# 12-12-27).
Appendix B Application for IRB Approval

For NU IRB use:

Date Received:  ____________________________  NU IRB No.  __________________________
Review Category:  ____________________________  Approval Date  __________________________

Application for IRB Approval

APPLICATION FOR APPROVAL FOR USE OF HUMAN PARTICIPANTS IN RESEARCH

Before completing this application, please read the Application Instructions and Policies and Procedures for Human Research Protections to understand the responsibilities for which you are accountable as an investigator in conducting research with human participants. The document, Application Instructions, provides additional assistance in preparing this submission. Incomplete applications will be returned to the investigator. You may complete this application online and save it as a Word document.

If this research is related to a grant, contract proposal or dissertation, a copy of the full grant/contract proposal/dissertation must accompany this application.

Please carefully edit and proof read before submitting the application. Applications that are not filled out completely and/or have any missing or incorrect information will be returned to the Principal Investigator.

REQUiRED TRAINING FOR RESEARCH INVOLVING HUMAn SUBJECTS

Under the direction of the Office of the Vice Provost for Research, Northeastern University is now requiring completion of the NIH Office of Extramural Research training for all human subject research, regardless of whether or not investigators have received funding to support their project.

The online course titled "Protecting Human Research Participants" can be accessed at the following url: http://phrp.nihtraining.com/users/login.php. This requirement will be effective as of November 15, 2008 for all new protocols.

Principal Investigators, student researchers and key personnel (participants who contribute substantively to the scientific development or execution of a project) must include a copy of their certificate of completion for this web-based tutorial with the protocol submission.

□ Certificate(s) Attached
A. Investigator Information

Principal Investigator (PI cannot be a student)  Dr. Kristal Clemons

Investigator is: NU Faculty ___ NU Staff ___ Other ________________________

College ___ Northeastern University College of Professional Studies

Department ______ Education (EdD Doctorate Program)

Address ________ 20 BV College of Professional Studies, Boston MA 02115

Telephone ____ 877-668-7727  Email ______ k.clemons@neu.edu

Is this student research? YES _ X_ NO ___  If yes, please provide the following information:

Student Name _____ Robin Cicchetti _______ Undergrad ___ MA/MS ___ PhD ___ (EdD)

Mailing Address 994 Old Road to Nine Acre Corner, Concord, MA 01742

Anticipated graduation date: September 2013

Telephone 978-371-9819 Primary Email cicchetti.r@husky.neu.edu

Cell phone 978-371-9819 Secondary Email robcicchetti@gmail.com

B. Protocol Information

Title  Transitioning a high school library to a learning commons: Avoiding the tragedy of the commons

Projected # subjects ___ 3___

Approx. begin date of project October 15, 2014  Approx. end date February 30, 2015

month, day, year

It is the policy of Northeastern University that no activity involving human subjects be undertaken until those activities have been reviewed and approved by the University's Institutional Review Board (IRB).
• Anticipated funding source for project (or none) ___NONE______________

Has/will this proposal been/be submitted through:
- NU’s Office of Research Administration and Finance (RAF) ___no____
- Provost ___no____
- Corp & Foundations ___no____

C.

<table>
<thead>
<tr>
<th>Will Participants Be:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (&lt;18)</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Northeastern University Students?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Institutionalized persons?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Prisoners?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Cognitively Impaired Persons?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Non or Limited English Speaking Persons?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>People Living outside the USA?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Pregnant Women/Fetuses?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Other? (Please provide detail)</td>
<td></td>
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</table>

<table>
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<tr>
<th>Does the Project Involve:</th>
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<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Removal?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Investigational drug/device?</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Audiotapes/videotapes?</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

Please answer each of the following questions using non-technical language. Missing or incomplete answers will delay your review while we request the information.

D. What are the goals of this research? Please state your research question(s) and related hypotheses.

The goal of this research is to examine the process of transitioning from a traditional high school library service model to the learning commons service model. The research focuses on the school librarian practitioner, and is designed to identify the factors that either promote a successful transition, or undermine the transition.

The following question guides the direction of this study:

The research questions are designed to explore the factors that positively or negatively influence the transition from a traditional high school library to a learning commons model.
What is the process of transitioning a traditional high school library to a learning commons service model?

- What factors determine a successful transition?
- What factors undermine or threaten the transition?

