TRANSFORMING LIBRARY SPACES: AN EXAMINATION OF TWO-YEAR COLLEGE
LIBRARIES IN THE GREAT LAKES REGION

By

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ABSTRACT

The two-year academic library has evolved from a space that housed religious manuscripts to a space that currently serves students, faculty, and the community. Meeting the needs of library users in various iterations has been the norm in academic libraries. This study examined innovative efforts undertaken by two-year college libraries in the Great Lakes Region to transform their spaces to meet the needs of their constituents. This study fills the gap of the current literature focused primarily on four-year university library renovations. It also provides a checklist for two-year colleges to use as a roadmap for future library renovations.

Keywords: academic library building, community college, decision making, library space renovation, two-year college library

DEDICATION

This dissertation is dedicated to my children, Yasmeen and Hameed, for your unwavering love and support, your encouragement, your patience during my absences, and most of all your irrepressible spirits. You are my joy and blessings.

To my village: my sister Anthonia who endured this journey with me by constantly checking in to ensure that I remained on track and celebrated each small win along the way; my sister Veronica who remained vigilant and encouraged me during each visit; my brother David who kept me grounded with lively discussions and encouragement; my sister Pauline who called from Australia just to check in and to encourage me; and my brother Joseph for his support and prayers.

Finally, to my mom Veronica whose love for learning and education always encouraged me as I kept her favorite phrase in sight: "It is not how long, but how well."

To Him be the glory.

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CHAPTER 1: INTRODUCTION

BACKGROUND

Libraries have been around for thousands of years. Originally called repositories and regarded as the collectors of written knowledge, the earliest collections were the clay tablets of Mesopotamia, a region in southwest Asia. Later, papyrus scrolls used by the ancient Egyptians, Romans, and Greeks were collected in repositories. Eventually these repositories were called libraries, with the first known library built in the third century BC in Alexandria, Egypt, when it became important for the culture to create collections of written knowledge such as plays, poetry, history, and Egyptian mechanics (Haughton, 2011). This is important to note, as it confirms that from the very beginning libraries have changed over time based on current needs and evolved into what we know today.

This study focused on selected two-year community college libraries and the renovations they have undergone to improve their spaces in the last five years. While the community college library serves faculty, staff, students, and community residents, this study focused primarily on the faculty and the students it serves.

THE COMMUNITY COLLEGE

The community college can be defined as a two-year institution that offers college-level coursework that may lead to an associate degree, a vocational certificate, or a transfer to a four-year institution. Community colleges were originally called junior colleges. Unlike four-year institutions, junior colleges were founded with open access to educational opportunities serving their surrounding communities. Joliet College in Joliet, Illinois, is considered the first

community college, opening its doors in 1901 at a time when discussions focused on a more-skilled workforce to strengthen the economy. However, in the 1960s, the birth of many community colleges and technical colleges took place. Throughout this study, the terms "two-year college," "technical college," and "community college" are used interchangeably.

According to the National Center for Education Statistics (NCES; 2017a), as of 2017, there were 1,579 two-year private, public, technical, and vocational colleges of various sizes in the United States, which accounts for 23% of the higher education universe (Carnegie, 2019, p. 1). To meet accreditation standards in part, two-year colleges have to evaluate how their library meets and supports the college mission and strategic plan. A college's strategic plan is instrumental in aligning the college's goals with its resources. Community college libraries are now an integral part of the college's strategic plan, which outlines a college's academic and operational goals for a three- to five-year period. In addition, community college libraries provide critical direct and indirect value to their institutions by supporting recruitment and retention, enhancing student learning, supporting faculty projects and teaching, and contributing to the needs of the communities they serve (Association of College and Research Libraries [ACRL], 2016, p. 1).

Today's academic libraries, including community college libraries, hold a central position as the heart of an institution both in physical placement and as a symbol of scholarly pursuits (Freeman et al., 2005). They must not only prove their worth as centers for books and information but must also include spaces that provide solitary and collaborative environments. Community college librarians are grappling with a need to connect students to valuable physical and electronic content and support library environments that enrich the student learning experience. Studies have documented the function of libraries as the "third place," separate from

home and work. Libraries serve as an important resource in a student's life and as such, the need for libraries to change their spaces to accommodate these evolving needs by repurposing the library space has proven pertinent in the world of academia (Ferria et al., 2017; Montgomery & Miller 2011; Shill & Tonner 2004).

A BRIEF HISTORY OF ACADEMIC LIBRARY EVOLUTION

During the colonial period, academic libraries in the United States primarily collected and preserved print materials. At this time, colleges and universities relied heavily on donations to fill their shelves. One example of the value of donations relates to Harvard University, originally named New College. In its early years, New College focused on educating clergy, and the donated books were primarily the resources available to students with limited access to them for only a few hours a week (Weiner, 2005). Reverend John Harvard donated books to New College and, when he died, his personal library and half of his estate was donated to the school. The value of books and the knowledge they represented was so important to the institution that the original name of the school was revised to honor John Harvard when its name was changed to Harvard University. While academic libraries may still accept book donations to enhance their collections, today funds are allocated for library expenditures during the college budgeting process.

From approximately 1800-1900, academic libraries not only provided designated spaces for educational inquiry, but also for contemplation (Freeman et al., 2005). To enter and use these establishments was considered a privilege. Despite their impressive exteriors, the interior spaces were dim and confining, difficult to navigate, and the specialized services and collections were only available to the serious scholar (Freeman et al., 2005). During this period, establishing print collections became a goal for many university libraries. Then at the end of the nineteenth and

into the twentieth century, four-year academic libraries began to transform from mainly collection builders into research institutions (Weiner, 2005, p. 3).

To emphasize the importance of academic libraries, much has been written to document changes that library spaces have undergone, generally relating to the four-year institutions. Shill and Tonner's (2003), "Creating a better place," presents literature about college library changes from 1995-2002. They noted that academic institutions have benefited from new, expanded, renovated, or reconfigured facilities since the mid-1990s. They also pointed to three factors that necessitated the change: (1) technology that brought in the era of the internet and connected learning, (2) the need for more collaborative space, and (3) the gradual move from physical resources to digital content.

With the change from physical card catalogs to online public access computers (OPACs), the spaces previously dedicated to physical content were slowly reduced when resources such as encyclopedias and other print publications made way for individual and group study spaces. Electronic databases, eBooks, and wi-fi became the tools for individuals to access scholarly information without library assistance. Academic libraries continue to face the impact of how technology has changed their environments and, consequently, the collaborative spaces are continually being evaluated in concept and theory (Harloe & Williams, 2009).

These collaborative spaces have become a key component of public service in most academic libraries and, although they have become increasingly popular within higher education, the design and implementation of the spaces have not been consistent. While every academic library space need not be based on the exact same design, following a roadmap might be helpful in reaching the desired outcomes in an efficient and cost saving manner. In today's educational environment, simply focusing on library space transformations without a knowledgeable plan is

not sufficient: "Academic leaders are immersed in ongoing discussions about strategic investments and outcomes that impact institutional priorities, use of resources and the modeling of spaces on campus" (Lukanic, 2014, para. 5). These evidence-based discussions must be aligned with the institution's mission, strategic plan, and accreditation to maximize efforts. More recently, library efforts pointed to the ever-growing need to adapt to the changing times that have resulted in space-update trends.

Many of the same forces and trends affecting four-year institutions have likewise influenced two-year college libraries. To enhance and accommodate student and faculty needs, community college libraries have also played a part in their own evolving process. Again, however, they have had little access to information on how to approach their projects either through renovation, simple refresh, relocation, or a rebuild. This study brings to light the two-year college's valuable experiences regarding the pitfalls and best practices of this endeavor.

THE CHANGING ROLE OF LIBRARIANS

Not only have academic libraries had to change to support the current trends, but the role of the professional librarian has also changed. Librarians have historically recognized themselves as the keepers and disseminators of knowledge — a coveted role that usually ascribes a perception of being well read, knowledgeable, and able to help navigate the written word. According to the Department of Bureau and Labor Statistics, in 2016 there were 138,200 librarians working in various institutions and organizations within the United States: "Individuals who hold a master's degree in the field of library and information sciences or information studies typically provide library services. Reference librarians are variously referred to as "mediators between the user and the information … navigators of the information superhighway" (as cited by Huling, 2002, para. 1).

In 1930, James Wyer's *Reference Work: A Textbook for Students of Library Work and Librarians,* he asserted that "It still is, and always will be, imperative to provide human beings as intermediaries between the reader and the right book. The utmost use of great libraries never can be attained by mechanics" (p. 5). This substantiates the value of the skilled librarian.

In the post-World War II era, higher education saw a growth in enrollment from 2,300,000 students in 1950 to 8,650,000 in 1970. Post-world war individuals, dubbed the "baby boomer" generation, began attending college and the number of students seeking information also increased, which led to an expansion of reference services (Bobinski, 2007, p. 41). This era known as the golden age of librarianship lasted through the early 1970s and realized a growth in the addition of new libraries, the expansion of existing libraries, and a greater reliance upon credentialed librarians (Bobinski, 2007, p.4).

Fast forward to the twenty-first century. Characterized as the electronic age, individuals now have options that allow access to library information from their homes, offices, or local coffee shops. This era was ushered in during the 1990s and has progressed into today's reality where many adults and children own their own personal electronic devices such as computers, phones, and iPads. These technologies have created a vast number of pseudo-librarians who conduct their own self-directed online research. This fundamental shift to self-directed information-seeking learners has transformed the nature and work of libraries and librarians. The truth of this shift, however, may be that the self-directed learner is not aware of the need to separate fact from fiction and may be considered as having a lack of information literacy. While the skilled librarian can still be considered vital to acquiring information, students may not consider the librarian a critical element in the information gathering cycle. This study analyzes

the changes that libraries have undergone in the last five years and how they addressed these issues.

STATEMENT OF THE PROBLEM

The Association of College and Research Libraries' (2016) annual report on the addition or renovation of sixty-six libraries in the United States and Canada, has given credence to the fact that libraries of all kinds have been documenting their need for library space renovations and repurposing over the past decades. Currently, there is extensive research focused on the transformations of four-year academic libraries. However, while two-year community college libraries have also been changing over the years, their transformations have not been extensively documented. This study intends to fill that gap.

As some community college libraries move forward with a renewal or renovation of their spaces, they start with a ground-level approach with little indication of what is involved structurally or financially regarding their project. In today's environment, libraries are advised to align their renovation goals with the college mission statement, strategic plan, and accreditation in order to make informed decisions. Making informed decisions stems from having as much relevant information as possible. This is significant because two-year institutions are currently wrestling with procuring and allocating funds in an economically challenging environment with dwindling enrollment. Alignment with the college goals will also help move library staff along a continuum that progresses from viewing the academic library as a collection warehouse to envisioning the library as a composite of services to a space that is an integral part of the overall campus learning environment (Halling & Carrigan, 2012). This study intends to document how six community colleges accomplished their library transformations, including their successes and what they may have done differently to save effort, time, and money.

PURPOSE OF THE STUDY

The purpose of this study is to investigate two-year college libraries that have undergone space changes within the last five years, to understand their decision-making process, implementation plan, and finally their outcomes. The current literature regarding library transformations pertains to four-year colleges and universities with little research focused on the two-year college. This study fills that gap and assists other community colleges in deciding how to plan and implement this complex endeavor. In addition, this study addresses the importance of aligning the library renovation with the goals of the college.

GUIDING QUESTIONS

This study will be guided by the following research questions:

- What factors led to the realization that the library space no longer met student and faculty needs?

- What steps were taken to improve the learning environment?

- What financial considerations were needed to approve the changes?

METHODOLOGY

This research is a qualitative inquiry using case-study methodology. The aim and objectives of qualitative research are to provide an in-depth and interpreted understanding of the social world of research participants by learning about "the sense they make of their material and social circumstances, their experiences, perspective, and histories" (Ritchie et al., 2013, p. 4).

To understand behavior, we must investigate the decisions made relating to the behavior. Since this research seeks to understand the decisions made regarding library renovations, qualitative inquiry is the most appropriate approach for this study. Merriam and Tisdell (2016) agree that qualitative methods are often used to explore the meaning of people's behavior.

The decision-making process is built upon observing, understanding, seeking input, acting, and evaluating the outcome. Nicholas (2017, p. 2) lists the decision-making process in six parts. In this researcher's opinion, it is important to add a seventh step that focuses on follow-up to evaluate the action taken:

1. Understand the problem, identify options
2. Gather relevant information
3. Analyze the information
4. Draw implications from the results
5. Decide which option to implement
6. Take action
7. Evaluate action taken to understand the veracity of the action taken

This study applies case study methodology. Case study research refers to an in-depth, detailed study of an individual or a small group of individuals. In the social and behavioral sciences, the event or incident that represents the case to be studied is usually bounded by time and place with a clear beginning and end and with an identifiable location or position relative to its surroundings (Emmel, 2013). The subject of analysis can be of a rare or critical event or focus on a typical or regular event. Studies similar to this research are typically qualitative in nature, resulting in a narrative description of behavior or experience.

For the purposes of this study, six community colleges that have improved their library space within the past five years and reside in the Great Lakes Region of the United States were selected to participate in this research. The Great Lakes Region is identified by the Carnegie classification for higher education and provides a list of community colleges by size. The various

sizes are characterized by enrollment undergraduate profile, size, and setting. This study

investigates various sizes of community college according to the Carnegie classification data.

Case studies are used to discover generalizable truths or make predictions. The emphasis

in case study research is placed on exploration and description of a phenomenon. The main

characteristics of case study research are:

- It is narrowly focused

- It provides a high level of detail

- It can combine both objective and subjective data to achieve in-depth understanding (Center for Innovation in Research and Teaching [CIRT], n.d.a., para 1).

As long as researchers are able to identify the phenomenon of interest and draw its

boundaries or "fence in" what they are going to inquire, they can name it a case (Merriam, 1998).

Deciding the boundaries of a case, how it might be constrained in terms of time, events,

and processes, may be challenging. Creswell et al. (2007), agreeing with Emmel (2013), stated

that case studies may not have clear beginning and ending points, and the researcher will need to

set boundaries that adequately surround the case.

> Case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case-based themes. For example, several programs (a multi-site study) or a single program (a within-site study) may be selected for study. (Creswell et al., 2007, p. 21)

A multi-site case study explores multiple sites to understand the phenomenon, event, or

situation. This research meets the criteria of being a multi-site case study as it explores the

renovations of six community colleges. Purposeful sampling is a commonly used strategy,

providing responses from varied perspectives. The sample size may be predetermined or based

on theoretical saturation, which is the point at which the newly collected data no longer provides additional insights. The type of purposeful sampling is referred to as quota sampling and was used to gather data in this study.

To fully understand how and why decisions were made regarding community college libraries, examinations of budgets, architectural renderings, and space planning are appropriate. Colleges designated as very small, small, medium, large, and very large are represented.

RESEARCHER INTEREST

The researcher's interest in this study stems from experience as a community college student in Chicago, Illinois. As a student, I spent time in the library after classes ended to complete my assignments. The library environment was very conducive to contemplation and collaborative work, especially when I worked on group projects with my classmates or wrote stories for my humanities class. There were long study tables for students and the environment was hushed, a characteristic that sometimes proved challenging when I had to collaborate on a group project. I completed an "Introduction to Architecture" class in my third semester, and the class helped me to gain an understanding of how people interact with spaces and how design can affect the way people choose to use spaces. Upon conclusion of the architecture class, I left with a hunger for more knowledge and eventually transferred to a four-year institution to pursue architecture studies.

At the university, I learned that I could work at the library as a student worker and I immediately applied for a position in the Technical Services department. As I observed how students used the spaces in the library, I noticed how there often appeared to be a need to rearrange furniture to enhance collaborative study. Another university class I completed, Communication Design, focused on how people use spaces and furniture and how form follows

function. This class helped to solidify my interest in how the human body adjusts to its environment and how it finds ways to meet its need for comfort in various spaces. Because these experiences predated the use of the internet and technology in the classroom or library spaces, they did not include the impacts of technology on engagement and learning..

As other life experiences came into view, architecture remained an abiding interest for me, one that I continually used to evaluate spaces as I entered buildings and navigated my way through various rooms and spaces. As my educational journey pivoted, I earned a master's degree in library science, and I found myself working in a public library as a librarian. As my levels of responsibility increased and I gained confidence as a professional, I became involved in projects related to use of space and resources.

The years flew by quickly and my work in a public library became tangentially related to a renovation project in the library. As members of the management team met with the architects for imagining sessions and asked questions about space design, my abiding love for architecture was revived. Today, as a student in a doctoral program, I find that these experiences have helped to narrow my focus on the intersection of libraries, space utilization, and student learning.

RESEARCHER BIAS

Although researchers make concerted efforts to ensure the validity of their research, it is foreseeable that their world view, socioeconomic position, and beliefs may color the lens through which they conduct their research. Mehra, (2002) agrees that, "While researcher bias and subjectivity are commonly understood as inevitable and important by most qualitative researchers, the beginners in qualitative research classes are generally not very comfortable with the idea of research that is not value-neutral" (p. 1). These biased lenses must be taken into consideration, acknowledged, and set aside to ensure the rigor and validity of their research.

Sutton and Austin (2015) affirm the need for self-reflection before and during research to help readers understand the context of the research. They note the importance of acknowledging researcher bias and articulating how information and gathered data is analyzed and filtered through researcher's own world view. This acknowledgement helps the reader gain a better understanding of the researcher's lens and bias. They also state that, "From this perspective, bias and subjectivity are not inherently negative but they are unavoidable; as a result, it is best that they be articulated up-front in a manner that is clear and coherent for readers" (para. 3).

My experience as a librarian in a public library for over ten years and as an instructor at a community college for nine years have only strengthened my interest in the intersection of library buildings, space utilization, and student success outcomes. These experiences, while enriching and engaging, may be biases that color the objectivity of my selection and interview process. In addition, my ability to fully engage with and understand the viewpoint of the participants may be premature as I may attempt to fill in missing gaps in the interview process that may appear obvious to me. As a researcher, I understood that I must take care to ensure to randomly chose the research sites based on size and location criteria and not simply on my prior knowledge. In addition, I crafted my interview questions so as not to lead the participants or insert my experiences into the participant responses. As the researcher for this study, I must temporarily set aside my biases and focus on understanding the story of each community college renovations. Creswell (2013) stated, "The realist also reports objective data in a measured style uncontaminated by personal bias, political goals, and judgment" (p. 93).