This exploratory design allows for an in-depth analysis of the complex factors related to the transition process, and a hypothesis on the requirements for success.

E. Provide a brief summary of the purpose of the research in non-technical language.

This study addresses the lack of understanding of the various elements of the learning commons that are required for a successful transition and implementation of the model (Crowe, 1969). High school libraries are responding to changes in digital information and media literacy by moving away from the traditional service model towards a learning commons model that supports 21st century learning goals for students (Loertscher, Koechlin, & Zwaan, 2011). This transition involves systemic changes and a different approach towards long-term strategic planning, pedagogy, collaborative planning and teaching, budgeting, student scheduling, library technology infrastructure, ongoing technology support, and curriculum leadership (Koechlin, Rosenfeld, & Loertscher, 2010). Unless there is appropriate planning for a learning commons there are challenges that can undermine the success of such a transition.

By identifying the factors that promote a successful transition, or undermine the transition, the study will provide useful guidelines for school library practitioners and their administrators. The study has the potential to reveal domains of the transition process for future study.

F. Identify study personnel on this project. Include name, credentials, role, and organization affiliation.

*Principal Investigator – Dr. Kristal Clemons Ph.D; Northeastern University faculty located in Northeastern University College of Continuing Studies – will have minimal access to data

*Student Researcher – Robin Cicchetti, M.LS; Head Librarian of Concord-Carlisle Regional High School and doctoral (EdD) student in Northeastern University College of Continuing Studies.

*Professional Transcriptionist – To be confirmed. Each time interview transcription is mentioned in the study, the possibility of utilizing a professional transcriptionist is also mentioned. If used, the professional transcriptionist will be asked to sign a “Transcriber Confidentiality Statement in a Research Study” Form (Appendix A).

G. Identify other organizations or institutions that are involved. Attach current Institutional Review Board (IRB) approvals or letters of permission as necessary.
The Student Researcher (Robin Cicchetti) is a board member of the Massachusetts School Library Association (MSLA). The Call for Participants (Appendix B) will go out through MSLA Listserve and Facebook group. A letter of permission can be found in Appendix C.

**H. Recruitment Procedures**

Describe the participants you intend to recruit. Provide all inclusion and exclusion criteria. Include age range, number of subjects, gender, ethnicity/race, socio-economic level, literacy level and health (as applicable) and reasons for exempting any groups. Describe how/when/by whom inclusion/exclusion criteria will be determined.

Potential participants will be three professionally certified Massachusetts public high school librarians. Potential participants in the study will be identified through professional membership to the MSLA, and participation in the study will be voluntary. Membership to the MSLA indicates that the participants have a shared value for ongoing professional development in their field, as well as an interest in collegial engagement with fellow school library practitioners. This will serve as a commonality between the three participants despite potential differences in school building cultures.

The Call for Participants (Appendix B) states the criteria, and includes the statement: “Selection for the study is not guaranteed, but will be determined during a brief 5-10 minute intake call.” Participants will be recruited from the Massachusetts School Library Association, a professional association of certified school librarians in order to establish a purposeful sample (Creswell, 2013).

Potential participants will self-identify as working at a Massachusetts public high school level and as having experienced transitioning a school library into a learning commons. In order to maintain consistency of state educational frameworks and other state regulations between cases, all potential participants will have experienced this transition in a Massachusetts public high school. Employment in a Massachusetts public high school also confirms professional licensure and state certification as a teacher.

During the intake call, the Student Researcher will give a brief overview of the project, and then ask criteria-based questions (self-recording the participants’ answers). After determining if the individual would be an adequate candidate, the Student Researcher will state whether or not the individual qualifies for the study.

Describe the procedures that you will use to recruit these participants. Be specific. How will potential subjects be identified? Who will ask for participation? If you intend to recruit using letters, posters, fliers, ads, website, email etc., copies must be included as attachments for stamped approval. Include scripts for intended telephone recruitment.

Recruitment will be in the form of snowball sampling, whereby the researcher will reach out to school librarians who have shared via professional networks (MSLA listserve and MSLA Facebook Group) that they are engaged in a transition Creswell, 2012). The researcher will ask
the potential participant if they know of other school librarians who are engaged in the process, and thereby expand the pool of potential participants.

School administrators of potential participants will receive an email (containing the CfP) from the Student Researcher, informing them of the study and the participation of the school librarian in their school. The Student Researcher will request permission from the building principal to conduct the study, and visit the school site with the specific goal of interviewing the school librarian and reviewing materials and artifacts specific to the study.