LIMITATIONS OF THE STUDY

All studies have limitations, and it is important to identify them to understand the scope of the research. The following limitations of this study are:

- The study was limited to two-year colleges in the Great Lakes Region (Illinois, Indiana, Michigan, Ohio, and Wisconsin).

- The study was limited to changes made only within the previous five-year period and excludes community college libraries that were renovated prior to that time.

- Because of weather concerns, the researcher was unable to meet at one of the selected sites.

The result of these limitations is that the results, while not comprehensive for all 1,579 community colleges nationwide, are generalizable based on the selection criteria. In addition, because this is a qualitative inquiry, only a small number of participants can provide sufficient evidence when the research is in-depth. This study collected in-depth information from each of the participating colleges.

INTENDED AUDIENCE

This study is intended for the two-year college library administrators and librarians who are considering how to adapt their spaces to the changing needs of their students, faculty, and staff. Community college libraries will gain useful insights, including best practices, from six institutions who have undergone this very experience.

CHAPTER SUMMARY

The current literature documents library renovations pertaining to four-year colleges and universities but has scantly documented the same efforts from the two-year community college perspective. Chapter 1 covered an introduction to the brief history of libraries and the evolution of change at academic libraries. This chapter discussed the value of book donations, especially in the early days of establishing libraries, and addressed how today, while libraries still accept donations, they are generally funded by their parent institutions. Chapter 1 also listed the guiding

questions of the study and steps involved in the decision-making process. In this qualitative

research, case study methodology was identified as the appropriate approach. To situate the

research, Chapter 2 discusses existing literature on four-year academic libraries and the limited

literature on two-year college renovations.

CHAPTER 2: LITERATURE REVIEW

INTRODUCTION

This study focuses on library renovations that have occurred at six community colleges within the past five years. While community college libraries have changed to meet student and faculty needs for many years, limited information has been formally documented. Library renovations may be cosmetic and completed speedily or may be extensive and last over several years. Today, existing literature regarding community colleges is narrowly focused on enrollment, recruitment, retention, information literacy, and student outcomes with little written related to library space changes. This study intends to add to the existing literature which is mostly related to four-year institutions and aims to fill that gap. This is significant because embarking on a library renovation should focus on the population it serves. The two-year community college serves similar yet dissimilar and distinct populations than the four-year university.

The most notable difference between the four-year and two-year institutions is that community colleges primarily serve local residents and are considered commuter schools with a few residential exceptions, such as Joliet Junior College and Bay de Noc College; universities may serve local residents but, for the most part, their students may come from anywhere within or outside of the United States. While the four-year colleges serve mainly traditional students who enroll directly after high school, the community college serves a much broader audience offering credit, vocational, and noncredit courses. Their students and library users may include these 10 types of learners:

- Children who attend summer camps

- High school teens who enroll in dual-credit programs

- Adults who hold a four-year degree and are retooling their skillsets

- Lifelong learners, such as retirees, enrolled in senior programs

- Working adults who want to earn a certificate or associate degree

- Traditional students ages 18-20 who enroll after high school

- Students who dropped out of high school seeking to earn their GED

- Students seeking to learn English as a Second Language (ESL)

- Community residents who are not community college students

- Stay-at-home parents or those returning to school after their child has earned an associate degree and are sold on the merits of community college.

While some data from the four-year institutions may be helpful in planning a community college renovation, this study provides details related to the two-year college.

As previously stated, there is scant information about community college library renovations, two brief narratives of the community college experience are presented here. While the narratives offer some insight regarding their renovation, the details of how they accomplished their renovations were not noted. This study includes numerous details to increase the current literature about community college library renovations.

The first community college renovation is from Anne Arundel Community College (AACC) in Arnold, Maryland. In the *Severna Park Voice*, Darrell Mak's (2011) article "Renovations begin on Truxal Library at AACC," shared that a budget of $23.5 million was allocated for the library renovation project. Library director Cindy Steinhoff went on to say that the library,

Conducted focus groups with students to better understand what type of improvements they wanted. The wish list included being able to see outside, having an abundance of natural light, and being able to see inside when walking from outside. Another desirable feature included having a variety of seating areas and styles. (p. 1/3)

The article further shared that Steinhoff's library student survey results revealed that the updated space could include "tables and chairs, lounge seating, study carrels, and even some rocking chairs" (Steinhoff, 2011, as cited in Mak, p. 2/3). To accommodate students, AACC also mentioned that the redesign required various noise levels: "the new library will feature a quiet or silent area… [to] accommodate all preferences" (Steinhoff, 2011, as cited in Mak, p. 2/3).

The second community college that underwent a library renovation is Harper College located in Palatine, Illinois. The 2018 article, "Harper College, Legat Architects to explore academic library design at National Community College Conference," starts by sharing that the conference presentation would focus on "From Content Consumption to Content Creation: Harper's Library Transformation'" (Legat Architects, 2018, p. 2/8). The article continues by explaining that the conference presentation discussed the "third place concept…which posits that…the first place is the home…the second place is where we work…the third place is a public setting for informal gathering and relaxation" (Legat Architects, 2018, p. 6/8). Legat stated, "This concept drove the Harper College Library renovation, but the formula was slightly different — the first place is the student's home, the second is the classroom, and the third is the library" (Legat Architects, 2018, p. 6/8).

Harper College was one of the six two-year colleges included in this research. Readers should note that I am associated with Harper College as an instructor in the Continuing Education Department.

While there have been numerous studies related to the renovations of the library at four-year institutions, this literature review includes selected documentation representing a broad range of what has been written. The purpose of this study is to understand the processes and the innovative approaches community colleges employed to transform their library spaces.

THE CHANGING ROLE OF THE LIBRARY

In 1995, the University of Michigan students and faculty created an electronic resource called the Internet Public Library (IPL) as a training ground for future digital librarians. This tool received questions over the web and allowed librarians to respond to the reference questions within a set timeframe (Oder, 2003). This was the academic libraries' introductory phase to the internet as it provided the opportunity for individuals worldwide to ask questions electronically. Moholt (1985) contributed to this concept by writing, "In the 1980s, the term information support center described the academic library's new role in assisting users with finding electronic information" (p. 285).

In Wegner and Zemsky's 2007 essay, "Changing Roles of Academic and Research Libraries," drafted upon the conclusion of a roundtable convened by the ACRL (2010), the authors stated that library spaces are strategically placed at the heart of an institution occupying the most desirable location on campus: "Geographically and symbolically, it occupies the center of a community established to support the advancement and perpetuation of knowledge" (p. 7). The significance of this statement justifies the importance of the academic library space, and the time, effort, and cost related to its transformation.

Dane M. Ward's (2013) dissertation, *Innovation in Academic Libraries During a Time of Crisis*, states that, "More than ever before, innovation has become an essential capacity as

libraries identify, anticipate and meet the needs of students and faculty in an uncertain and rapidly evolving information environment" (p. 6).

Many academic libraries have rebranded their identity over time as their space environments continue to change. This rebranding was generally introduced to showcase emerging technology such as electronic databases or the advent of the internet. Terms such as "information support center," "learning resource center," "information commons," and "learning commons" are often used to describe the ever-changing library space. However, there has been no consistency with the adoption of the use of these new library identities and no confirmation that rebranding the name of the library space was the reason that students and staff came to the library. Rather, it was often the new technology that prompted the interest in students using the library space. The most obvious case of new technology encouraging visits to the library might be as the wooden card catalogs of years gone by gave way to small plastic keyboards and bulging screens. This technology became the tool used to connect students and staff to the internet and other electronic resources. The library landscape and footprint were beginning to change.

In a 2013 article by Turner et al., "Learning spaces in academic libraries," they confirm the inconsistency of the rebranding concept. They noted the terms "learning spaces," "learning commons," and "information commons" were used interchangeably at academic libraries. They stated that, although each term might have similar meanings at different institutions, the progression of the name changes was not consistent in reflecting the evolving nature in academic libraries.

Victoria Karasic's 2016 paper, "Evolution of learning spaces in libraries," portrays the academic library as the modern-day hub of any college campus, while harkening to the past and

the various iterations of the name of academic libraries from the word "library" to information support centers to learning resource spaces and information commons. With the fast-paced change in technology which ushered in various personal devices that students use to access the internet, the decline of the use of the physical space in academic libraries raised a concern about the demise of the academic library as a central resource. With the rebranding of libraries with their new identities, Karasic (2016) writes, "Librarians have grappled with the question of how to attract students to the library as a place to not only retrieve digital information, but also to discuss and apply it to their classroom and learning experiences" (p. 53).

To this end, Karasic (2016) describes the active learning classrooms where the expectation is that students not only attend class but also interact with the newest technological tools to engage in learning. Karasic went on to say that learning classrooms were built at four-year universities in science departments and libraries then began to explore the same concept in their existing spaces in the late 2000s (pp. 55-56).

Embedding technological experiences into the classroom "emphasizes the academic library as an impartial space on campus where departments do not feel as though they have to compete for resources" (Karasic, 2016, p. 57). These modern classrooms embed the librarian into the courses through partnerships with college departments. The benefit of this process is the opportunity it provides for librarians to use the classroom for instruction and information literacy while engaging faculty and students in formative learning processes.

FOUR FACTORS IN LIBRARY SPACE CHANGES

As previously stated, the literature regarding library renovations is numerous from the perspective of four-year colleges and universities, with little detail of transformations illustrated from the two-year community college viewpoint. This literature review begins by focusing on

four major factors that are commonly repeated as reasons to renovate the library spaces at four-year institutions. They are (1) technology, (2) student needs, (3) administrator support, and (4) funding.

Technology

Technology has been a disruptor of knowledge-seeking and sense-making for decades. As advances in technology continue to evolve most aspects of the learning environment are impacted, including academic libraries. Ward (2013) wrote, "Despite our perception of their stability in a rapidly changing world, academic libraries in the United States have always experienced a great deal of change" (p. 10). In 1972, innovations in technology brought about the advent of DIALOG — an online information retrieval system created by Lockheed Martin that provided access to large amounts of bibliographic information. Bobinski (2007) reminds us that "by 1980, electronic reference emerged as distinct from the print-oriented reference desk. A patron wishing to do an online literature search had to work through a librarian trained in online searching" (p. 15). Academic libraries have continued to evolve with the proliferation of technology that has directly impacted the work of academic librarianship — work such as instructional methods, needs of students, print versus digital content, and the continued growth of multi-generational learners.

As early as 1994, in several surveys conducted by the National Center for Education Statistics (NCES, 1998) statistics related to both two- and four-year colleges combined, stated there were 111,649,668 reference transactions. By 2008, reference transactions had decreased by 50% to 56,148,040. During a similar period from 1998, library visits had slowly increased from 927,173,988 with a few dips in an eight-year period to 1,054,269,996 by 2008 (p. 4).

Wegner and Zemsky's (2007) report to the ACRL regarding the future of libraries and their role in the connected universe noted that universities and research institutions were facing tradeoffs between print and digital resources and, in fact, were cancelling print journal subscriptions and were more focused on licensing agreements and negotiations with digital content providers. The authors also noted that librarians were "reprofiling approval plans or implementing new software to provide federated searching" (pp. 1-2).

In Stewart's 2009 work, *The Academic Library in the Digital Age,* he attempted to compile data about academic library construction at four-year institutions from 2003-09. Stewart asserts that based on his survey of 56 four-year college libraries, changes in information technology and the changing character of student body space needs rose to the top as significant factors.

By 2017, Gstalder revealed that online education such as MOOCs (Massively Open Online Courses), the flipped classroom, and eBooks have disrupted the way students learn and faculty deliver instruction: "As more information became available online, the collection of printed material was used less frequently, and many libraries became warehouses of little-used books" (p. 3). This fast-paced change revealed that as the need for physical collections began to decrease, libraries began the work of reducing the footprint of their print collections. This would eventually provide space for new technologies or other options within the library.

These changes were a real signal to librarians that while library circulation and visits were increasing, the reference interactions between users and librarians had decreased significantly. Librarians observed that space use had increased while students attempted to navigate electronic resources on their own. The use of the spaces had evolved from students seeking reference assistance to students' self-directed research using their personal devices.

While door count and use of the library space increased, interactions with librarians had decreased. ACRL was at the forefront of gathering the library community together to examine the rapid change that was needed to adapt to changes in technology. In the same 2007 report, Wegner and Zemsky wrote, "the challenges libraries now face are the same ones that confront any contender in the expanding market for information: there is a continuing need ... to keep pace with new developments in technology and new competition in the industry" (p. 4).

The manner in which students interact with libraries has been changing since the 1980s. Technology has been the disrupter, which does not necessarily mean it's a negative change. For some individuals, change is quite difficult and keeping up with the myriad of new technologies is a challenge. However, information seekers will no doubt adjust to the changes ahead as academic libraries continue to evolve.

Student Needs

Sam Demas of Carleton University in Ottawa, Ontario, used the concept of old Mouseion, the Library of Alexandria, as a metaphor for emerging trends in contemporary libraries that combine the role of learning, culture and intellectual community. In his essay *From the Ashes of Alexandria: What's Happening in the College Library*, Demas (2005) argued that academic libraries were among the most heavily used facilities on campus, and that the enduring value of libraries as secure, comfortable, and quiet study spaces remained intact, despite the notion of "the deserted library" that emerged in 1990s. Demas described the motivation to choose "the unique pleasure of being alone, in a quiet place, while simultaneously being in a public place associated with scholarship....It is a place to see and be seen while working privately" (p. 29).

Today, while some students still view the library as synonymous with books, Wegner and Zemsky's (2007) report for ACRL confirmed that the Online Computer Library Center's (OCLC, 2006) report on *College Students' Perceptions of Libraries and Information Resources* revealed that students did not view their libraries as the primary source of information beyond the physical collection, and, in fact, visited the library no more than twice a year.

With faculty assigning group projects, students may find themselves seeking a neutral space to collaborate using their laptop computers or other electronic devices such as their mobile phone or iPad to work on their assignments. This literature review provides two examples of four-year institutions and their innovative solutions of recreating space in order to meet student's needs. The first example is from Andrew University's White Library and the second is from the University of Rochester Library.

James White Library, Andrew University in Berrien Springs, Michigan

Librarian Silas M. Oliveira (2016) from Andrew University wrote an article, "Space preference at James White Library: What students really want" where he examined two interests. One was the study habits of American students and faculty and the other was to investigate existing college student surveys in North America and abroad. The purpose of Oliveira's research was to identify "what types of spaces students really want in order to accomplish better their academic requirements and learning needs" (2016, [abstract]). In addition, he sought to identify other areas of the college outside of the library where students chose to study.

Oliveira (2016) gathered data at his institution through space usage observation, interviews, focus groups, and undergraduate and graduate student usage surveys. Oliveira's study was designed to help the library make informed decisions about the future renovation plans of the White Library while keeping optimal learning spaces as a focus. Oliveira surveyed 276

students using a Charrette design, a planning session where stakeholders participate in designing

a vision for development:

> It provides a forum for ideas and offers a unique advantage of providing instant feedback to the designers. Charrettes are organized to encourage the participation of all. That includes everyone who is interested in the making of a development or who will ultimately, be affected by it. (Oliveira, 2016, p. 358)

The results of Oliveira's (2016) study confirmed patterns similar to those found at other

institutions, that approximately 46% of the respondents preferred a study space or an

individualized space with no regard to the noise level. In addition, of the 274 respondents, 54%

valued spaces designed for group work while another 19% preferred closed group study spaces

or open spaces. Oliveira then compared research from other institutions with his own White

Library research.

Oliveira's (2016) examination of the surveys created and compiled by various institutions

noted individual and quiet spaces as the highest rated preferences of students. Regarding why

students chose to study in other places on campus, Oliveira found that 72 of the students

surveyed replied that the library was too far away; 56 students noted that the building was too

old; 48 students claimed there were not enough open spaces; and 33 students said they could

socialize in alternate spaces. Forty-five students stated the lack of comfort or temperature

challenges of the library space as the reason they chose to study in other places. The remainder

of the students gave other reasons such as lack of access to food, poor lighting, and distractions

in the library. In sharp contrast, an administrator at White Library proposed that students no

longer needed the library because they had mobile devices. This proved to be inaccurate as

Oliveira noted during his study that 40% of those observed in the library were using library

computers. Oliveira (2016) concluded,

This poignantly reinforces the results obtained from the charrette design exercise — that is, students at Andrews University greatly and mainly value individual study areas to study, whether it be in a closed space (i.e., study rooms, individual carrels) or in open spaces such as tables across a large room. (p. 364)

Although Oliveira lists the various student needs, the discrepancies of why students chose to meet or study in places other than their library however are more likely due to the deficiencies of each particular library. Thus, Oliveira's (2016) research suggests that until an academic library aligns its spaces to serve students' actual needs, students may choose to use alternative spaces on campus to complete assignments or meet for group discussion.

University of Rochester in Rochester, New York

Through the University of Rochester Library, Nancy Fried Foster, an anthropologist, and Susan Gibbons, the former University Librarian and now the vice provost of Collections and Scholarly communications, served as editors for the 2007 study, *Studying Students: The Undergraduate Research Project at the University of Rochester.* They also authored several chapters.

This study was initiated by the ACRL, a division of the American Library Association (ALA). Its purpose was to understand the undergraduate student, "their habits, the academic work they are required to do, and their library-related needs" (Foster & Gibbons, 2007, p. v). This lengthy study looked at many aspects concerning student needs; however, this literature review looks at the University of Rochester's efforts to analyze and resolve their library space in a very innovative way. As authors and editors of this study, Foster and Gibbons (2007) noted that a typical day for the students did not coincide with the typical hours of the library. They discovered that the library was closed during the critical hours that students needed to access the space for research, studying, and the like. A profound question raised by the authors was, "How

can a library fully support the learning and research needs of students if it closes its reference desk precisely when students finally approach it?" (p. 20).

To serve the late-night students, the University of Rochester Library stayed open during the late-night hours. Foster and Gibbons (2007) also noted that librarians Suzanne Bell and Alan Answorth wrote, "We dubbed the pilot 'Night Owl Librarians' … the name was particularly appropriate…it was a plan that was simple, inexpensive, and could be implemented in a hurry" (p. 16).

The pilot program was marketed to students and offered for two weeks. The late-night staff worked at night from Sunday to Wednesday and stayed open until 11 pm. This schedule was based on previous student data. Analyzing this approach, the pilot program was deemed successful, and the library team learned that students approached the desk because there was help available when they needed it, not because they saw signs on tables or read about the available help in the student newspaper much like during the normal reference desk hours (Foster & Gibbons, 2007, p. 18).

As Rochester Library continued its improvements, it examined how the space was being utilized and realized that the students had informally self-selected different noise areas, and the study spaces had become "zoned" into quiet areas and not-so-quiet areas. They noted that, "in some rooms…you can hear the proverbial pin drop…; the reference area, in contrast, has a constant buzz and murmur" (Foster & Gibbons, 2007, p. 20). While these zoned areas had not been intentionally developed, they did exist, and the library team set out to see if space changes might improve library services.

The first phase of this improvement was to informally survey students by using a flipchart at the library entrance to ask the questions, "Why do you like to come here? What is

missing?" (Foster & Gibbons, 2007, p. 21). From the 38 responses, they made the changes that students had suggested which included a new web page suggesting places to study with spaces designated as quiet, collaborative, and comfy. The web page also mapped the electrical outlets in the library. Another solution suggested by students was to add several stand-up computer stations so students could check email or search the electronic library catalog for materials (Foster & Gibbons, 2007).

The second phase of library improvement occurred in the second year of the project and was funded by the Gleason Foundation. The goal of the renovation project was to transform a large square area of the library staff backroom into student spaces that were collaborative in nature and to create a grand staircase that led to the Student Computer Center (Foster & Gibbons, 2007, p. 21).

To renovate the space students again participated in a charrette-style process. They were provided with supplies such as poster-board, markers, pencils, and sticky notes and asked to design the space. Their design could include adding walls or having no walls, furniture options, staffing, and any amenities that would make for a better experience. Students were paid $5.00 and offered food at no charge to participate in the 20-minute session. They were instructed, "So you design the space, and overnight it is built. It is exactly the way you wanted it to be, and you love it and want to go there a lot. Show us what it looks like" (Foster & Gibbons, 2007, p. 22). In addition, the authors noted that,

> Some students suggested creative ideas such as "massage tables, fountains, gardens, and game tables…fireplaces, sofas, beanbags, and ottomans" while other designs included "whiteboards, conference tables, and partitions or other structures to provide some level of privacy or sound dampening." (Foster & Gibbons, 2007, p. 22)

Other students suggested "windows, food sources, and even traditional materials such as books and magazines scattered throughout the designs" (Foster & Gibbons, 2007, p. 22).

The student input focused on five major recommendations:

1. Students insisted on flexibility to move within spaces such as areas for group study, areas to relax in, and spaces for individual study. They wanted food provided by a café, a computer area, and a place to view media.

2. Students suggested spaces where they could feel comfortable meaning, "easy access to coffee and food, natural light, and an environment with soothing textures, sounds, and great warmth" (Foster & Gibbons, 2007, p. 22).

3. With an interest in the most current technology, students recommended "media players, Smart Boards, and plasma screens as well as low-tech items including staplers, power outlets, and a three-hole punch" (Foster & Gibbons, 2007, p. 22).

4. Only a few students noted available staff as important, mainly to answer questions about food availability, and/or how to locate books, study spaces, and supplies such as staplers.

5. The final request of students was resources that might be considered similar to a "traditional academic library…ranging from academic and reference books to leisure magazines and DVDs" (Foster & Gibbons, 2007, p. 25).

To understand the furniture design, Rochester University again reached out to students using the charrette approach and invited them to a two-hour design workshop and compensated the students as they had done previously. With furniture cutouts scaled to size, students laid out their preferred furniture placement on poster-boards. The results of this project were in complete contrast to what the library team had envisioned. The library team declared, "If the furniture had been laid out as the renovation team proposed, we would have simply gotten it all wrong!" (Foster & Gibbons, 2007, p. 27).

Lessons learned were two-fold in studying student needs in renovating and improving library services at Rochester University Library. The first lesson learned was that collecting student input could be done in an affordable and time-efficient way. The workshops were two-

hours long with an additional eight hours for prep work and analysis. Payments to the student were $100 with an additional $50 for snacks and supplies (Foster & Gibbons, 2007, p. 29).

The second lesson learned was "that we, as librarians, cannot assume we know how our students do their academic work or what they need. Over and over again, our assumptions have been proven wrong" (Foster & Gibbons, 2007, p. 29).

Both the Andrew University White Library and the University of Rochester Library were able to refresh their libraries to meet the changing needs of students. Using survey results, both institutions were able to implement the changes that better met the needs of their students. Both the Andrews and Rochester University surveys provided them the critical information needed to improve how they serve their students.

Administrator Support

Administrators also play a vital role in the decision-making process of library transformations. They analyze data, listen to concerns, provide guidance, and advocate for the needed resources. Academic library administrators are responsible for ensuring that the library's goals are fully aligned with the institution's mission, strategic plan, and accreditation. The ALA continues to guide the conversation around library leadership and asserts that the academic library leader's mission should center on teaching and learning, yet from the institution's budgetary perspective, a library's rationale for existing is to support the college's learning community — students and faculty. With academic departments competing for funds, Wegner and Zemsky (2007) stated that libraries have to place an emphasis on their budget priorities such as the acquisition of materials, teaching, staffing, and technology. In addition, they noted that "The allocation of funds among such budget items becomes a statement of priorities and a vision of roles the university or college librarian envisions for the library" (p. 4).

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Financial resources are critical in realizing the vision that students, faculty, administrators, and librarians have for their learning spaces. Creating an active learning environment that promotes student and faculty engagement requires exploring possibilities and asking questions. Questions from library administrators and librarians might include:

- How does a learning space contribute to or deter access to learning?

- What elements of the space can be reimagined to fully engage students?

- Does lighting, space configuration and placement of materials play a role?

- Is the furniture uncomfortable?

- Are there adequate spaces for quiet study and group work?

- How will we pay for this?

According to Scott Bennett (2003) of Yale University, "Between 1992 and 2001, the higher education community spent on average some $449 million annually on library construction. On average, about 2,874,000 gross square feet of space were renovated or built annually" (p. 3). In addition, Bennett also noted that during the same period, 38 library projects were completed, and the construction of new library buildings was an average of 1.1 million gross square feet, which was the equivalent of 40% of the total space involved. Bennett's *Libraries Designed for Learning* reported findings about space conceptualization and planning processes from a web survey of library construction and renovation projects undertaken between 1992 and 2001. Bennett's survey of college presidents during the 1995-2001 period sought to understand the motivating factors for their library projects. The top three responses were (1) the growth of the collection, at 57%; (2) the changing character of student study spaces, at 45%; and (3) changes in, or growth of, library instruction programs, at 32%. Essentially, Bennett's findings revealed that libraries in the 1990s were focused on expanding spaces to accommodate a growth

in print collections and an expansion of circulation services with the need for rooms to deliver library instruction. In addition, during the same period, Bennett found that libraries were willing to give up user space for collection size.

In their roles as directors at each of their institutions, Harold B. Shill and Shawn Tonner surveyed other college administrators from the mid-1990s to 2002. In their 2004 article, "Does the building still matter? Usage patterns in new, expanded, and renovated libraries, 1995-2002," they discovered more than 390 academic library buildings in Canada and the United States were constructed, renovated, or expanded between 1995 and 2002.

In a slight contrast to Bennett's findings, during the same period, Shill and Tonner (2004) noted the challenges libraries were facing stemmed from, "growing student usage of internet resources, off-site availability of electronic resources, institutional needs for technology upgrades in classroom buildings, and declining usage statistics" (pp. 124-125).

Shill and Tonner (2004) continued the conversation by stating that there were also other factors that impact library usage such as "broader trends and local factors" (p. 124). The authors asserted that although large sums had been invested in improving or even building new facilities, there was little known analysis of any correlation between the quality of a building and its usage. In fact, they surmised that librarians were left to rely on anecdotal evidence to determine if facility improvements had a direct positive correlation to library usage. There were 171 administrators who provided feedback for the Shill and Tonner study, and in their findings, the authors noted that students abandoned academic libraries due to

> facilities lacking good computers, an extensive network access infrastructure for laptop computer users, and a comfortable environment conducive to a variety of uses (individual and study research, instruction, social) … [The study] provides clear, empirical evidence that students can and will use a comfortable, well-equipped library. (p. 149)

This finding in the Shill and Tonner research was in contrast to the Oliveira (2016) study of why students chose to study in other places on campus.

Shill and Tonner's (2004) conclusion emphasized the importance of library renovations because the financial investment helped to enrich the student experience which included, "research and study space, teach information literacy skills, expose students to recorded knowledge in both print and electronic formats, and make 'information experts' readily accessible" (p. 149).

Julie McKenna (2006) from Regina University reviewed the 2004 Shill and Tonner article, "The quality of academic building improvement has a positive impact on library usage." In the review, McKenna discussed the relationship between library usage and gate count. The author noted that Shill and Tonner received responses from 90 of the 384 academic libraries surveyed. Their survey regarding gate count revealed that while libraries that completed a renovation originally reflected an increase in gate count, as time progressed, even with a renovation, some libraries experienced a decline in usage. McKenna revealed that, although a large percentage of the libraries saw a surge in library usage after the improvement, the drivers of increased usage were the quality of the improvements and the building. The literature confirms that four-year academic libraries are in a state of constant change, and administrators play a critical role in supporting and advocating for the needed changes.

Funding

In order for any library space change to occur, library and college administrators must consider funding as a critical component of what is usually a costly endeavor. Public higher education, including community colleges have typically been funded by the concept of the three-

legged stool — state, local appropriations, and student tuition — with each leg contributing 33% of the funds (Mitchell et al., 2017, para. 30).

As of April 2019, in the state of Illinois, Brian Durham the Executive Director of the Illinois Community College Board (ICCB) told a senate committee that the state provides 16% of the funding for community colleges (Nowicki, 2019), less than half of the 33% of the three-legged stool. In Illinois, the Higher Education Public Community College Act established the means by which two-year public colleges in Illinois could gain access to funding for facilities improvement, renovation, or additions. The state statute requires community colleges to pay for 25% of their state funded projects with local resources such as levying taxes or the issuance of bonds. Unfortunately, community colleges and four-year colleges share the same revenue stream for their projects (Illinois Board of Higher Education [IBHE], 2004, p.14). In 1997, the Illinois Community College Board (ICCB) conducted a survey of community college facilities, asking for an estimate of the funds required to maintain their individual facilities. The survey produced a subsequent report titled, *A Report on the condition of the facilities of Illinois Community College.* The study revealed that colleges had deferred major and minor maintenance due to an underfunding of their maintenance budgets; in fact, the deferred maintenance in 1997 exceeded $300 million.

Mitchell et al. (2017) from the Center on Budget and Policy Priorities (CBPP) affirm that overall funding for colleges and universities has fallen by $9 billion, a figure lower than the 2008 funding after adjusting for inflation. In 2016, more than 53% of college funding was from state and local appropriations. During the economic downturn of the past decade, college funding from state and local governments decreased significantly, thereby shifting the burden to the

student as colleges had to increase tuition to make up for the financial shortfall. During this period, higher educational institutions experienced significant belt tightening.

In the state of Illinois, as the politicians wrangled over balancing the budget, the state failed to pass a budget for a two-year period. During this time, Illinois public colleges, including community colleges, experienced faculty and staff layoffs, closed campuses, and cut services in order to remain open. Mitchell et al. (2017) noted that in 2016-17, all but thirteen states were able to increase higher education funding levels.

The renovation of any building on a college campus is usually the result of a deliberate and collaborative process. The strategic plan of educational institutions incorporates long-term goals for the college including any physical building changes. Tied to the college's strategic plan is the campus master plan, sometimes called the facilities plan. This plan takes a long-term view because of the time needed to plan, secure funding, and build or extensively remodel major facilities: "Keeping facilities consonant with the strategic plan, the budget is crucially important, particularly because physical facilities are fixed assets and changes cannot be made without long term planning" (Saunders, 2014, p. 68). As colleges continue to adapt to the demands on teaching and learning, such as a need for connected learning with the use of the web, updating learning spaces should be foremost in the mind of college administrators. Saunders also asserted that providing spaces for students in the 1960s and 1970s during the early years of college building, finding spaces for students to hangout was not a consideration, yet the emphasis today is on student engagement, increased access to support services, and group learning activities. This change has "prompted colleges to rethink the purposes for which physical space on campus is committed and the degree to which those spaces are both functional and appealing (Saunders, 2014, p. 68).

Whether renovating an existing building, making minor cosmetic changes, or building a new academic library, each of these endeavors incurs significant costs. Gstalder (2017) asserts that between 2003 and 2009 the average cost of a new library was $30 million. He also noted that renovations, while not as expensive as new construction, still had a large price tag; an unusual renovation project completed in 2009 was $100 million — clearly not the norm (p. 6).

The Academic Facilities Act of 1963 was created to provide matching funds for the construction of academic libraries at public and private institutions (Bobinski). The Act was defunded in 1986 when the federal government reasoned that state and local government should bear the responsibility for academic facilities funding to eliminate duplicated funding efforts (Montgomery & Miller, 2011). The government, in one form or another, has contributed to the growth and relevance of libraries through targeted funding for information technology needs, collections, and electronic resources. Other sources of funding for libraries, academic libraries in particular, have come from various sources such as the college foundation, endowed gifts, state government grants, fund raising capital campaigns, and the college itself.

According to Bobinski (2007), in 1977, "Edmund and Louise Uraff Kahn made…three $1 million gifts to the University of Pennsylvania […]Libraries, [...]the Smith College Library […]and to the Dallas Public Library" (p. 73). Colleges in recent times have developed endowment funds from various private donors and foundations to fund various initiatives such as expanding the electronic collection, adding maker spaces, and creating additional library instruction labs. According to DeAngelis and Nieman-Deschaaf (2013),

> Sometimes, creating a library to embrace these changes requires constructing a new building or making major modifications to an existing facility. But in many cases, a modern, functional library can be created through a budget sensitive renovation within an existing space. (p. 122)

In the 2017, *American Libraries: Library Design Showcase*, Brian Lee, architect and design partner at Skidmore, Owings, and Merrill, recommended that libraries should find innovative ways to finance their large-scale renovation projects. One suggestion was that common sources of financing could stem from tax increment financing (TIF) (Morehart, 2018). Other authors agreed with Bobinski (2007) and suggested that renovation funding could include capital campaigns, endowments, donations, and appropriations from the state. While little information is available regarding the details of funding renovation projects, the Grand Valley State University and the University of Calgary projects provide some insight.

The Grand Valley State University Library in Allendale, MI

On September 21, 2010, in the article written by Dave Murray in the *Grand Rapids News*, "What's in store for Grand Valley State University's new $65 million library," Murray noted that the renovation of the new library would coincide with the fiftieth anniversary of the university. The university president, Thomas Haas, said that the new construction project would create nearly 1,500 jobs over the three-year project, would increase the space by about 100,000 square feet of the current Zumberge Library (technically known as a learning and information commons), and would increase the number of materials that could be held in the retrieval system by 600,000 additional volumes of material (p. 1/4).

The funding for the renovation was the result of a combination of fundraising efforts, bonds, and savings that resulted in a $65 million budget. Initially, the college trustees were unsuccessful in procuring state matching grants, which left a $25 million gap. The fundraising campaign to raise $25 million was not fully realized; however, the efforts yielded "more than $20 million of the new library's $65 million price tag … through donations, with the lead gift coming from Robert C. Pew II, a longtime donor to Grand Valley" (McVicar, 2013, para.11).

In a February 5, 2010 article, "Grand Valley State moves ahead with new library," Haas noted,

> It's important to note that this project will not raise tuition. It will provide much-needed facilities to serve students. The current library on the Allendale Campus was built in 1969 for a projected student body of 5,000. Grand Valley has 24,000 students. (GV NOW, 2010, para 2)

Funding such a large scale and costly project required some creativity that sought money from various streams which included private funding and donors: "The university paid for the remaining $45 million by selling $23 million in bonds, with the rest coming from its campus development fund" (McVicar, 2013 para. 13).

In Murray's article, the largest gift came from a long-time donor, Robert C. Pew, who was also a GVSU founder. He wanted the building named after his mother, and his sister Kate Pew Wolters' goal was to find out "What is it going to take to get her name on that library?" (Murray, 2010, p. 2). As a result of this successful endeavor, the Learning and Information Commons (library) was completed on time in 2013 and was renamed after the mother of the Board chair. The library is now called the Mary Idema Pew Library (Murray, 2010, para 5).

This collaborative effort of envisioning a much-needed space change and partnering with various groups both within the campus and externally by millage are some of the methods utilized by library administrators to fund this renovation building project.

University of Montana Mansfield Library in Missoula, MT

In the 2018 article from the University of Montana, "Mansfield Library stabilizes funding, undergoes renovation at the University of Montana," it was reported that the university was experiencing declines in student enrollments and, because of this, funding was being reduced in various departments including their Mansfield Library. However, this story is another

example of utilizing successful nontraditional financing to renovate the library and not only to keep it going, but also to keep it growing.

In a 2017 article, "Committee chair: Make library a priority at University of Montana," Keila Szpaller reported that "the Mansfield Library has lost 30% of its workforce since the 2016 fiscal year, and it plans to curtail hours come spring 2018" (p. 1/7). In the same article, Shali Zhang, dean of the library was quoted as saying that 'funding for collections has dropped 31% from 2013 to 2018 fiscal year' (Szpaller, 2017, p. 2/7).

During this time, another internal report from the University of Montana stated the "administration must stop ongoing cuts to the library collection funding" and library staff were disappointed to learn that, "the library was omitted from UM President Sheila Stearns' draft report on campus priorities" (Szpaller, 2017, p. 2/7). The report went on to say that the library, as well as other departments, was experiencing reduced funding.

In spite of these issues, Zhang determined that the 40-year-old building that housed their academic library required a much-needed major renovation to support students. To make this happen, Zhang sought funding on her own to renovate the library. She admitted that cultivating donors from other disciplines on campus took up 30% of her time.

Zhang stated that in 1972, the state funded 76% of higher education efforts, yet in 2018 state funding had been reduced to 38%. With her fundraising efforts Zhang, expected the 2019 budget to be approximately $5.89 million, "slightly more than its total last year after faculty and staff buyouts" (Szpaller, 2018, p. 2/9). Zhang's success story resulted in her ability to hire several more staff and she hoped to hire "a tenure-track faculty post and ... a halftime adjunct" (Szpaller, 2018, p. 2/9).