The Call for Participants gives a brief explanation of the purpose of the study, participant criteria, compensation, and contact information.

What remuneration, if any, is offered?

A $15 gift card to either Amazon.com or iTunes (participant’s choice) will be offered to participants who complete the study.

I. Consent Process

Describe the process of obtaining informed consent*. Be specific. How will the project and the participants’ role be presented to potential participants? By whom? When? Where? Having the participant read and sign a consent statement is done only after the researcher provides a detailed oral explanation and answers all questions. Please attach a copy of informed consent statements that you intend to use, if applicable.

If your study population includes non-English speaking people, translations of consent information are necessary. Describe how information will be translated and by whom. You may wait until the consent is approved in English before having it translated.

Interviews will be only with English speaking people.

As stated in section H (Recruitment Procedures), the researcher will give a detailed oral explanation of the scope of the project and the role of the participant during the intake call.

Participants will receive the unsigned consent form prior to the interview. We will review the form at the start of the interview. Participant questions will be answered, and they will be asked to give their verbal consent on the recording.

If your population includes children, prisoners, people with limited mental capacity, language barriers, problems with reading or understanding, or other issues that may make them vulnerable or limit their ability to understand and provide consent, describe special procedures that you will institute to obtain consent appropriately. If participants are potentially decisionally impaired, how will you determine competency?

N/A
If incomplete disclosure during the initial consent process is essential to carrying out the proposed research, please provide a detailed description of the debriefing process. Be specific. When will full disclosure of the research goals be presented to subjects (e.g., immediately after the subject has completed the research task(s) or held off until the completion of the study’s data collection)? By whom? Please attach a copy of the written debriefing statement that will be given to subjects.

N/A

J. Study Procedures

Provide a detailed description of all activities the participant will be asked to do and what will be done to the participants. Include the location, number of sessions, time for each session, and total time period anticipated for each participant, including long term follow up.

Qualitative data will be collected through interviews conducted by the Student Researcher either in person, over the phone, or via ‘Skype®’ (an online program which allows people to converse remotely, similar to a telephone conversation, but also offering the ability for individuals to see one another).

After the initial intake call (approximately 5-10 minutes), each participant will be interviewed two separate times. The first interview will focus on the participant’s experience transitioning from a school library service model to a learning commons model. The questions in the first interview are rooted in five domains established in the literature review. The second interview will allow the participant to reflect upon the their experiences (lasting approximately 60 minutes), and determine if there are other factors that impacted their experiences. The second interview will occur one month after the first.

The transcripts and initial data codes/interpretations from both the first and second interview will be emailed to a secure email address provided by the participant within one month after the second interview. This review will constitute part of the member check process. The participant will then have one week to review the information and provide any feedback in regards to the validity, or make requests for alterations.

A thank you card and the $15 Amazon.com or iTunes gift card will be mailed to each participant two weeks after the second interview is complete (and the member checking period has lapsed).

Who will conduct the experimental procedures, questionnaires, etc? Where will this be done? Attach copies of all questionnaires, interview questions, tests, survey instruments, links to online surveys, etc.

The interviews will be conducted by the Student Researcher (Robin Cicchetti) either in person, over the phone, or via Skype®. When done over the phone or Skype®, the Student Researcher will conduct all interviews in the secure settings of either her work or home office, and the
participant will be asked to also be in a location where privacy and concentration can be maintained. If there are any instances where an in-person interview is possible, these would also be conducted in a private setting to ensure confidentiality and the ability for both the researcher and interview to concentrate on the interview.

The script for the Intake Call, Interviews #1 & #2 (which include the interview questions) is attached (see Interview Protocol Form, Appendix D).

K. Risks

<table>
<thead>
<tr>
<th>Identify possible risks to the participant as a result of the research. Consider possible psychological harm, loss of confidentiality, financial, social, or legal damages as well as physical risks. What is the seriousness of these risks and what is the likelihood that they may occur?</th>
</tr>
</thead>
</table>

Appropriate measure will be taken to ensure confidentiality (see Section L: Confidentiality). Participants will be discussing their professional experience, and potentially identifying factors that reflect poorly on their school organization such as poor administrative support. To protect participants from retribution from administrators or professional evaluators pseudonyms will be used for the participants and their schools.