The University of Montana is an example of how libraries, like other disciplines in academia, had to advocate for their resources in order to complete their space changes. With the Library Commons expected to open in September 2019, students will experience the new multipurpose library spaces, a "$360,000 project funded through private philanthropy...Our library is supported by donors. They really care about students" (Szpaller, 2017, p. 3/9).

CHAPTER SUMMARY

ALA's contributions to the field of librarianship helps library professionals navigate the ever-changing landscape of information management. Communities of practice from ALA have continued to sound the alarm about change and how libraries and their administrators must prove their relevance to their institutions.

The literature review affirms the various examinations of studies regarding four-year institutions and the evolution of librarianship, library buildings partnerships that are being forged with student service providers on the college campus, and the drivers of change in the college environment including students, technology, faculty, administration, and the budget. Chapter 3 covers the theoretical framework and case study methodology used in this research study with a focus on six community college libraries in the Great Lakes Region.

CHAPTER 3: RESEARCH METHODOLOGY

INTRODUCTION

This qualitative inquiry uses the case study as the methodology. Creswell (2009) stated that this type of research focuses on a particular set of "processes, activities, or events" (p. 177) allowing the researcher to gain an in-depth understanding of the topic by conducting face-to-face and/or phone interactions. The cases for this study are six community college libraries from the Great Lakes Region, exploring their space changes within the last five years to understand their decision-making processes, implementation plan, and outcomes. This chapter details the phases of the qualitative study using the multi-case methodology examining multiple cases to understand the similarities and differences between them (Baxter & Jack, 2008, p. 550).

According to the Center for Innovation in Research and Teaching (CIRT), "The goal of qualitative research is to provide in-depth understanding and therefore targets a specific group, type of individual, event, or process" (CIRT, n.d.b. Para 1). Merriam (2009) states that "In the broadest sense, research is a systematic process by which we know more about something than we did before engaging in the process" (p. 4). Creswell (2009) adds the research process for qualitative study is emergent, which means that the initial research plan is fluid and can change during or after the researcher begins the data collection.

According to Patton (2002), qualitative studies rely on "direct quotations from people about their experiences, opinions, feelings, and knowledge...obtained through interviews, detailed descriptions of people's activities, behaviors, and actions" (p. 14). In addition, qualitative studies can include behavior recorded in observations and excerpts, quotations, or

entire passages extracted from various types of documents. Based on the nature of qualitative research methods, which is to understand information in-depth, understanding how two-year college libraries make decisions about transforming their spaces is best implemented using the qualitative methodology with a multi-case study approach. A multi-case approach examines the same or similar phenomenon at various sites.

Research studies are conducted at various sites for observation, interviews, and document examination. The researcher has to decide on which sites, which individuals, and which documents to examine. In qualitative and quantitative research, there are two types of sampling: probability and non-probability. The goals of qualitative research do not necessarily seek to validate a theory such as cause and effect and as such, probability sampling would not be appropriate. Non-probability sampling is more appropriate for this study because it seeks to discover what has occurred and the implications of the occurrence and the relationship linking of the occurrence (Honigmann, 1982). The most common form of non-probabilistic sampling is purposeful sampling. Merriam & Tisdell (2016) note that "purposeful sampling is based on the investigator's need to discover, understand, and gain insight" and must select the sample that provides the most gain (p. 96). Marshall and Rossman (2011) note that "case studies rely on historical and document analysis, interviewing, and typically some form of observation for data collection…. Case studies take readers into the setting with a vividness and detail not typically present in more analytical reporting formats" (p. 267).

SITE SELECTION

To select the most appropriate case to study, researchers must establish criteria that guides the selection (Merriam & Tisdell, 2016). The following four criteria guided this study.

1. The selected colleges must be two-year institutions.

2. The chosen colleges must be situated in the Great Lakes Region of the United States as described by ICCB. This region is composed of Illinois, Indiana, Michigan, Ohio, and Wisconsin.

3. The chosen colleges must be very small, small, medium, large, and very large in size according to the Carnegie classification system.

4. The chosen colleges must have completed a library transformation within the last five years.

In selecting colleges, the researcher determined the first criterion (two-year institutions) through the use of purposeful sampling. According to Merriam (2009), "purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 77). Purposeful sampling, according to Creswell (2005), involves the intentional selection of individuals and sites to learn about or understand the topic at hand. LeCompte and Schensul (2010) state that the criteria the researcher uses to establish purposeful sampling directly reflects the purpose of the study and guides the identification of information-rich cases. Selecting a particular site for research relies on information gleaned from the community college universe. Through purposeful sampling, this study will examine the processes that college libraries used to transform their spaces, how they implemented the processes, and, subsequently, learned the outcome of their project.

Criterion two (Great Lakes Region) was based on the geography of the colleges within the bounded location utilizing data gathered from the Integrated Postsecondary Education Data System (IPEDS). IPEDS has various regions for all colleges in the higher education universe. The states designated in the Great Lakes Region are Illinois, Indiana, Michigan, Ohio, and Wisconsin. Only colleges in this region were considered for the study. Table 1 details the number of two-year colleges per state by size.

Table 1: Enrollment by Location and Classification

STATE	VERY SMALL	SMALL	MEDIUM	LARGE	VERY LARGE	TOTAL
Illinois	0	17	18	15	1	51
Indiana	0	4	0	0	3	7
Michigan	3	10	5	8	2	28
Ohio	0	15	6	5	2	28
Wisconsin	3	6	6	4	0	19
Total	6	52	35	32	8	133

Source: Carnegie Classification of Institutions of Higher Learning, 2019

Criterion three (size of college) is an important component for site selection and relies on the Carnegie Classification of Institutions of Higher Learning. Size, according to Carnegie (2015), "is related to institutional structure, complexity, culture, finances, and other factors" (p. 10). Carnegie further defines size based on the college's full-time equivalent (FTE) enrollment in the colleges' Fall sessions only. Currently Carnegie's definition lists:

- Very small with fall enrollment of 500 or fewer students

- Small colleges with fall enrollment of 500 –1,999 students

- Medium colleges with fall enrollment of 2,000 – 4,999 students

- Large colleges with fall enrollments of 5,000 – 9,999 students

- Very large colleges with fall enrollment of at least 10,000 students.

This study uses the Carnegie classification from the Fall enrollments of associate-degree granting institutions to select institutions that are very small, small, medium, large, and very large.

Criterion four (library transformation within five years) was based on two-year college libraries that have undergone a transformation within the past five years. It is important to study recent and completed renovations within the stated period to ensure that stakeholders involved in

the project have gathered feedback and usage data before and after the renovation and are able to share the information. As a part of the criteria selection and to comprehend the space changes of the libraries, this study looked at three well-known library publications. The first publication to understand criterion four is the ACRL. Their annual *Excellence in Academic Libraries Award* publication recognizes libraries with interesting spaces: "The award is given to academic libraries that are outstanding in furthering the educational mission of their institution" (ACRL, 2018). The second publication is the A*cademic Library Data: Year in Architecture,* an annual publication that details libraries that have undergone new builds, renovations, and additions during the past year. The third publication is *American Libraries*, an annual issue of the ALA that showcases library design. These publications list libraries that have undergone space transformations that include new construction, additions, and renovations and also awards for design innovation. This study provides detailed data about college libraries that have undergone a space change within the past five years.

In addition to the four criteria listed above for site selection, research for this study also turned to the data collected by the American Association of Community Colleges. According to the AACC, there are 266 public and 293 nonprofit two-year colleges in the Great Lakes Region. The total group of colleges is the population universe, the selected colleges are the sample, and the process of selecting the colleges is sampling (NCES, 2017b). Oliver (2013) provides a list of decisions to consider prior to sampling:

> (1) defining a sample universe, by way of specifying inclusion and exclusion criteria for potential participation; (2) deciding upon a sample size, through the conjoint consideration of epistemological and practical concerns; (3) selecting a sampling strategy, such as random sampling, convenience sampling, stratified sampling, cell sampling, quota sampling or a single-case selection strategy; and (4) sample sourcing, which includes matters of advertising, incentivizing, avoidance of bias, and ethical concerns pertaining to informed consent. (Abstract, n.p.)

Because it is logistically challenging for researchers to sample the universe of available subjects and sites, the quota sampling method was utilized. Quota sampling is a form of purposeful sampling because participants' criteria are preset prior to sampling.

QUESTIONS GUIDING THE STUDY

The main characteristics of a case study as noted by (CIRT, n.d.a.) highlights the fact that case studies are narrowly focused, provide a high level of detail, and can combine both objective and subjective data to achieve in-depth understanding. Libraries change their spaces for various reasons, and while it may be easy to assume why the changes were needed, the root cause of the changes are explored in Chapter 4. To recognize the various drivers of library changes, one can make many assumptions such as:

- The space was outdated

- The college president wanted a new library

- Faculty and staff were dissatisfied with the limitation of the facilities

- The college's accreditation agency recommended the change

- The technology needs of the library were growing faster than it could support

- The space needs had changed, and reconfigurations were needed.

Ultimately, the only way to understand the decision-making process is to explore the various factors at each selected college site. The questions guiding this study were developed to understand the decision-making process, implementation, and outcomes in the renewal of community college libraries. The guiding questions are:

1. What factors led to the realization that the library space no longer met student and faculty needs?

2. What steps were taken to improve the learning environment?

3. What financial considerations were needed to approve the changes?

The research process is not static; in fact, Creswell (2009) describes the process as emergent: "This means the research process cannot be tightly prescribed, and all phases of the process may shift after the researcher enters the field and begins to collect data [because] the questions may change, the forms of data collection may shift and the individuals studied and the sites visited may be modified" (pp. 175-176).

According to Wolcott (1992), "Data collection is about asking, watching, and reviewing" (p. 19). These three concepts are the foundation for the data collection of this study. Merriam and Tisdell (2016) suggest that there are three stages of the data collection process: "entry, data collection, and exit" (p. 142). The entry ushers in Wolcott's first approach: Asking.

The First Wolcott (1992) Approach: Asking

Asking involves the process of interviewing. It is one of the most common forms of data collection. In the interview format, the investigator asks a mix of structured questions that may be followed up with unstructured questions allowing for flexibility in the responses (Merriam & Tisdell, 2016). A request was made to conduct a group interview by inviting stakeholders who were involved in the change process. The interviews were recorded on two separate devices to ensure that data was secure should one recording device fail. After formal introductions at the interviews, the following structured interview questions were used to collect data.

1. What factors contributed to identifying that the library space no longer met student and college needs?

2. What steps did the college take to explore how to improve the learning environment?

3. How did your college improve your library space?

4. Did you demolish, renovate, repurpose, or rebuild, and can you share some in depth information about how you made this decision?

5. Who were the stakeholders (generic titles) and how were they involved in the project?

6. Where there any objections to the project, if so from whom?

7. What concessions had to be made and by which campus group?

8. Do you feel it was the right decision?

9. What financial considerations were needed to approve the changes?

10. How was the project funded?

11. How long did the project take from concept to completion?

12. Did the project fulfill the original mission?

13. What kind of feedback did you receive from the students, community, and college employees?

14. What would you have done differently?

The Second Wolcott (1992) Approach: Watching

A checklist for site observations is provided by Merriam & Tisdell (2016): the physical setting, time of day, participants and their interactions with their colleagues, along with subtle intangible factors like nonverbal communication can be used to provide insight into the general perception of the culture and working environment. Following Merriam and Tisdell's (2016) recommendations, watching for data relies on the keen observations of the researcher at the setting where the phenomenon occurs. They also note that "observations are also conducted to triangulate emerging findings; that is, they are used in conjunction with interviewing and documenting analysis to substantiate the findings" (p. 139).

Prior to the group interviews, my initial observations were made by walking through the physical space. This is important because I needed to experience the space without a preconceived notion. During this time, I also observed (watched) how students and faculty

interacted with the space. A second walk-through was conducted after the group interview to observe the space through the participant's eyes. My observation before and after the group interview helped increase my understanding of the decision-making process. It also assisted in gauging the accuracy of the participant's narrative. Upon completion of the observation, Merriam and Tisdell (2016) recommend that the researcher leave the setting, record field notes as soon as possible, summarize the observation, and draw a diagram of the setting.

Field Notes

The use of field notes is another way to document the researcher's experience at the study site. Field notes were gathered within a three-hour window of exiting the study site. The notes were descriptive in nature with details about the interview setting and participants. Details such as the time, location, name, and title of the participants are vital to the field notes for follow-up. Merriam and Tisdell (2016) stress the importance of documenting the researcher's observation and key ideas as soon as possible, because recall accuracy begins to diminish with time. This process also makes it easier to document nonverbal cues observed during the interview. These cues help to fill the gaps that may occur in the data collection process. Each participant was identified by their first name.

The Third Wolcott (1992) Approach: Reviewing

As Creswell (2009) stressed, researchers should avoid talking about their observation before notes have been recorded. It is also recommended that recordings be made of the researchers' reflections, their reactions, and feelings during the interview process, and should be documented as soon as possible. This is considered observer commentary (Merriam & Tisdell, 2016).

Mining data collected from the interview, the artifacts, and researcher observations contribute to the analysis and review process. Artifacts consist of physical materials found in the study setting such as architectural renderings and meeting notes (Merriam & Tisdell, 2016). Artifacts were gathered based on participants' permission. For the purposes of this study, artifacts are personal documents, emails, previously conducted student surveys, meeting notes, and architectural renderings. It also includes audio recordings of the interview and pictures taken at the site. The advantages of gaining access to these materials enables the researcher to obtain the language and words of the participants and provides written evidence that can be accessed at a time more convenient for the researcher: "The basic procedures in reporting the results of a qualitative study are to develop descriptions and themes from the data that conveys multiple perspectives from participants with detailed descriptions" (Creswell, 2009, p. 175). Creswell goes further to say that "researchers should build their patterns, themes, and categories from the bottom up by organizing data into increasingly more abstract units of information" (p. 175).

TRUSTWORTHINESS OF STUDY

To increase the level of trustworthiness of a case study, the researcher should rely on more than one site to explore the phenomenon being investigated, expand the data set, and enhance validity through data triangulation (Ravitch & Carl, 2016). Denzin recommends researchers use multiple strategies to increase the credibility of their findings and the internal validity of a study: "With regard to the use of multiple methods of data collection for example, what someone tells you in an interview can be checked against what you observe on site, or what you read about in documents relevant to the phenomenon of interest" (as cited in Merriam & Tisdell, 2016, p. 245).

Denzin (1970) identified four types of triangulation: using multiple methods, multiple sources of data such as interview transcripts and survey documents, multiple investigators, or multiple theories to confirm emerging data. In contrast to Denzin, Creswell (2007) recommends using a minimum of two quality techniques to validate studies. This study incorporated triangulation, member checking, and adequate engagement in data collection to validate the findings.

Triangulation

Multiple sources of data collection were used to establish triangulation. Using surveys, interview transcripts, and field note observations provided multiple sources of rich descriptions that corroborate the data. Creswell and Miller (2000) assert that the narrative account and self-disclosure of researchers in the qualitative process help to validate their study by relying on multiple forms of evidence rather than a single source.

Member Checking

Member checking is the second method to ensure trustworthiness. Member checking involves asking participants to read and confirm interview transcripts or summaries for validation. It is a method used to gain feedback based on preliminary findings from those interviewed. In this study, the researcher sent a printed copy of the interview transcript to the respondents for verification and accuracy.

Adequate Engagement in Data Collection

The third measure of trustworthiness is the adequate amount of time invested in collecting data such that the data becomes saturated (Merriam, 2009). Data collection at the study site included identification of the site problem; the methods used to survey students,

faculty, and librarians; architectural renderings; and the data that supports the outcome of the project. While numerous amounts of data are available, there comes a time when data begins to repeat. According to Creswell et al. (2007), this is the point of data saturation and the researcher should stop the data collection process and begin analyzing.

ETHICAL CONSIDERATIONS

Researcher integrity is vital to the reliability and trustworthiness of a study, especially when human subjects are involved. Merriam and Tisdell (2016) assert that in all research, one must trust that the research is carried out with integrity, which involves the values and ethics of the researcher. The Institutional Review Board (IRB; Appendix A) of my institution is responsible for assuring that the researcher does no harm and obtains informed consent. The IRB process requires that the researcher avoid deception, respect the participant's privacy, and treat them as a whole person. The approval granted by the IRB is provided based on the researcher's completion of a Collaborative Institutional Training Institute (CITI) exercise. The researcher's relationship to the participants is also key, as building relationships allows the participants to trust the researcher with what may be sensitive information. The researcher is responsible for establishing trust and assuring the participants that their information will not be released without their consent. The signed informed consent detailed the level of information I could obtain and reveal about the participants.

RELATIONSHIP BUILDING

The case study approach was utilized with an aim to collect detailed information, using a variety of data collection procedures accumulated over a sustained period of time (Creswell, 2009). Collecting detailed information required a process of relationship building. The first

process was to contact the library by phone or email to introduce myself and give a brief overview of this study; the purpose of the call, stating that the college was selected because its library had undergone a library space change; and inquiring about the names of the key stakeholders in the library space change process. When a positive response was received, I followed up with additional questions such as:

- Are the library stakeholders still employed by the college?

- Are the stakeholders available for a group interview?

- Who from your college needs to approve the release of information?

- Will I need to gain formal approval from your institution, and what will the process entail?

Once the college and library agreed to participate in this study, the next step was to choose a date and location for the interviews. Creswell (2009) suggests that qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study.

Prior to the interview, participants were asked to supply information such as staff or student surveys, architectural renderings, and internal documents including emails that pertained to the project. In addition, Bogdan and Biklen (2007) list questions the researcher should consider prior to visiting the site:

1. What activities will occur at the site during the research study?
2. Will the study be disruptive?
3. How will the results be reported?
4. Why the site was chosen?
5. What will the gatekeeper gain from the study? (pp. 78-79)

I followed up with additional calls and emails to the stakeholders to discuss the details of the study, benefits to the institutions if any, and answered any questions they may have. When approval was granted for the interview, I asked if the interview could be in a group setting to gather all pertinent data. Nerstrom (2013) suggests that questions should be developed that elicit personal insight from the participants with a plan for an initial interview and a follow-up interview. I followed up by phone or email as additional questions arose.