<table>
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<tr>
<th>Describe in detail the safeguards that will be implemented to minimize risks. What follow-up procedures are in place if harm occurs? What special precautions will be instituted for vulnerable populations?</th>
</tr>
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</table>

Participants will be informed that if they feel uncomfortable replying to any of the questions that are asked, they are free to decline from answering. They will be also told both verbally and in the Consent Form (Appendix D) that they are free to withdraw from the study at any time.

Every effort possible will be made to protect participant confidentiality, and no other risks (financial, social, physical, etc.) seem likely based on participation in this study.

L. Confidentiality

<table>
<thead>
<tr>
<th>Describe in detail the procedures that will be used to maintain anonymity or confidentiality during collection and entry of data. Who will have access to data? How will the data be used, now and in the future?</th>
</tr>
</thead>
</table>

Any information that is obtained in connection with this study and that can be identified with an individual will remain confidential and will be disclosed only with the participant’s expressed request/permission or as required by law. No names will be associated with any interview information; any information that could be used to identify a participant will be altered to protect their confidentiality; the recording of the interview will not be labeled with the participant’s name, but rather a pseudonym; should a professional transcriptionist be used, a Transcriber Confidentiality Statement (Appendix A) will be used; all data files will be encrypted and
password protected, and only the Principal Investigator (Doctor Kristal Clemons) and Student Researcher on this project (Robin Cicchetti) will have access to the files.

The data will be used for the Student Researcher’s doctoral thesis project, and potentially for future journal articles, books, presentations, or research. Even in these potential instances, confidentiality will be kept for all participants.

Information regarding confidentiality will be shared with all participants prior to the interview process, both in the Consent Form and verbally.

How and where will data be stored? When will data, including audiotapes and videotapes, be destroyed? If data is to be retained, explain why. Will identifiers or links to identification be destroyed? When? Signed consent documents must be retained for 3 years following the end of the study. Where and how will they be maintained?

Each interview will be audio-recorded by an electronic application called “AudioMemos” on two separate devices (the Student Researcher’s iPad and iPhone) to ensure the audio is captured. AudioMemos has no limit to audio-length, and electronic recordings can be transferred to a computer as mp4 or .wav files.

The electronic recordings of the interviews and all other electronic documents will be downloaded and then saved to the Student Researcher’s personal USB flash drive, and personal external hard drive. All files will be encrypted and password-protected.

Interviews will be transcribed by one of two methods:
1) Directly by the student researcher, or
2) By a professional transcriptionist who will be required to sign a “Transcriber Confidentiality Statement in a Research Study” (Appendix A).

Transcripts will be saved in the same secure manner as the electronic recordings. The only other person who would have access to original files and actual names would be the Principal Investigator (Dr. Clemons), should there be a need.

Any written documents will be kept in the locked desk drawer at the home of the Student Researcher (994 Old Rd. to Nine Acre Corner, Concord, MA 01742) during the period when the investigation is taking place. After the thesis project is complete, any hard-copy materials containing confidential interviewee information will be destroyed. All remaining electronic data stored on the student researcher’s USB flash drive and personal external hard drive will remain untouched, and kept in a locked safe in the home of the Student Researcher. These remaining data and documents will be destroyed 5 years following the completion of the study.

M. If your research is HIPAA-protected, please complete the following;
Individual Access to PHI

Describe the procedure that will be used for allowing individuals to access their PHI or, alternatively, advising them that they must wait until the end of the study to review their PHI.
N/A

**N. Benefits**

What benefits can the participant reasonably expect from his/her involvement in the research? If none, state that. What are potential benefits to others?

Participant: A $25 Amazon.com or iTunes gift card, which will be mailed to the individual two weeks after the second interview is completed.

School Library Profession: Greater insight into the factors that support a successful transition to the learning commons service model.

Student Researcher: Successful completion of this study will allow the Student Researcher to complete the EdD (Doctor of Education) program at Northeastern University.

**O. Attachments**

Identify attachments that have been included and those that are not applicable (n/a).

<table>
<thead>
<tr>
<th>ApxA</th>
<th>Transcriber Confidentiality Statement in a Research Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>ApxB</td>
<td>Call for Participants: Copy of fliers, ads, posters, emails, web pages, letters for recruitment *</td>
</tr>
<tr>
<td>AxC</td>
<td>Massachusetts School Library Association letter of permission</td>
</tr>
<tr>
<td>AxD</td>
<td>Informed Consent or Informed Consent and Health Information Use and Disclosure Authorization*</td>
</tr>
<tr>
<td>AxE</td>
<td>Scripts of intended telephone conversations*</td>
</tr>
<tr>
<td>n/a</td>
<td>Debriefing Statement*</td>
</tr>
<tr>
<td>(faxed)</td>
<td>Signed Assurance of Principal Investigator Form (required)</td>
</tr>
<tr>
<td>AxF</td>
<td>NIH Human Subject Training Certificate(s) (required if not already on file at HSRP)</td>
</tr>
</tbody>
</table>

*(Approved forms must be stamped by the IRB before use)*

**P. Health Care Provision During Study**

Please check the applicable line:

___ x ___ I have read the description of HIPAA “health care” within Section 3.0 of the Policies & Procedures for Human Research Protection. I am not a HIPAA-covered health care provider and no health care will be provided in connection with this study.

_____ I am a HIPAA-covered health care provider or I will provide health care in connection with this study as described in Section 3.0 of the Policies & Procedures for Human Research Protection. This health care is described above under “Study Procedures,” and the Informed Consent and ____ Health
Information Use and Disclosure Authorization form will be used with all prospective study participants.

If you have any questions about whether you are a HIPAA-covered health care provider, please contact Kate Skophammer, IRB Coordinator, *College of Professional Studies, Human Subject Research Protection* at k.skophammer@neu.edu or (617) 390-3450.

**Please return the completed application to:** Kate Skophammer, IRB Coordinator
Human Subject Research Protection
960 Renaissance Park
Northeastern University
Boston, MA 02115-5000
Tel: 617.390.3450; Fax: 617.373.4595
k.skophammer@neu.edu

*The application and accompanying materials may be sent as email attachments or in hard copy. A signed Assurance of Principal Investigator Form may be sent via fax or in hard copy.*
Transcriber Confidentiality Statement in a Research Study

Northeastern University, College of Professional Studies
Robin Cicchetti
Title: Transitioning a high school library to a learning commons: Avoiding the tragedy of the commons

I am asking you [name] to take part in a research study. The research collected will be one-on-one interviews. Every interview will be audio recorded using the AudioMemos application on the Student Researcher’s Apple iPad and iPhone (two separate devices are being used solely for backup in case of error) to capture accuracy in recording the responses. The use of a recording device is justified in this study because the details of thought and language used by the participants are critical to data analysis.

I am responsible to transcribe the audio-tapes to ensure accurate reporting of the information provided. You will not discuss any item on the tape with anyone other than the researcher. No one’s name will be asked or revealed during individual interviews. The audio-tapes will be stored in locked files before and after being transcribed. Tapes will be destroyed within 2 weeks of completing the transcriptions.

Who can I contact if I have questions or problems?

Robin Cicchetti (Student Researcher), 994 Old Road to Nine Acre Corner, Concord, MA 01742
cicchetti.r@husky.neu.edu
(c) 978-371-9819
Dr. Kristal Clemons (Principal Investigator), Northeastern University, Boston, Ma 02115
k.clemons@neu.edu

Who can I contact about my rights as a participant?

If you have any questions, you may contact Kate Skophammer, IRB Coordinator, Human Subject Research Protection, 960 Renaissance Park, Northeastern University Boston, MA 02115 tel. 617-373-7570, email: irb@neu.edu. You may call anonymously if you wish.

Will I be paid or my participation?

N/A

I agree to take part in this research
<table>
<thead>
<tr>
<th>Signature of person agreeing to take part</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name of person above</td>
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Appendix C Interview Protocol General Audit

Part 1: Introductory Protocol

Thank you for participating in this study. You have been selected because you meet the criteria of being a Massachusetts certified high school librarian who has transitioned a school library to a learning commons service model. You also satisfy the criteria of being an active member of the Massachusetts School Library Association.

This research project focuses on the experience transitioning from a traditional school library service model to the learning commons model. This study will help identify the factors that either promote or undermine a successful transition.