THE GROUP INTERVIEW

To maintain effective research practices, the participants should be assured that the process will be no more than two-hours to avoid interview fatigue. It is crucial that a level of trust between the participants and the researcher is established. It is incumbent upon the researcher to establish this by being honest and factual about the purpose of the study and her intent. Since it is anticipated that the researcher will spend some time at the site, the researcher must be respectful of the time allotted for interviews and the space granted for use on participant site. Guthrie (2010) suggests that researchers consider the following steps before beginning the interview process at the interview site:

- Tell participants the purpose of the research
- Tell them what you will do with the results
- Answer any questions about the research
- Respect their right to refuse to participate
- Respect their right to withdraw at any stage
- Pay attention to the time you had stated
- Thank the participants for their time (p. 126)

Prior to starting the formal interviews, participants were asked to sign the consent form, a contractual agreement between the researcher and the participants (Appendix B). One copy was given to the participant and the researcher kept the second copy. The interview process utilized a mixture of semi-structured and unstructured questions. The semi-structured method included asking the respondent to describe their understanding of the space change project, while the unstructured interview included asking the respondent to discuss their participation in the library renovation process. The researcher's role as a librarian helped to ground the understanding of the process involved in renovating a library. Since I have undergone two renovation projects over the course of four years at a public library, I had a firm grasp of two very different renovations that were led by different key players and how the players changed the process of each renovation. I was also aware that my experience could prove to be a biased lens through which I conduct data collection. I also understood that public libraries, while similar to academic libraries, serve different roles in their natural settings. Transformation of academic libraries are long processes that involve various parties from administrators, librarians, faculty, and architects to students. The process can take many years based on numerous contributing factors, which ultimately rest on the college's prioritization and financial ability. The written interview protocol includes the college name, date of interview, name of participants, title of participant, researcher purpose of the study, pertinent interview questions, consent forms, no more than fifteen questions with additional probing questions, audio recordings, and a separate notebook for observations and post interview reflections.

DATA STORAGE

All information related to the study was gathered and stored in a confidential and secure area in the researcher's home office. All personally identifiable information such as the study

location, participant name, and job title were kept in a secure location. Additionally, field notes and interview recordings were secured in an encrypted file accessible through cloud storage such as Dropbox.

CHAPTER SUMMARY

Chapter 3 detailed the methodology, techniques, and the data collection method. A multi-case approach was utilized to gather data from six community colleges in the Great Lakes Region. The four listed criteria helped narrow the focus of the research. The method for contacting suitable participant sites was initially by phone with additional follow-up by email. To obtain trustworthiness and validity in the research method, triangulation of the data included survey documents, site interviews, and observation. Ethics require that the participants be fully aware of the purpose of the study and that no harm be caused by their agreeing to participate. Chapter 4 will cover the identification of the findings with an examination of the collected data, interview transcripts, pictures, and source documents.

CHAPTER 4: CASE STUDIES AND FINDINGS

INTRODUCTION

The data that informed this research study focused on two-year college libraries that had undertaken a space change project. The Integrated Postsecondary Education System (IPEDS) maintains the list of two-year colleges in the United States, and to find a list of colleges by region, I turned to Carnegie Classification of Institutions of Higher Education for colleges in the Great Lakes Region by size. The American Library Association's general listserv was used to send an inquiry to library staff that subscribed (Appendix C).

Responses from Listserv participants yielded a few responses for Illinois, and a librarian from the College of DuPage extended my inquiry to her colleagues who had undergone a prior renovation. To find participants in other states, I joined the State of Michigan Libraries' listserv, which yielded a few responses; however, only one library had completed a renovation. To find libraries in Indiana and Wisconsin, I reached out to libraries through a library CHAT with a follow-up response for two locations in Indiana. There were no respondents from any library in Ohio that fit the five-year criteria. The Director of Libraries in the UW Colleges Systems responded with a willingness to talk and identified other colleges in the system that had completed a space change. Although I met with a librarian from the Ivy Tech Lafayette Library, the library was still in the midst of final renovations and was not included in the study. Once participants agreed to an interview, formal invitations for on-site interviews and consent forms were sent before each interview along with requests for various renovation planning documents (Appendix D).

This research study was conducted in an effort to understand the catalysts that led to the decisions made by two-year college library staff and administrators that have undergone space changes. What factors contributed to the change process and how did each institution respond? In addition to the research questions and the preliminary site-visit questions, the interview consisted of 14 main questions with additional follow-up questions based on the participant's response (Appendix E). The following themes emerged from the responses:

- Campus strategic plan

- Space configuration and furniture

- Technology

- Financial resources

- Input from staff, faculty, students and community

- Lessons learned

The six community colleges that participated in this research are:

1. College of DuPage

2. Harper College

3. University of Wisconsin – Green Bay, Manitowoc

4. University of Wisconsin – Milwaukee, Waukesha

5. Ivy Tech College, Indianapolis

6. Bay de Noc College

Of the six colleges surveyed, the Indiana and Wisconsin two-year colleges are in a state-wide system. The Illinois and Michigan colleges are independent as these states do not have a

state-wide system, with the exception of the City Colleges of Chicago system separately

governed by a mayor-appointed board. These governance systems appeared to make a difference

in funding at each institution as noted in this chapter. All college sizes were represented from a

total of four states in the Great Lakes region. Table 2 shows college demographics for each

location. Table 3 shows the list of participant sites and participants.

Table 2: Participant Classification by Setting, Size, and Renovation Completion Date

COLLEGE	GEOGRAPHIC SETTING	SIZE	LIBRARY STAFF	RENOVATION COMPLETION
Bay de Noc	Rural	Small	3	2016
College of DuPage	Suburban	Very Large	81	2014
Harper College	Urban	Large	33	2018
Ivy Tech - Indianapolis	Suburban	Medium	7	2018
University of Wisconsin – Manitowoc	Suburban	Very Small	2.5	2017
University of Wisconsin – Waukesha	Suburban	Small	6	2018

Table 3: Participant Sites and Participants

INSTITUTION	TITLE OF INTERVIEW PARTICIPANTS	PARTICIPANT
College of DuPage 425 Fawell Boulevard Glen Ellyn, IL 60137	Assistant Vice President Academic Affairs Library Coordinator Librarian	Lisa Rebecca Colin
Harper College 1200 W. Algonquin Road Palatine, IL 6004	Dean of Library Librarian Librarian	Njambe Tom Christine
Ivy Tech Community College 9301 East 59th Street Indianapolis, IN 4621	Assistant Director	Paula
Bay de Noc College 2001 N. Lincoln Road, Escanaba, MI 4982	Director of Library Services	Oscar
University of Wisconsin – Green Bay, Manitowoc 705 Viebahn Street Manitowoc, WI 5422	Associate Academic Librarian	Anthony
University of Wisconsin – Milwaukee, Waukesha 1500 N. University Drive Waukesha, WI 53188	Executive Director Senior Academic Librarian	Jennifer Jane

This chapter includes fast facts about each institution and details of in-depth conversations regarding participants' contributions to the space change process at their college. In addition, themes for each college were identified and discussed. I begin with my experience and observations prior to entering the interview environment. This portion of the study also includes my walk-thru observations. At the conclusion of each interview, I received a guided tour of the library space from each participant. I was able to visit all but one institution, Bay de Noc College in Escanaba, Michigan, because of weather concerns.

College Size and Library Data

College of DuPage (COD) is a very large two-year associate degree granting institution with over 82 programs, 9 associate degrees, and 74 certificate programs (COD, n.d.a, para 4-6). COD is located in Glen Ellyn, Illinois, a suburb approximately 25 miles west of downtown Chicago. The college began with the passing of a referendum from the DuPage High School District voters in 1965 and established a newly created community college district 502 in the same year. In 1967, classes began and were held in office trailers until 1968 when three interim buildings were constructed. Five years later, in 1973, the first permanent structure was built (COD, n.d.a, para. 2-3).

The college's main campus sits on 273 acres set in a residential area with a vast number of open fields and parking lots, with a total of 14 structures, 11 major buildings, and 5 owned and/or leased buildings on other campuses (COD, 2018b). Additional instructional centers are located in Addison, Carol Stream, Naperville, and Westmont. The college's district has over one million residents in 48 communities covering a large geographic area. COD had a 2018 Fall enrollment of 26,376 students with an FTE of 13,676 students. The majority of the students reside in DuPage County with the remainder from Cook, Will, and Kane Counties. DuPage County residents have a median annual income of over $141,000. Approximately 20% of students attending the college already possess a bachelor's degree. Like other community colleges in the state, COD has a 3+1-degree program which allows students to transfer to partner universities while completing their coursework at the COD campus (COD history, n.d.b).

The demographic data of the student population (Table 4) shows the largest population consists of young adults age (19-24) at 52%, students aged 18 and under and adults ages (25-54)

total 23%, while adults aged 55 and over are 2% of the student body with less than 0% with age

unknown. The median age is calculated at 22.

Table 4: College of DuPage Student Population Statistics

STUDENT POPULATION BY AGE / RACE	% OF STUDENT POPULATION
18 and Under (including recent HS graduates)	23
19-24	53
25-54	23
Older Adults (55 and over)	2
Unknown – (Equivalent 1 FTE or 6 seats)	0
White	49
Hispanic	25
Asian	12
Black	7
Two or more races - unknown	6

Source: Carnegie Classification of Institutions of Higher Learning, 2019; COD, 2018c; COD, 2019

The college employs approximately 3,238 employees, which includes 2,317 faculty. Of

the total faculty count, 282 are full time and 2,035 are part time (COD, 2018b). COD is the

largest publicly funded community college in the State of Illinois (COD, 2017, p. 6). Funding

sources for the college include 32% property taxes, 31% state government, 26% tuition and fees,

with an additional 8% from the federal government (COD, 2018a, p. 8). The operating budget for

fiscal year 2019 was $177,317,376 (COD, 2019).

Like most institutions in the State of Illinois, COD has experienced a decrease in

enrollment over the past five years; the college's student newspaper the *Courier* reported that,

> Over the past five years, College of DuPage has seen a 15.5% decrease in overall student enrollment. In 2014, COD had an official head count of 29,476 total students and 16,858 full-time equivalent (FTE) students taking 15 credit hours or more. After COD's official

10th day headcount for the 2018 academic year, there are 24,900 students and 13,676 FTE students. (College of DuPage Courier, 2018)

Studies have shown that, during an economic downturn, college enrollment increases, and as the economy starts to see an upswing, college enrollment decreases. This is not unique to colleges across the country, and such is the case in the State of Illinois.

About the Library

The COD Library is located at the main campus in the Student Resource Center (the SRC is located on the second and third floors of the building). The SRC also houses the bookstore, administrative offices, continuing education, academic computing center, cafeteria, learning resource center, and conference center. The Library is open 80 hours a week and is operated by 81 staff members that include 10 full-time librarians, 19 full-time and 26 part-time classified staff, and 26 student workers. The library's mission is to,

> be an exemplary academic library that supports the educational goals and purposes of the college. The Library is dedicated to providing instruction and access to resources and services that support the academic program and the general information needs, diverse cultural interests, intellectual development, and professional growth of the entire college community. (COD, n.d.c)

The library, previously called the Institutional Resource Center (IRC), was opened when the college was founded in 1967 and was housed in the Glen Hill office complex. The IRC was moved in 1969 to the J building in 1983 (Dunbar, 2017). In 1972, the IRC was renamed the Learning Resource Center (LRC), and in the 1980s, the computer catalog began to take the place of the card catalog (Dunbar, 2017). In 1997, the LRC was renamed yet again, and this time as the Library. In 2010, a $168 million capital referendum was passed that included the future renovation of the SRC including the library (COD, 2017, p. 1).

The library renovation was carried out in two phases: the first phase focused on the

second floor, and the final phase was focused on the first floor. In August of 2013, the library

had renovated the second floor and had closed off the first floor to complete the renovation. The

$40 million project also included work on the SRC; however, the majority of the funds were

directed towards the library (Versaci, 2014). Though the entire project took17 months, this

research is focused on phase two of the project, which was on the first floor of the library.

As of August 2018, the library had 42,859 card holders, consisting of 33,275 students,

2,608 faculty and staff, and an additional 6,976 registered community members. The library

occupies 108,000 square foot on two levels of the SRC. Print materials account for majority of

the collection at 249,230, with an additional 95,318 nonprint resources such as microforms,

audio books, and music and video recordings. Electronic resources, such as databases and

streaming media, total approximately 95,298. The library is visited by over a quarter of a million

students, faculty, and residents a year with an average of 2,000 visits per day (COD, 2018b).

The number of library visitors has changed incrementally over the years. According to

the library's fact sheet, the 2011 number was 765,099; in subsequent years, the number of

visitors decreased, and in years 2017-18, the number of visits remained steady at approximately

750,000 (COD, 2018b; Table 5).

Table 5: College of DuPage Library Data

CATEGORY	DESCRIPTION
Address	425 Fawell Blvd., Glen Ellyn IL, 60137
Institution Size	Very Large (FTE)
Participant Titles	Assistant Vice President Academic Affairs Library Coordinator Librarian

CATEGORY	DESCRIPTION
Type of Renovation	Phase 1 - July 2012 to April 2013 Architectural configuration-structural (Same footprint) Phase 2 - April or May of 2013 - January 2014 Structural and cosmetic re-design
Collection Volume	246,230 print, 124,488 non-print, 95,181 eResources
Door Count	750,000 annually
Square Footage	108,000 square feet on two levels

Source: COD, n.d.c.

Initial Observation

On Thursday, December 6, 2018, I arrived at the college for the site interview. COD sits on a large expanse of open fields with several buildings, and as I approached the SRC on the south end of the campus, it was teeming with students (Figure 1). The SRC houses the library and the Learning Commons and is home to the tutoring center, math assistance, the writing lab, and placement test center. As I drove down Lambert Road, to my right was the Homeland Security Education Center, a relatively new addition to the campus. The SRC is a glass-encased three-story building connected to four other buildings on campus. I parked in the lot directly across from the SRC and walked across a walkway that led to the entrance of the building.

Figure 1. College of DuPage Student Resource Center/Atrium

I arrived 15 minutes before my 1:00 pm interview to explore and interact with the space before meeting with the participants. The library's first and second floors are located on the second and third floors of the SRC. Upon entering the circular rotunda of the SRC, to the left was a sign with directions to the second floor where the library was located. A set of stairs to the left led to the second floor of the building. I climbed to the top of the stairs and veered left on a curved walkway that led to the entrance of the library on the right. The automatic doors opened to a wide and open interior expanse flanked by windows in a circular space. Located about ten feet from the entrance was the circulation desk staffed by two individuals.

In the middle of the floor, adjacent to the circulation desk, was a prominent round pillar with a curved table with two library catalog computers (Figure 2). To the right of the large pillars were two double-sided stands that held a browsing collection of new "Featured Books." Behind the pillar were several round study tables with chairs and a free-standing whiteboard with wheels. A few feet to the right and behind the study tables were two service desks; to the right

was a vacant desk and to the left was the Reference desk also staffed by two individuals. Behind

and adjacent to the desk was a large staircase that led to the second floor of the library. Before

the stairs were additional tables and chairs, reference bookshelves, and what appeared to be a

quiet zone. At the bottom of the stairs to the left was the Media Lab. The Computer Printing

Support Station stood behind the Reference desk to the right. Behind the printing station were

periodical shelves tucked into a low ceiling area. The building was circular in shape and the

carpet had dark shaded circular areas in various places, and the columns helped to emphasize the

circles.

Figure 2. College of DuPage Library First Floor/Checkout Desk

Directly behind the Reference Desk were study carrels filled with desktop computers and

occupied by students. Past the carrels were upholstered seating areas dotted throughout the

space. The perimeter of the space was lined with glass-walled instruction rooms and a media lab.

Since my appointment time was approaching, I walked back towards the reference desk. I said

hello and stated my name and appointment with Rebecca at 1:00 p.m. I was instructed to meet her at the top of the stairs.

The staircase was wide and appeared grand in stature with a short landing between the second and third floors. At the top of the stairs was the second reference desk, and as I reached the landing, I was met by Rebecca who introduced herself. As she turned to the left to lead me down a hallway, we walked past a silent study room to the library administration staff area. I followed her into a small office with a table and six chairs. She asked me to have a seat while she got the other participants. I took the time to set up my recorders, notebook, and laptop.

The Interview

Colin, an associate professor and manager of Web Services, entered the room and introduced himself. Colin had a professional yet kind demeanor. He had some papers with him, and I asked if he had received the Informed Consent Forms; he said he had. Colin said he had another meeting and could only stay for an hour. Shortly after our exchange, the associate vice-president of Academic Affairs (AVP), Lisa, and Rebecca joined us, and I exchanged greetings and introductions. Rebecca was a woman with short wavy hair and keen eyes. As we sat down, I thanked them for agreeing to participate in my research. I talked a little bit about myself and the purpose of the study. I also explained the voluntary nature of the study and restated the need to record the conversation. Participants were also notified that they could withdraw at any time during the interview.

Prior to the recording, I asked each participant to state their name before they answered questions or contributed to the discussion to help with transcription purposes. As we began, each participant stated their name, title, length of service, and role in the space change. Rebecca began by introducing herself and shared that she was the coordinator of Library Operations. Rebecca

had been at the college since 2002 and, as a member of the library administration, was part of the renovation planning process. She gave me a comprehensive list of materials including the floor plans she had gathered.

Lisa has been in her role for ten months, had been dean of the Learning Resources of COD until 2013, and had played a major role in the library at the time of the renovation. She left COD in 2013 and returned in 2018 as the AVP. Colin was library faculty and had also been at the library since 2002 and played a role as chair of the technology committee that led an ad hoc educational specifications (ed. spec.) committee tasked with making educational specification recommendations about group study rooms, classrooms, and public computing spaces.

The library aggressively weeded about 30% of its collection and reduced about one-third of the shelving. Prior to the renovation there was one entrance, one front door, which was a challenge for students and staff. After the renovation, they doubled the circulation desks by having a desk on each floor and added multiple entrances.

Table 6 shows the themes that emerged from an analysis of the interview. The sentences in the text boxes are direct quotations from the participants.

Conclusion

Six themes were identified as major or significant in nature. The members of the renovation project conducted a lot of initial research before embarking on their library renovation. They visited other institutions such as public libraries, colleges, and universities. The nature of the renovation was driven by the college president at the time. Additional information gathered regarding the renovation were:

- Early discussions of anchoring the library in the SRC were repeated.
- The renovation was in two phases: 2012-13 and 2013-14.

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- The renovation was a part of a larger strategic plan of the institution.

- Input was gathered from the community, students, faculty, and staff.

- Each team member used their strengths and skills to contribute to the project.