Your responses are important and I want to make sure to capture everything you say. I would like to audio tape our conversation today. I will also be taking written notes during the interview. Only I, and possibly a professional transcriptionist, will have access to the audio files. If a transcriptionist is used, that person will have signed a confidentiality statement, and will also only be provided with the recording labeled by pseudonym, meaning they will never even know your name, to maintain confidentiality. The audio files will be destroyed within two weeks after they are transcribed. I can assure you that all responses will be confidential and only pseudonyms will be used when quoting from the transcripts. Only your pseudonym will be attached to the transcript.

I would like to begin recording this session now. Are you ready? OK, the audio recording has begun.

To meet our human subjects requirements at the university, participants have to read and verbally agree to the Consent Form that I sent you. I’d like to go over this form with you now. The Consent Form for this study, titled ‘Transitioning a high school library to a learning commons model: Avoiding the tragedy of the commons’ states that all participants must be certified to teach in the state of Massachusetts, and hold active membership in the Massachusetts School Library Association. You are being asked to participate in two interviews focused around your experience with the transition of your library into a learning commons. There are no foreseeable risks or discomforts to you for taking part in this study, and there are also no direct benefits to you for participating in the study. Your part in this study will be handled in a confidential manner. As part of this process your school administrator was asked for permission for me to engage in this study within your school district. Your privacy will be maintained through the use of pseudonyms for you and your school district. Only I, as the researcher, will know your identity. Any reports or publications based on this research will only use pseudonyms, and will not identify you or any other participant as being part of this project. The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time. You will receive a $15 gift certificate to Amazon.com or iTunes upon completion of the two interviews. If you have any questions about this study, contact information for me as well as the
Principal Investigator is listed, and contact information is also listed for the IRB Coordinator of Human Subject Research Protection at Northeastern University should you have any other questions about your rights in this research (and you can call that person confidentially, if you wish).

Do you have any additional questions or concerns about the interview process or this form? Do you give your verbal consent? Thank you.

This is the first of two interviews. We have planned for this interview to last between 60-90 minutes. We will then do a follow-up interview approximately 1 month from now, which will last approximately 60 minutes. Today, I have a series of questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

Part 2: Interview Introduction

This study is designed to get a better understanding for the various factors involved in undertaking a transition to the learning commons model. The approach to this qualitative study will be a series of questions designed to gain insight into various aspects of the transition, and finally to ask the participant to reflect upon the process and possibly identify factors not previously identified.

Today’s interview will cover factors identified by the researcher as influential in the transition process.

The second and final interview will cover your reflection on the transition process, and will occur one month from now.

Are you ready to begin?

Part 3: Questioning

I’d like to start by asking you some questions in regards to your experience with the transition to the learning commons service model. We will cover five domains: your professional background, school description, the context of the learning commons, administration and leadership, and changes made for the transition. This should take about one hour.

Table 7

<table>
<thead>
<tr>
<th>Topic</th>
<th>Subtopic</th>
<th>Q</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Q1</td>
<td></td>
<td>Please describe your professional background, and your educational</td>
</tr>
<tr>
<td>Professional Background</td>
<td>Professional Experience</td>
<td>Q1</td>
<td>How many years have you been a school librarian?</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>How many different schools have you worked in?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3</td>
<td>How many years have you been at your current school?</td>
</tr>
<tr>
<td>School Description</td>
<td>Demographics</td>
<td>Q1</td>
<td>What type of community does this school serve (i.e., white collar, blue collar, mixture)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>What percentage of the graduating class attends a 4-year university? 2-year university?</td>
</tr>
<tr>
<td></td>
<td>School Culture</td>
<td>Q1</td>
<td>Describe how students use the library within the school.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>Describe how faculty uses the library within the school.</td>
</tr>
<tr>
<td></td>
<td>Personal Perspective</td>
<td>Q1</td>
<td>What made you decide to change from a school library model to a learning commons model?</td>
</tr>
<tr>
<td>Learning Commons</td>
<td></td>
<td>Q2</td>
<td>Describe how you introduced the concept of the change to your school leadership.</td>
</tr>
<tr>
<td></td>
<td>Position within school culture</td>
<td>Q1</td>
<td>Describe the changes, if any, you have experienced since transitioning to a learning commons service model.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>Describe the changes, if any, you have experienced in your position within the school academic departments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3</td>
<td>Describe the changes, if any, you have experienced in working with students and how they use the learning commons.</td>
</tr>
<tr>
<td>Administration and Leadership</td>
<td>District and building-based administration</td>
<td>Q1</td>
<td>Describe your role as a leader in curriculum development within your district and building.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>Describe the changes, if any, you have experienced in leadership opportunities within the school.</td>
</tr>
<tr>
<td></td>
<td>Across school/academic departments</td>
<td>Q1</td>
<td>Describe your experiences working with teachers in various academic departments since transitioning to a learning commons.</td>
</tr>
<tr>
<td>Changes Made for the Transition</td>
<td>Administrative Changes</td>
<td>Q1</td>
<td>As part of the transition, what changes did you make to the physical space?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>As part of the transition, what changes did you make to the library collection?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3</td>
<td>As part of the transition, what changes did you make to policies in the learning commons?</td>
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<td></td>
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<td>Q4</td>
<td>As part of the transition, what changes did you make to purchasing and budgeting?</td>
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<tr>
<td></td>
<td></td>
<td>Q5</td>
<td>As part of the transition, what changes did you make to staff?</td>
</tr>
</tbody>
</table>
Part 4: Wrap-up

*That concludes the questions for today’s interview. Before we wrap up, do you have any questions?*

*I want to confirm the time for the next/final interview: ___*

*Thank you so much for your participation, and I will call you for the final interview on ___.*

***************************************

Interview # 2

Reflection on the transition process

Part 1: Introductory Protocol

*Today’s interview will allow us to follow up on questions from the first interview. Similar to last time, I will be audio recording this interview. Are you ready to begin?*

Part 2: Questioning

1) *Based on our discussion last month, I would like to know if you have had further thoughts on any of the topics we discussed.*
2) *Since last month, have your opinions on the transition changed in any way?*
3) *Given our discussion last month, how do you feel the transition has gone in your school? As the school librarian, do you feel the transition went well?*
   a. *What went well?*
   b. *What aspect of the transition did not go as well as you anticipated?*
4) *After your experience with the transition, what factors do you feel were most important in contributing to the success of the transition?*
5) *What factors undermined the transition?*

Part 3: Wrap-up

*Thank you, that concludes the interview questions for this final interview.*
If I need to ask any follow-up questions for clarification, would you mind if I contact you again? Would you prefer I contact you via email or telephone?

Sometime over the next month, I will email you word-for-word transcripts and my initial interpretations of both interviews. If you choose, you can review the information, and you will have one week to provide me with any feedback, alterations, or corrections. Can you please confirm the email address you would like for me to email the transcripts to?

Also, I would like to send you a $25 gift card to either Amazon.com or iTunes for your participation in this study. Which would you prefer? And can you please let me know where you would like me to mail the gift card? Great, I’ll be able to send that to you two weeks from now. And once this thesis study is complete, which will most likely be 3-6 months from now, would you like to receive an electronic copy of the document?

Do you have any questions for me?

Thank you so much for your participation in this study!
Appendix D Consent to Participate in Research

Northeastern University, Department of Education
Name of Investigator(s): Dr. Kristal Clemons (Principal Investigator), Robin Cicchetti (Student Researcher)

Title of Project: Transitioning a high school library to a learning commons: Avoiding the tragedy of the commons

Request to Participate in Research
We would like to invite you to take part in a research project. The purpose of this research is to identify factors that promote a successful transition to the learning commons model, or that undermine that transition.

You must be at least 18 years old to be in this research project.

The study will take place at ______________ and will take about ___________. If you decide to take part in this study, we will ask you to participate in two interviews (conducted by Robin Cicchetti) about your experience as a high school librarian who transitioned the school library to a learning commons model.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you for participating in the study. However, your answers will help identify the factors that support or undermine a successful transition to the learning commons model.

Your part in this study will be handled in a confidential manner. Only the researchers will know that you participated in this study. Any reports or publications based on this research will only use pseudonyms, and will not identify you or any other participant as being part of this project.

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time.

You will receive a $15 gift certificate to Amazon.com or iTunes upon completion of the two interviews.

If you have any questions about this study, please feel free to contact Robin Cicchetti (Tel: 978-371-9819, Email: cicchetti.r@husky.neu.edu), the person mainly responsible for the research. You can also contact Dr. Kristal Clemons (Northeastern University, Boston, MA, Email: k.clemons@neu.edu), the Principal Investigator.

If you have any questions about your rights in this research, you may contact Kate Skophammer, IRB Coordinator, Human Subject Research Protection, 960 Renaissance Park,
You may keep this form for yourself.

Thank you.

Robin Cicchetti