- The collection was heavily weeded before the renovation.

- The remodel met most of the requirements but not all, as students still wanted individual study spaces.

- The final design appeared more conservative in comparison to other institutions.

Table 6: Themes that Emerged from Interview Analysis – College of DuPage

PARTICIPANTS	COMMENTS
Theme 1: Campus Strategic Plan	
Lisa	• We had gone through a big referendum campaign and… we worked really hard to be an anchor project in that referendum. • I did a video just talking about how we learned what we wanted to do differently and what the needs were, the needs for change, and that was pitched as part of a referendum package… that went out that had it as an anchor in the library. • We were tasked with coming up with an overall vision... of what we wanted to do and then for different spaces and departments. • A lot of the [planning] methods were specific to our president at the time using the ed. specs [educational specifications].
Colin	• We were assigned an architect team that was working across the college on this building because it wasn't only the library in our building that was renovated. • We also embarked on the landscape review... visiting other libraries and then doing an environmental scan.
Theme 2: Space Configuration and Furniture	
Lisa	• ... also needing a refresh that a lot of new buildings [had] come online, and we were starting to get really dated just even an appearance in decoration and all that.

PARTICIPANTS	COMMENTS
Colin	• So, at that time, there was a lot written about the library moving from just a space to store books to creating a collaborative kind of inviting collaborative instruction and community environment. • We used to have just a handful of small groups study rooms that were not technology equipped that were kind of remote. We put new ones front and center. I think we are up to 18 now that [are] generally all technology equipped and lots of different configurations. We were going for pretty much something for everyone. • By creating additional access points, we doubled our service areas, so now we have two circulation desks and two reference desks both upstairs and downstairs. Finally, with our classrooms …increasing the size of classrooms. • Wherever possible, we put glass walls in our classrooms, so they kind of connect to the main library space.... we raised the visibility and made that integrated into the library. • We've really [a] much better physical access to the library like Lisa said, there was a single entrance you had to come in go out now there's flow and multiple access points to the library which is great. • We really wanted to create a library space for every type of user. So, we have got loud rowdy collaborative open spaces and then places for people to get away from the din.
Rebecca	• … within the next year or so the college had used its own money to replace some of the old furniture that we had been unable to be replace. • Most interior walls came down, everything was stripped down to the studs.

Theme 3: Changing Technology

Colin	• From my perspective… what we were going for is we used to have just a handful of small groups study rooms that were not technology equipped that were kind of remote. • We read the Educause Horizon Report and different academic technology publications that really gave us a lot of direction as to what kind of spaces and technology we needed to really change the identity of the environment. • We now have 18 technology equipped rooms.
Rebecca	• We built one classroom as a collaborative classroom as a table pods that had group screens.

Theme 4: Financial Resources

Rebecca	• The referendum paid for the infrastructure, and the college paid for furniture for the lower level.... The entire building renovation was like $30 million, and the library was included in that. • Our college has also always been generous ... • We didn't get new furniture for the lower level because all the money had been used, but within the next year or so the college had used its own money to replace some of the old furniture that had not been replaced.

PARTICIPANTS	COMMENTS
Theme 5: Input from Staff, Faculty, Students, or Community	
Lisa	• But we did have staff forums about imagining what it could be. We set up a blog and… where we started capturing all these things and trying to make sure that we sort of housed what we are looking at. • We do have a fair number of community [members] and they were free to write on the boards and they wanted to comment. I mean all staff those are stakeholders you know students no one faculty as well our internal staff.
Rebecca	• I believe in 2011 we did a student survey... library survey of what students need… [we created one] for faculty shortly before that. • As I recall we did things like put a poster board up and said... what services do you like that we have, what things [do] you wish that we had… we wanted students to kind of weigh in [on] different sort of things. • We still get comments from students from visitors, faculty, outside faculty using it. • We do have a fair number of community members, and they were free to write on the boards and they wanted to comment. • Trying to balance… the public needs of the student with the staff needs and, you know, kind of keeping the students at the forefront of what we're doing. • Trying to get input from I think everyone, really everyone who worked here— at least all the full-time people. I can't remember how much part-time input there was.
Theme 6: Lessons Learned	
Rebecca	• We're trying to figure out how to accommodate this [individual study space] faster or what to do is more kind of individual study space. There are times people want their own little room or pod to study in, and we don't have much individual space. • We were not as successful as I think we might have wanted to be, and partially it's just because of the size of being on two floors, [and to] create as much sightlines and visibility between desks. It's not perfect but it's better, that was a goal was to try to have as much visibility of service areas as we could.
Lisa	• And maybe this was a factor of time but in some ways, I feel like we were a little bit too staid and formal [with] what we did because I go to places now and Harper [College] is one example where I feel like it's more modern... • I do think... that our first-floor struggles with how people study there and with chaos.... If there was a better way to do that or not do it or leave it the way it is. But it [is] still a struggle. • I think it's one thing to really consider and to really wrap your head around when you're embarking on something like this is you can't have enough conversations; you can't have enough time for people to give their input.

PARTICIPANTS	COMMENTS
	• We have this crazy hallway between our egress hallway, which is between our two centers [tutoring services and the library] that makes it impossible to open that up physically.
Colin	• That was our biggest regret it was a matter of where function had to follow form, because of the existing structure. • The pilot media lab, we kind of under-spec'd the footprint… we re-opened it in a new larger space in the library. Being able to adapt…. we didn't have to change anything structural; it was easy to re-configure. • We still get comments from students and faculty; it is never going to be perfect. I am sure we are going to continue to make changes.

HARPER COLLEGE

College Size and Library Data

Harper College is a large two-year associate-degree granting college located approximately 30 miles northwest of Chicago in Palatine, Illinois. In addition to the main campus, the college has extension centers in Schaumburg and Prospect Heights (Harper College, 2018b). The main campus sits on a 200-acre lot and, like the College of DuPage, classes began in temporary facilities before the college broke ground on six permanent structures later in 1967. As of December 2018, there were 23 buildings on the Harper campus.

Harper offers 7 associate degrees, 10 areas of interest, and more than 40 certificates (Harper College, n.d.a). Founded in 1967 and named after William Rainey Harper, an educator who originated the community college concept (Harper College, n.d.b), the college serves residents of Community College District 512, with 535,497 residents from 23 neighboring communities (Harper College, 2018b, p. 7). The median income varies from $56,000 in Wheeling to $173,650 in South Barrington (Harper College, 2018b, p. 12).

Harper had an FTE of 9,372 students in Fall 2018, of which 23% were aged 17 and under, 46% were between the ages of 19 and 24, and 31% were aged 25 and above (Table 7).

The demography of the college is 50% White, 28% Hispanic or Latino, 13% Asian, 4% Black or African, and 5% other. Female students are 55% and males are 45% of the student population, and the average student age is 25. The college employs 1,465 professional, faculty, and staff, of which 646 are faculty, 205 full time and 441 part time.

Table 7: Harper College Student Population Statistics

STUDENT POPULATION BY AGE/RACE	% OF STUDENT POPULATION
18 and Under (including recent HS graduates)	23
19-24	45.7
25-52	28.7
53 and over	2.7
White	50
Hispanic	28
Asian	13
Black	4
Multi-Racial	2
Unknown	2
All Other Races	1

Source: Harper College, n.d.b; 2018a, 2018c

Revenue sources for the college are as follows: 50.9% property taxes; 40.9% tuition and fees; 6.5% State government; with an additional 2.4% from the federal government and other sources (Harper College, 2018b, p. 52). According to the *College Factbook*, the total revenue for fiscal 2018-2019 is $103,413,639 (Harper College, 2018b, p. 53).

About the Library

The library (recently renamed the David K. Hill Family Library) is located in the F Building and was re-opened in 2018 after an 18-month renovation. The library was initially located at the Elk Grove Village High School campus and occupied a 2,600 square-feet-space in

1967. When the college decided to build permanent structures, the library was part of a larger construction, and it occupied 68,000 square feet in the new building. There is an additional reading room staffed by two librarians located at the Learning and Career Center at the Prospect Heights location.

The library collection began with 7,000 books and 150 periodicals, and five years later the collection had grown to over 74,000 items. By the 1980s, the collection had grown to 211,718 items. The library also began to adapt to the needs of community members by offering browsing best sellers and popular magazines. By 1986, with the increased size of the collection, the library decided to automate the catalog with an online version. The process was completed over a three-year period (Harper College, 2018b, para. 1-8). In 1995, the library underwent a $3.5 million renovation and increased its footprint to 84,000 square feet to include a larger circulation area and the addition of a bibliographic instruction room (para. 18). As the college's demographic began to change, the library staff sought to increase awareness of the library's offerings and began offering programming such as multicultural programs that featured food and music, in addition to hosting book drives and book discussions (Harper College, 2018b).

In the 1990s, with the advent of the internet, the library developed a website and migrated to a new library automation system, Voyager. Voyager included web-based catalog searching, a new service at the time. Later, as the librarians began to understand the impact of technology, they anticipated yet another space change that could meet the needs of a born-digital generation (Harper College, 2018b). As library administration and librarians began discussion regarding space renovation, they noted that there was limited space for study rooms for students to work quietly. The other occupants of the building, such as IT, media services, and the Academy for Teaching Excellence, had taken a large share of the building space. According to

Njamabi, Dean of Resources for Learning, the space needed more modular furniture and better space design for wayfinding in the library: "The print collection occupied a large footprint of the library space and had not consistently been weeded over a long period of time. Therefore, the librarians spent time weeding the collection before the renovation started." The library staff had a wish list that included the following:

- Open and well-lit building capturing the natural light

- Improved wayfinding including a public elevator

- Collaborative and quiet study spaces

- Group study rooms

- Comfortable and flexible furniture

- Up-to-date technologies with more charging outlets

- Programming space

- Additional instruction classrooms

- Café

The newly renovated library (Table 8) occupies the second and third floors of the F Building, which is also home to Academic Support Center on the first floor and the Academy for Teaching Excellence on the third floor (Harper College, 2018a). The gate count for the library was as high as 714,068 in 2015 before the library moved to its temporary home in the D building (Harper, 2018a, p. 69). Upon their return to the F building, the 90-day gate count from April 2018 to June 2018 was 55,239. The library is open 75.5 hours a week and is operated by a staff of 33. Planning for the renovated building began in 2014, construction began in August 2016, and the building reopened in August of 2018 (Harper College, n.d.c, para 1). Funding for

the renovation came from the 2010 referendum, which was approved overwhelmingly by the

Harper District.

Table 8: Harper College Library Data

CATEGORY	DESCRIPTION
Address	1200 Algonquin Rd, Palatine, IL 60067
Institution Size	Large (FTE)
Participant Titles	Dean, Resources for Learning Coordinator of User Services & Reference Coordinator of Reference Department
Type of Renovation	Architectural configuration (Re-design) Refurbish (renovate, redesign) Entire building interior was replaced – elevator and stairwell were preserved.
Collection Volume	120,104 print books, 141 periodicals, 22,866 audiovisual titles (DVD, CD, Blu-Ray), and nearly 800,000 electronic titles (books and audiovisual).
Door Count	55,239 (90-day gate count upon re-opening)
Square Footage	60,000 square feet on two levels

Source: Harper College, 2018a

Researcher Disclosure

As an employee of the college, I acknowledge the possibility of bias, and I made a

concerted effort to withhold judgement as I viewed the space with fresh eyes. As an instructor in

continuing education, I have taught at the Harper campus during the Spring and Fall semesters

for the past nine years. I, along with the students, regularly attended bibliographic instruction

classes that included a tour of the space. During the construction period over the past two years,

library instruction was held in the Mega Lab. We anticipated the completion of the renovation as

it contributed to a full understanding of the academic library environment. The Spring 2018

semester saw the return of the library students to the main library for instruction and a tour of the

building, which brought delight and awe as I saw the building through their eyes.

Initial Observation

As I approached the campus for the onsite interview on Tuesday, December 12, 2018, I turned left from Algonquin Road past the sign with the college's name. The campus is flanked by residential homes and businesses. The road to the left led to the newly built M building, renamed the Foglia Foundation Health and Recreation Center, which houses a recreation center and an outpatient care center. The road to the right led to a parking lot, which is where I parked to reach the library. The F Building is geographically located in the heart of the campus and is only accessible by foot. There are two main entrances to the library that can be accessed near the campus bookstore, which opens to the second level and across from the D Building on the ground floor. On the ground floor is the Academic Support Center. I walked through the Avante building to reach the first floor of the library. To the right of the main entrance is the college bookstore. A set of double glass doors lead to the library. Prominently displayed on a wall to the right of the glass doors is the David K. Hill Family Library sign at the base of a wall topped by a glass display of books. As I looked to my left, I saw an impressive glass enclosure on several levels of the building that had an open and expansive view (Figure 3).

Figure 3. F Building/David K. Hill Family Library

Directly across from the glass doors is an online catalog, OPAC. Beyond the OPAC is a glass-enclosed Make Shop where various pieces of maker machinery, such as a vinyl cutter, sewing machine, button maker, and laser cutters, are housed. The space surrounding the Make Shop is dotted with various seating arrangements, intimate armchairs with tables, study tables, booths, computer desks, and the like. There are 15 glass-enclosed study rooms dotted throughout both levels of the library, and the bibliographic instruction classroom is next door to the Make Shop. Across from the instruction room is the reference desk staffed by two library staff. Behind the checkout and reference desk is a large meeting space that can be used for poetry slams and various library and college-sponsored programs (Figure 4). Further back, beyond the instruction room, are additional banks of seating and low hanging shelves for reference materials. Directly behind the reference shelves are offices occupied by librarians, and to the left and around the corner is the Circulation Services Department. The cataloging, acquisitions, and serials departments are on the first floor of the building adjacent to loading dock and service elevator.

Figure 4: David K. Hill Family Library/Checkout Desk

At the top of the stairs on the third floor is a desk called "the other desk." The third floor is for quiet study, an area flanked by various computers and study carrels, a bank of individual computer carrels and study nooks, and discussion rooms. Across from the carrels is an elevator next to the Academy for Teaching Excellence (ACES) created to provide professional development opportunities for full-time and adjunct staff. Past "the other desk" is a large conference room and an adjoining elevator. This is where my interview was scheduled.

The Interview

I had met with Tom and Christine during my visits on campus over the past nine years for library instruction. I had also met them as I conducted a preliminary investigation into my dissertation topic. Njambi and I had met during my visits on campus and had spoken on the phone. Tom is a professor and Coordinator of Reference Services and had been at the college for over 25 years. Christine had been at the college for 7 years and is the Coordinator of User Services, which includes circulation and inter-library loan. Njambi, Dean of Resources for Learning, has been at the college since 2007 and oversees the Library and Academic Support Center.

As I made my way towards the conference room, I encountered Njambi as she stepped off the elevator and was making her way towards the conference room for our interview, and she led me into the conference room. The conference room was large with a view of the Avante building. The room had a smart screen on the wall and appeared to sit approximately 12 people. As I took a seat, I explained my progress in the dissertation process and what my goal was for the interview. A few minutes later, Tom entered the room and Christine arrived a few minutes later. I discussed the IRB and informed consent and again requested their permission to record

the interview. I asked each participant to state their name as they spoke to assist with

transcription. Table 9 shows themes that emerged from the interview.

Table 9: Themes that Emerged from Interview Analysis – Harper College

PARTICIPANTS	COMMENTS
Theme 1: Campus Strategic Plan	
Njambi	• The campus master plan was designed in 2008, When [the college president] arrived the redesign was only for the 1st floor. Buildings D and H had more urgent renovation needs, so we had to wait our turn.
Tom	• The library was a part of the campus master plan. • The building was demolished from floor to ceiling, which included HVAC, plumbing, and windows, we saved one elevator and got a new one. Njambi's office stayed the same — the building had good bones. • There was not much preserved; however, the 2 back stairs were preserved.
Christine	• We were evacuated to the D Building and occupied offices in the H Building for almost 2 years. We were out in August of 2016 and returned in April of 2018.
Theme 2: Space Configuration and Furniture	
Njambi	• We had limited space for quiet study and collaboration. • Very poor design and poor wayfinding, now we have much improved wayfinding. • We lacked a public elevator and internal stairwell to the 3rd floor. We wanted a more open space so when students came in, they could take a look around and figure out where they wanted to be. • We increased study rooms from 6 to 15; we updated the collaborative spaces that previously held a maximum of 6 people, and now the capacity is up to 10 people. We added a programming and quiet study space. • There is now a landing space outside of the library that students use before the library opens.
Tom	• The print collection was not being used; we traded the collection space for student space. The prior renovation was not part of the technology considerations. • We weeded before the move and went from 123,000 to 90,000 items. • Poor design decisions from last renovation, circ desk was 100s of square feet. [Poor design] It wasn't just the library; it was college wide. • The building was demolished from floor to ceiling, which included HVAC, plumbing, and windows, we saved one elevator and got a new one. Njambi's office stayed the same — the building had good bones. • To gain more space, we pushed out windows by 3-4 feet to gain 3,000 square feet.

PARTICIPANTS	COMMENTS
Theme 3: Changing Technology	
Christine	• We increased the number of outlets and improved the work areas.
Tom	• The group study rooms now have large LED monitors, HDMI cables and white boards
Theme 4: Financial Resources	
Tom	• We finished under budget, and we decided on everything before we began spending. [The college] president was clear that the renovation would be completed on budget.
Christine	• There was no time when we heard that there was no more money.
Njambi	• In 2006 the [previous president] had initiated a referendum that passed so there was no need for matching funds. He had done a cost analysis per building [renovation].
Theme 5: Input from Staff, Faculty, Students, or Community	
Njambi	• [The president] asked renovation constituents to submit names for committee work on the pending renovation. I suggested three names to represent the library in a college-wide Facilities Steering Committee. The committee included the college architect, IT, student affairs and librarians. • If we said 'xyz,' IT would say 'how would you do that?' • We visited other libraries and we were attracted to their openness, we wanted natural light. The 2nd floor is very open, students love it. • Plans for the library was taken to students, the senate, and the president. • We ensured that everyone felt included; it was an inclusive project, and every opinion was heard. • Each department realized the challenges in the space, and we needed to create a space that was contiguous while looking at efficiencies. • We put it [white board] up for an entire semester. • We also visited University of Wisconsin [for ideas].
Tom	• The committee also included Student Affairs. The committee asked for input from Public services, Technical Services, Tutoring & Writing Center, and the Academy [for Teaching Excellence]. • Each department had input in the F Building steering committee. • Event planning did not mind being booted out [of the F Building]. • We visited several institutions and public libraries to get ideas and learn about lessons learned. We went to a library planning conference, and places like Grand Valley State University, Library planning conference, Loyola, DePaul, Wright College, COD, Schaumburg Public Library, and Barrington Area Library.
Christine	• We had a whiteboard and posted the question of the week … students would fill up one side of the wall with their responses, then we posted another question. The poster said, "we wish the library had …" • Robert took pictures, transcribed the results. Input from the group looked at the responses, and it confirmed what we thought.

PARTICIPANTS	COMMENTS
Theme 6: Lessons Learned	
Njambi	• The folks in ILL are isolated in the back, while everyone else is working contiguously. They [ILL] are not connected to the rest of the building. • Be mindful of people who don't like change. Make sure you are communicating so there are no rumors. • Getting input from all areas of the college. • We want everyone to feel like a part of the library.
Tom	• We could move them [ILL], break down a wall... • The plan for the coffee shop on the first floor was scrapped because the vendor did not want to expand and compete with its other offerings on campus.
Christine	• We could have added more study rooms, and the dead spaces can be utilized for storage and student spaces.
Njambi	• Looking at the collaborative learning floor, they [students] realize they don't have to be shushed in the library, they can talk to their friends.

Conclusion

The six themes were identified as major or significant in nature. The members of the renovation project conducted a lot of initial research before embarking on their library renovation. They visited other institutions such as public libraries, colleges, and universities. The nature of the renovation was driven by the same college president who left Harper for COD. The next president managed the renovation based on the approved referendum amount. Technology changes were a larger consideration as ten years had elapsed between funding and the beginning of the project, and the nature of technology needs had changed. The librarians were methodical about their approach to the renovation and there was a sense of collaboration among the various constituents that shared the space. Although the library lost square footage, the library staff was pleased with the space they retained. Additional information gathered regarding the renovation were:

- Collaboration was key to a successful completion.

- Inter-library loan department lost the ability to connect to the rest of the building.

- The bookstore annexation plan was abandoned as the funding was not provided.

- Other campus buildings were not as busy after the library opened.

Njambi noted that student feedback was very positive. One student stated, "I decided to stay another semester because of the new library."

UNIVERSITY OF WISCONSIN – GREEN BAY, MANITOWOC

College Size and Library Data

The Manitowoc campus of the University of Wisconsin system is a very small two-year associate-degree granting college. UW Manitowoc was recently part of the UW College system, which consisted of twelve other two-year colleges. In 1933, the University of Wisconsin–Green Bay, Manitowoc campus began with 26 students at the local vocational school. As classes and the number of students grew, it resulted in the building of the Manitowoc campus in 1962. Manitowoc is a city along the shores of Lake Michigan in Manitowoc County, Wisconsin, with a population of 79,074 and a median income of $51,053 as of the 2013-17 United States Census (2018b). Today, the college offers a freshman and sophomore curriculum with over 200 academic programs and associate degrees in arts and science.

The UW colleges are not considered community colleges, but instead two-year freshman and sophomore institutions that offer direct transfer to the state's four-year institutions. The college campus is owned by the County of Manitowoc and operated by the State of Wisconsin (UW, n.d., para. 5). The Manitowoc campus sits on a 40-acre lot along Lake Michigan on the southeastern edge of Manitowoc (UW n.d., para. 1). The first hall, Founder's Hall, was built in 1963 and was renovated in 1965 after a fire. In 1986, Hillside Hall (previously named West Hall) was added, doubling the size of the campus. The hall housed additional classrooms, computers

labs, and a physical education space (UW, n.d., para. 6). In 2001, Lakeside Hall was built, which

added 22,000 square feet to the campus (para. 7). Later renovations included the bookstore,

distance education classrooms, an administrative office, and a new lecture hall (para. 8). There

are three connected buildings on campus and the college employs 16 faculty and 12 classified

and other staff members (UW, 2017, p. 46). As of the 2017-18 academic year, the enrollment for

Manitowoc was 331 with an FTE of 281 students. Enrollment has declined over the past three

years from 370 FTEs to 281 in Fall 2018 (UW, 2017, p. 20). See Table 10 for student population

statistics.

Table 10: UW–Green Bay, Manitowoc Student Population Statistics

STUDENT POPULATION BY AGE/RACE	% OF STUDENT POPULATION
11-17	2.76
18-24	81.73
24-59	13.79
60+	1.72
White	81.00
Hispanic	7.43
Other Races	1.61
Multiracial	3.01
African American	2.69
Native American/Alaskan	.66
Asian/Pacific Islander	3.59

Source: UW, 2017, pp. 20-21. Note: The college listed race data as a collective of all UW college campuses.

In July 2018, the University of Wisconsin Colleges (two-year) merged with the

University of Wisconsin four-year university and research institutions and is now a part of the

UW System. The University of Wisconsin System is a statewide college system created in 1971

as two public university systems. The University of Wisconsin and the Wisconsin State

University merged under the Board of Regents (UW, n.d.). As a result of the 2018 merger, 13

two-year colleges joined 13 four-year institutions, and the two-year colleges were renamed as branch campuses of the UW System (UW, n.d.). The combined enrollment for all two-year colleges totals 11,608 students across all 13 campuses. As with other colleges, enrollment peaked in 2010 and has steadily declined over the past years. However, this past fall, enrollment saw the highest ever for the school. Much like other higher education institutions, the UW system is funded by tuition and fees, federal and state appropriations, and other sources (UW, n.d.). The budget for 2017-18 academic year for all 13 campus branches is $118,787,320 (UW, 2017, p.11).

About the Library

The Library Learning Center housed at the center of the small campus was installed in 1967 on the second floor of Founder's Hall. The mission for all UW College System Libraries states that,

> The libraries are integral partners in fulfilling the mission of the UW Colleges. They are the information gateway to the university community, providing resources and services essential for learning, research, and instruction (UW – Milwaukee, Waukesha, 2013).

The library, like most other two-year colleges, allows community members access to their public-access computers. The library offers audio-visual materials such as CDs, feature films, and documentaries, magazines, laptops, and other equipment for in-house use (UW, n.d., para. 2). There is limited anecdotal history of the library as the previous librarian resigned in 2016. In 2010 and 2013, the library added new lighting and comfortable seating such as lounge chairs and ottomans.

The library is staffed by 2.5 employees: a full-time librarian, a library services assistant, and a CASE (Center for Academic and Student Engagement) associate, responsible for IT-related issues and a backup for the library assistant and 5 student workers. The library is open 49

hours a week and is closed on the weekends. In the annual report for the 2017-18 academic year,

all library branches circulated a total of 20,789 items and had a combined total of 18,030 visitors

per week, based on two-day's worth of usage in the tenth week of the Fall semester (UW, n.d.).

Data gathered from Anthony (personal communication, May 9, 2019) indicated that the library's

collection size is 22,297, with the circulation of materials at 1,010 and an average weekly door

count of 647 visitors in 2018. Table 11 shows a summary of the library's data.

Table 11: UW–Green Bay, Manitowoc Library data

CATEGORY	DESCRIPTION
Address	705 Viebahn Street, Manitowoc, WI 54220
Institution Size	Very small
Participant Titles	Associate Academic Librarian
Type of Renovation	Relocation –2nd to 1st floor Architectural re-configuration-structural Spring 2017 - Aust 2017
Collection Volume	18,635 print, 3662 non-print, 191 eResources
Door Count	647 average visitors per week
Square Footage	6,944 square feet

Source: private correspondence

According to a *Herald Times* reporter (Rudd, 2018), in 2011, the dean of the college

began talks with Manitowoc County regarding the update and renovation of the campus

buildings. A few years later, Anthony noted, the catalyst for the change stemmed from the

college's need to update and expand the science classroom with new physics and chemistry labs

and art studios. There had also been discussions about the possibility of adding a new building.

Since the library was next door to the science classroom, it was earmarked as an ideal space for

the science lab, and it was believed that annexing the library space would solve the problem.

However, the next question was, what to do with the library? Consequently, Anthony said, "The

renovation of the library was a ripple effect of the science lab project." The library itself was in

need of a much-needed renovation, and a decision was made to move the library to the first floor where three sections remained from the original bookstore, student senate lounge, and faculty lounge, so three wall sections were removed. The bookstore was moved to the learning commons, the library was designated as a functioning learning common, and it was decided to combine computer servicers, tutoring, and technology service into one space. The decision to move the library to the County Boardroom was widely recognized as a feature of the campus that would be attractive to the students given the attractive view of Lake Michigan. The County Boardroom, which was previously inaccessible to students, was replaced with library instruction and shelving space. The space was improved by expanding group study rooms and integrating more technology into the digital design studios; additional computers and the integration of a collaborative instruction space were the biggest improvements (Anthony).

Funding for the $7 million renovation project came from two major sources, with additional assistance from the college's foundation. The county contributed $5 million, and the state contributed $1.5 million for furniture, fixtures, and energy-saving modifications, while the Foundation contributed the remainder of the funds (Krasin, 2018, para. 2). The project was underway at the end of the 2017 Spring semester, and it concluded before the beginning of the Fall semester of the same year (Herzog, 2018). The library moved into its new home in August of 2017 and was officially reopened with a ribbon cutting ceremony in March 2018. Krasin's article in the school's *Campus Life* blog (2018) revealed that,

> This investment in the campus included moving and updating the library; creating a new science common; and updating art studios, science labs, and classrooms. Electrical, plumbing, HVAC, and other infrastructure items were also updated or replaced. Founders Hall, where the majority of renovation occurred, had not been significantly updated since 1962. (para. 3)

Initial Observation

The college is situated in a neighborhood across from residential homes on the banks of Lake Michigan. I arrived at the campus on Friday, December 21, 2018, a half hour before the interview (Figure 5). The library was on the first floor, a few feet from the main entrance in a common area with lounge seating for six. It was directly across from the Campus Services office and next door to a Next Step Instruction Center. Around the corner was a prominently displayed donor wall and a long hallway with the bookstore and computer lab next to the donor wall. Further down the hall were the distance education and instruction rooms. Around the corner to the left was an art gallery and a long hallway that connected Founders Hall to Hillside Hall. I returned to explore the library before the meeting.

Figure 5: Founders Hall main entrance

The entrance to the library is glass encased with wooden framed double doors. There were two large Grinch figures painted on the doors with a decorated tree visible through the glass window. As I opened the doors, I was greeted by a young man seated at a large desk. He was

very welcoming as I stated that I had an appointment with Anthony. I asked to explore the space

before the interview and began to notice the bright green colors and the modern feel of the space.

Inside of the library entrance to the right is Anthony's office, and the circulation desk is a few

feet to the right of his office. The L-shaped desk wraps around the other side of the checkout

desk facing windows overlooking the parking lot. The space appeared to be laid out in three

distinct sections. The first section next to the entrance had three round tables with chairs and

front facing shelving that held new books, audiovisual materials, and board games.

Section two had an online library catalog against the wall with a printer, low reference

shelves, and four bar-height tables with chairs. Section two was lined with shelving, two bar-

height tables with chairs, and four large green upholstered booths with seating for twelve. Across

the hall were three group study rooms and a digital design center (Figure 6).

Figure 6: Library seating booths and audiovisual materials

I walked past section two and headed down the hall as it opened up into a large space

with a wooden vaulted ceiling: section three. Directly ahead of me was an expansive view of the

lake through tall glass walls. This space was designated for bibliographic instruction with two

long mobile desks lined with computers and an instructional monitor overhead. Facing the glass walls were a few sitting arrangements with lounge chairs, and to the left behind me were tall shelves for the nonfiction collection. The far end of the space connected to the commons and the cafeteria through a set of wooden doors.

As I concluded my tour, I returned to the circulation desk where I was directed to a study table by the library services assistant. Anthony arrived a few minutes later and joined me at the table. I introduced myself and discussed the purpose of my study. He signed the consent form, and we talked a little about his journey to his current position. Anthony has been at the Manitowoc campus since 2016, and he is responsible for maintaining buildings and facilities and is a primary contact for library instruction, reference assistance, and collection management; he is the lone librarian on staff. The Centralized Library Support Services (LSS), housed at the UW Fond du Lac facility, is responsible for cataloging, acquisitions, and processing.

Anthony came to the college in the middle of the project, after all the design and planning had occurred, and he provided input for the technology and electrical needs of the project. The original library had three study rooms and one room was added post renovation. Anthony chose the furnishings and wall colors and was very pleased with the way the project turned out. Table 12 shows the themes identified from an analysis of the interview.

Table 12: Themes that Emerged from Interview Analysis – UW-Green Bay, Manitowoc

Theme 1: Campus Strategic Plan
• The County had discussions with the campus about adding a new building.   • Jennifer [Executive Director of Libraries] felt like she had to communicate to the board how important the tutoring space was.   • The renovation was a part of a larger renovation that included new biology and physics labs and the art studio.
Theme 2: Space Configuration and Furniture
• I learned that the entire plan was to put the library in the Board room, which would have diminished the space by half.   • We expanded group study rooms.

- We needed to spot trench to get more electrical outlets in the floor.
- We added a collaborative instruction space.
- We got an external facing drop box and added an internal drop box, which is new to the library.
- We demolished some walls; the ceiling was replaced along with the duct work.
- We did not gain any new space, and I am not sure if we lost any space.
- Took up the floor, replaced the ceiling and doors, and taking out walls were the major renovations.
- It was important to me to have a library with an open space. We wanted students to see the library as more than just a place to come and find books—to be in close proximity to resources while working on their projects.
- We didn't gain any new square footage, but the layout is different.
- Previously, we had hand-me-down furniture from hotel lobbies.
- We made sure that the furniture was modular, so it could be moved to accommodate different arrangements.
- I chose all the furniture, chairs, carpet, and colors…. We had an alternative layout for the shelving.
- It made sense with a view of the lake to try to go with some lounge-style seating.

Theme 3: Changing Technology

- We needed more outlets and added more technology like a digital design studio, access to iMacs, etc.
- One of the battles I had to fight was convincing the renovation committee to trench for additional outlets. It was not in the architect's plan, so not only did we not have enough electricity in the walls, but they were able to have spot trenching to determine what areas needed outlets, rather than taking the approach for the best practices for a library.
- We have more computers in here than we used to.
- We added a dedicated OPAC [online public access computer].
- These mobile carts make it easy for students to project what they are doing to the screen.

Theme 4: Financial Resources

- The overall project [including the library] was close to $5 million.
- The bulk of the funding came directly from the county — we did some independent fundraising through the foundation that has now been disbanded since we merged with UW–Green Bay, Manitowoc.
- All the money for the furniture and equipment came from the state, the UW system, the county, and the foundation.
- Movable furniture and staffing dollars come from the UW system.
- We got some local business donations and funding from the college foundation.

Theme 5: Input from Staff, Faculty, Students, or Community

- Members of the renovation committee included the Building & Facilities director, a faculty member from the biology department, an art professor, two chemistry professors. and a physics instructor were involved in the process.
- We wanted to communicate to the local community that "hey, you don't need to be a student to come here." We wanted to communicate to the community that they are also welcome.

- Aesthetically, we tried to convince the students that "this is the place you want to be."
- One of the primary benefits of moving the library to the main entrance is for the community members to find it; we actually have a community borrowing program and community member cards.
- We wanted faculty to view the space as potential for collaboration with library staff, to see how they could integrate the library into their courses.
- Community members love the aesthetics of the space — the views of the lake. People very much appreciate the layout, the bright lighting. When it was upstairs, it was a dimly lit space, no views of the outdoors particularly in the group study rooms that had no windows.

Theme 6: Lessons Learned

- If I could have done one thing over and over again, I would have pushed harder for the need to identify best practices for how many square feet there needs to be for access to electricity.
- We are really limited by what we can do furniture wise in terms of spaces where students can plug in devices. Spaces where students can plug in devices is where they tend to gravitate to.
- We know that at their best, libraries should be technology spaces... and they [students] can become less inclined to use the library with limited outlets.
- We need more study rooms and electricity.
- We are limited to what we can do furniture wise because we needed tables that had access to electricity.
- At some time, we will have to do some retrofitting and find solutions for outlets… it becomes dicer when you have to project 5-years out [regarding electricity].
- Anecdotally we definitely have noticed an increased use of the space.
- It has become a hub for students to come and study and meet and read. We can now also accommodate events on campus. We could not do that in the past. We wanted flexible furniture that can be moved and rearranged as needed.
- We thought we could have used a bigger space than we have because it would have been nice to have a dedicated instruction space.
- The contractor kept running into issues from the plans he received from the architect.
- I learned how to read demolition plans, plumbing plans….
- Understanding the world of state contracts, any vendor contractor had to have a state contract before they could do business us, I did not know that. There are rules: you have to identify 3+ vendors, go to bid, request RFP [Request for Proposal]….
- This was my first and only library renovation — I wish I had had someone to ask. I would have reached out to other librarians; I would have asked other librarians, what was your biggest challenge? …what would you have done differently?
- I would have been better prepared to understand what skills a librarian needs.
- We found that students prefer to have a surface for writing in front of them. I wish I had bought more furniture that had writing space in front so they could spread out.
- As librarians we are not skilled for any of these — I am not an architect— am I shooting low, am I shooting high?

- The circulation numbers have gone down every year, and while the goal of a library is to always meet the information needs of its customers, I think we just recognized that books are not the driving focus of the collection.
- Students love the space: they value the study areas, the furniture, and the group study rooms. They don't understand why there is only a single entrance to the space, and why can't they go out of the commons area.
- Our primary purpose, the reason for our existence, is to serve students and support them.
- The mission was accomplished because we got a space that was more student focused and less collection focused, that was the goal

Conclusion

The UW College System libraries on each campus of the freshman and sophomore campuses are headed by the director of libraries who oversees the administration and combined budget for all locations. A recommendation by various governing and accrediting bodies to merge the colleges with the universities was made in an effort to restructure and better manage the dwindling resources of the colleges due to various factors, including decreased enrollment. With the merger, the colleges were renamed as branches of the universities.

The renovation of the Manitowoc library involved the relocation from one space to another in addition to moving from the second to the first floor. The following points reflect the catalyst and process of the renovation.

- The science labs needed to be expanded, and the library was adjacent to the existing space.

- The library renovation and relocation were a "ripple effect" of the need for the above expansion.

- Anthony, while not involved in the original plans, was instrumental in the request for additional outlets and choices made for the furniture and color of the new space.

- The collection was weeded by Anthony's predecessor, and he weeded an additional 30% of the collection.

- The goal was to keep the collection intact, but at some point, the plans fell apart because the library collection was moved twice so the contractor could finish on time.

- Staff from other UW libraries, including custodial staff, came to help with the location and relocation of library materials.

- Previous renovations were piecemeal, so original and subsequent floor plan changes of the space were not documented. The architect discovered external walls during demolition of some internal walls.

- Anthony was able to accomplish what they wanted by expanding access, increasing study spaces, integrating services, and having a dedicated space for instruction without checking availability of other spaces.

UNIVERSITY OF WISCONSIN-MILWAUKEE, WAUKESHA

College Size and Library Data

The University of Wisconsin–Milwaukee, Waukesha is a small two-year freshman and sophomore institution that was founded in 1965. The college began in a classroom at Mount St. Paul Seminary in Waukesha (UW–Milwaukee, Waukesha, n.d.b.). The city of Waukesha is west of Madison, Wisconsin, with a population of 72,173 and median income of $61,380, as of the 2017-18 U.S. census (U.S. Census, 2018c).

In 1966, the college opened the campus with Northview Hall, a fieldhouse, and a Commons. In 1969, Southview Hall was added to the campus, and in 1978 the administration building along with an extension of Northview Hall was added, which doubled the space on campus. The Fine Arts Center, which included a theater, was built in 1987, and in 1996, to celebrate the thirtieth anniversary of the college, a $5.7 million renovation was undertaken, which added 20,000 square feet to the Commons. Like the UW-Manitowoc campus, the Waukesha campus was added to the UW Colleges system by the Board of Regents in 1997, and in 2018, was merged into the UW system as a campus branch. The college sits on 86 acres purchased from a local family in 1965 (UW–Milwaukee, Waukesha, n.d.a.). The college has a total of 1,852 FTEs with 47% of the student population reported as female and people of color reported at 12%. Like other college campuses, enrollment at the college has declined from 1,426

FTEs in 2014 to 1,199 FTEs in 2017. A total of 76 employees works at the college, and the

faculty on campus total 39 with unclassified and college staff at 37 (UW, 2017, p. 47). See Table

13 for student population statistics.

Table 13: UW-Milwaukee, Waukesha Student Population Statistics

STUDENT POPULATION BY AGE/RACE	% OF STUDENT POPULATION
21 and under	78
22 and over	22
White	85.5
Students of Color	13.7
Unknown	0.8

Source: UW, 2017

About the Library

The library serves the students and community members of the city of Waukesha. Unlike

libraries in Illinois, where residents of designated towns attend the college and obtain a library

card based on districts, residents of Wisconsin can obtain a community borrowing card from any

of their two-year colleges' libraries. With a collection of 34,083 print materials and 5,357 audio-

visual materials, patrons of the Waukesha Library checked out 4,439 items in 2018. The library

is staffed by three librarians, a CASE assistant for transactional student assistance, and two other

classified staff and student workers. The library is open 50.5 hours a week and closed on the

weekend. See Table 14 for a summary of library statistics.

Table 14: UW-Milwaukee, Waukesha Library Data

CATEGORY	DESCRIPTION
Address	1500 N. University Dr. Waukesha, WI 53188
Institution Size	Small
Participant Title	Director of Library Services
Type of Renovation	Re-purposed, replaced, repaired and renovated. Renovation June 2016 – July 2018
Collection Volume	34,083 print, 5,357 non-print, 191 eResources

CATEGORY	DESCRIPTION
Door Count (2018 est.)	100,893 visitors annually
Square Footage	24,000 square feet

Source: private correspondence

According to the documents received from Jennifer, executive director of Libraries, the library has undergone incremental changes over the past seven years; however, major renovations began in earnest in 2016. Table 15 shows the timeline for the various changes and associated costs.

Initial Observation

The Waukesha campus is approximately 108 miles from Chicago and 98 miles from UW–Green Bay, Manitowoc. It sits atop a large expanse of land on a winding road off the main street. As I approached the campus on December 21, 2018, I saw the main building to my left with ample parking spaces wrapped around the front and side. The college has five buildings, and the main entrance to the first building, the Commons, is flanked by four cylindrical columns. As I walked into a large open space, I turned to the right and followed the signs past the administration and Northview building to the library (Figure 7).

Table 15: Timeline of Changes Made to the Library

YEAR	CHANGES MADE TO THE LIBRARY	COST
2012	• Instruction classroom expanded – from 18-24 workstations, new tables, and projector	$15,000 (Grant funded)
2013	• Group study room, white board, group workstations • ADA-compliant tables and workstations • Library seating for North Window study area	$26,550 (Grants and institutional funds)
2014	• Conducted study, developed Master plan Collection weeding goal – 35,000 • Led student focus groups • Developed floor plan – multi-year/phase model	$10,000 (Foundation-grant funded) $1.5 million (projected)

Year	Changes Made to the Library	Cost
2015	• Library ceiling replacement • Academic support re-organization - (CASE workers) - Center for Student Engagement	N/A
2016	• Revised floor plan and furniture layout • Book shifting, carpet replacement • Replaced lighting and ceiling tiles • Repainted all public areas • Library classroom expansion • Expansion; Alternative testing room construction • Noise Assessment	$25,000 (Campus and County funded) $10,000
2017	• Received furniture from Grainger library renovation • Weeded reference materials • Requested new seating • Space planning with Architects • Student satisfaction and future needs survey	$10,000 (shipping cost)
2018	• Furniture planning • Concluded weeding - 49,427 items • Installed furniture from other libraries	$40,000 (Funded by UWC Libraries)

Source: private correspondence

Figure 7: Library Services main entrance

The library is on the ground level with a sign above a set of double doors that reads "Library Services," and to the right of the library entrance was an exit to the college campus. As I entered the space, I walked through a security gate past a book-sale cart and glass-enclosed display cases (Figure 8). I walked towards the circulation/reserve desk with an adjacent desk that appeared to be the reference desk. Between both desks was an entry way that led to the back workroom. Across from the desks were washrooms, a display table, a glass-enclosed computer lab, and a large collaboration/instruction room. Cozy seating arrangements were dotted throughout the space anchored by a prominent upholstered circular seating arrangement visible from the library entrance. Against the wall were CDs and, to the left, various group study tables and a cozy area flanked by booths lined up against the wall. Beyond the booths, I saw various seating areas with sofas, chairs, and end tables. Beyond the space I could see another arrangement of chairs and sofas located by the north wall with a fireplace. Around the perimeter were additional study carrels and tables with Tiffany-style table lamps and computer carrels. In the middle of the space were several six-feet high shelving units filled with books. On the way out of the space were computer carrels and a print station; further down was a staff office and a testing room.

Figure 8: Library lobby book and movie display

I approached the circulation desk and stated my name and that I had an appointment with Jennifer and Jane. They both appeared from the back office, and we exchanged greetings. We sat at the first study table, and I shared information about the purpose of my study and a little bit about myself. Jennifer and Jane gave me their signed consent forms and pertinent documents about the renovation of the library. Jennifer stated that she had been at the college since 2009 as an interim director and was appointed to the position of executive director of Library Services in 2015. Prior to that, she was the director of the Washington campus library for five years. Jane is the senior academic librarian and had been at the college for over 30 years and had seen the evolution of the college in its various iterations. She also spearheaded the renovation changes in the library. Table 16 shows the themes that emerged from the interview.

Table 16: Themes that Emerged from Interview Analysis – UW-Milwaukee, Waukesha

PARTICIPANT	COMMENTS
Theme 1: Campus Strategic Plan	
Jennifer	• The state funds the faculty and supplies — if you picked up our building and shook it, what falls out the state pays for, what stays the county pays

PARTICIPANT	COMMENTS
	for. Anytime we need to do a remodeling, we can't make that call completely because we need the county support for funding…. financially as well as their buy-in. • They [UW-Waukesha Library] had some structural damage in the ceiling tiles roofing and leaks, and they found asbestos. So the library for a short time was on the county's radar [for repairs]. • Until the county takes that [renovation projects] up as a project, the state would not take that up. When the county makes a commitment, the state matches [it], and will furnish up to a certain amount. • Every administrative unit was touched in a system-wide restructuring. And it was done in response to the largest state funding cut that the UW System — our parent organization — had ever received. • How much can we do with a $20,000 grant here, a $20,000 grant there... it wasn't looked at holistically.... it was not very cohesive. • We appointed an assessment coordinator and had been collecting space use data, figuring out where and when the students were using the space... how they were interacting with the technology. All of that data gave us a heat map of what areas were popular and used and what seemed underutilized.
Jane	• We got a little money to work with an architecture firm to do a layout of the library… and that was in 2015. After we got that, another librarian and I... we went to other universities in the Milwaukee area to see how they did a Learning Commons because we were hoping that this could become a Learning Commons. And the architect came back with a plan but then the money never came through. • When we had the designer come, we were able to tell her what our budget was, and she asked which furniture needed to go first — a phasing-in approach: what was high need, what's step 1, step 2, step 3?

Theme 2: Space Configuration and Furniture

Jennifer	• There was new carpeting, paint and ceiling, a new-to-us service desk (it was from somewhere else), and new furnishings in terms of used and brand new. We received a donation from the UW-Madison — the business library was getting all new furniture. • This piece in the middle…the interior designer and the facilities planner really wanted to have a focal piece there [middle of the space], so when you walk in…. We bought booth seating, and this focal point probably seats 10 or more, kind of a gathering space in the middle of the library and some upholstered furniture grouping in the back. • And so, they [Construction Crew] removed quite a bit of shelving. It used to be that the shelving was perpendicular to the entrance. OK. And it went. So very traditional... then shifted it so that it was angled so they had a better sightline and kind of created a little bit more of an inviting approach to the to the collection • When you look around, you know that it is not new. The furniture doesn't all look the same. It looked so vintage some people could say it looked neglected.

Participant	Comments
Jane	• Jennifer was able to... in her position… find the money for UW-Waukesha now to make it even a better space with an additional array of new furniture. • Jen decided that the space was just as important as the collection. • We had some furniture that we did keep and mostly it was the soft furniture. It was the chairs and the couches • After we got the 25-year-old furniture from UW-Madison, Jennifer was able to in her position find the money for UW-Waukesha to make it even a better space with an additional array of new furniture. • We wanted better carpeting, but they told us 'no we have no money.' • We didn't have the furniture that fit the new technology, and we wanted the library to be a more welcoming place that what it was.

Theme 3: Changing Technology

Participant	Comments
Jane	• We looked at how students interacted with technology in the space that they were occupying, so whether they were using technology [in-house] or whether they were bringing in technology... working solo or working in groups. • The other thing was technology had changed, and we didn't have spaces for the computers that we needed. We didn't have power where we needed it.
Jennifer	• I think we wanted technology, easier access, and a more streamlined approach because we knew that this library was going to be the only place on campus that they could access technology. With the closing of that other... computer lab. • A computer classroom had to close; the computer classroom here did not have the number of computers they needed, so they made a decision to take over a lunchroom or lactation room. It was a repurposed space, and they took the walls down to add about 6 more computers.

Theme 4: Financial Resources

Participant	Comments
Jennifer	• The colleges are funded dually between two municipalities. Our facilities are supported by the local county and municipalities. • The urban legend here is that you get funding every 15-years, don't expect funding for any remodeling or any really big project. The state looked at this not as a remodeling project but as a maintenance project. • When all the campuses were combined [budgets], I had more leeway with funding. I re-directed the money and found savings to support the renovation. We went over our $40,000 budget from the UW libraries. • Well, the only concession I can think that we had to make was monetary. I mean we had all these things we wanted to do... but we couldn't do them because of money. It wasn't because someone said 'no, I object to that.'
Jane	• The colleges were known for not being well funded, so every year, I would write a Lab Mod grant — which was extra money that the central office would give out to the campuses — and we asked for money to remodel. The first remodel was for the library classroom. • Jennifer had come up with a little bit of money, and she said tell me what you need, and we had enough money for four [upholstered] chairs.

PARTICIPANT	COMMENTS
	Jennifer said, 'I am not going to fund that for you because I think I can find some more money.' So, we waited ... • And this campus has a foundation that pitched in some money to help but we were pretty close to the work… and we received $2,000 dollars...

Theme 5: Input from Staff, Faculty, Students, or Community

Jane	• They [librarians] just started asking the students: what would you like? They were ok with what they had; they weren't clamoring for a new space. • We involved an outside consultant, then the facilities planner for the UW colleges. • And in the meantime, I made up the survey and asked students what they would like, and I gave them actual pictures, so they could see what I was talking about. • We had a survey sitting out in front of the library, after the 2-week period, we collected all the surveys and tallied the results. We gave them actual pictures, so they could see what I was talking about. We had it out for two weeks • The [survey] just verified what we thought we knew, and kind of gave us some new ideas about what the students wanted. • Faculty were great though; they came in and they helped us re-shelf books, and they were all excited just like we were.

Theme 6: Lessons Learned

Jennifer	• We knew we had to do something to make the space just feel inviting... to let the students know that we were invested in their education. That's what I think we really accomplished. • If we could have started from scratch and had some dream sessions, some focus groups that probably would have been interesting to see how that would have changed the outcome. What else might we have done differently? • But like you said, if we would have been able to do it in stages, maybe the next stage would have been the sound barriers or the foot stools or the power stations that we could put by the furniture. Students can plug in right by the couches... So, I think for the first step this was the right decision.
Jane	• Barring finances... I would have tried to be more organized with vendors and fabrics. And you know it was really hard because all the players were not on this campus. The architect was in Madison, Jennifer was in Washington... and struggled with what would look good. • We made the right decision because we breathed new life into the space, and we let the students know that we are invested in their academic success. • We wish we had more study rooms, deaden the sound.

Conclusion

Library systems governed by municipalities have additional hurdles to overcome when it comes to procuring funding for their initiatives. The funding controlled by the college, county, and state appear to limit the autonomy of the college. The Milwaukee, Waukesha branch wrestled with various concerns and funding appeared to have been a major factor in the depth and breadth of their renovation efforts. Jennifer made a concerted effort to ensure that the college libraries received funding that would help with student engagement. Jane had made various efforts over the years to improve the library space, and she had done this in collaboration with other library staff, Jennifer, and input from students. She was open to having student support services such as testing accommodations and tutoring co-located in her building. In addition to the above findings, a few salient points are noted below:

- The collapse of the roof and asbestos abatement was a major catalyst in the move to renovate the entire space and avoid a piece-meal process.

- Technology was a contributing factor to the space changes made at the college, as electrical outlets and collaboration spaces came to the forefront.

- As the busiest of all UW Colleges branches, the librarians felt it was important that the library reflect the changing landscape of how students studied.

- Jane sought input from campus constituents by creating surveys and asking for input regarding new furnishings.

- The library was creative in the way it repurposed donated furniture from another UW system library. While the furniture was older, it was in very good condition and it worked in the Waukesha library space.

IVY TECH COMMUNITY COLLEGE OF INDIANA–INDIANAPOLIS

College Size and Library Data

Founded in 1963 as Indiana Vocational Technical College, the Ivy Tech Community College system began with a focus on vocational and technical education. In 1995, the college

was rechartered as Ivy Tech State College and was made a statewide community college in 2005 (Indiana Commission for Higher Education, 2015, p. 7). Now with more than 19 campuses and 25 educational sites offering over 100 transfer courses, Ivy Tech is the second largest provider of postsecondary education in Indiana (Ivy Tech, 2019). The college system grants associate degrees, certificates, and access to over 1,000 online courses. The college system is divided into 14 regions that cover numerous locations in Indiana (Ivy Tech, 2019, para 4).

Like other colleges in the nation, the majority of the college's revenue is from student tuition and fees at 79%, federal and state appropriations and grants at 12%, auxiliary revenue at 3%, and other revenue at 6%. The operating revenue for the system was $166,096,169 with an end-of-year net position of $716,972,553 (Ivy Tech, 2018, p. 23). Similar to national trends, the system has seen a decline in enrollment. Ivy Tech's annual financial report for 2017-18 indicates that enrollment was as high as 179,191 students with an FTE of 67,265 in 2013 and is at 162,649 students with an FTE of 55,269 students in the 2017-18 academic year. In the same year, noncredit enrollment was 10,417 (Ivy Tech, 2019 p. 44). The average age of an Ivy Tech student is 28 (Ivy Tech, 2018, p. 15).

About the Library

The Lawrence campus is a medium-size, two-year institution located on a decommissioned army base in Lawrence, Indiana. The Lawrence campus sits on the now-closed Fort Benjamin Harrison Army Base, approximately 12 miles from downtown Indianapolis. Land for the Fort was purchased in Lawrence in 1903, the hometown of the 23rd president of the United States and subsequently named in his honor in 1906 (Fort Harrison Reuse Authority, 2014). When the base closed in 1995, ownership was transferred to the Fort's development group, then the former Defense Information School building, spanning 254,000 square feet, was

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sold to Ivy Tech for $10 (Salinas, 2016, para. 4). Ivy Tech took over the building in 2005 and

began nursing and medical programs. As of the 2018 census, the city of Lawrence had a

population of 49,046. The median age in Lawrence is 34.9 years, with the median income in

2016 at $50,338. The Lawrence campus has an enrollment of 3,761 students with an FTE of

1,709 (City Data.com, 2019). Table 17 shows the demographic data of the Lawrence campus

students.

Table 17: Ivy Tech-Indianapolis, Lawrence Student Population Statistics

STUDENT POPULATION BY AGE/RACE	% OF STUDENT POPULATION
17 and under	0.72
22 – 24	46.90
25-54	50.94
55 and over	1.44
White	51.21
Black	29.94
Hispanic	6.33
Multiracial	4.39
Asian/Pacific Islander	3.80
Other	4.39
Native American/Alaska	0.16

Source: Ivy Tech, 2016

Initial Observation

The former Fort Harrison Army Base sits on 2,500 acres that has been subdivided into

mixed-use spaces for a state park, golf course, housing, Lawrence government center, YMCA,

Ivy Tech, and retail businesses. On January 7, 2019, as I approached the college from 59th Street,

I encountered a large expanse of land to the left across from the college that appeared to be a golf

course. I turned right into the parking lot directly in front of the building and walked through a

set of glass double doors. Directly ahead of the doors was a security post where I asked for

directions to the library. I arrived early to view the space but was unable to, as the library was

undergoing renovation and the doors were locked. Directly across from the library was a library

staff office, and I walked in to meet with Paula. I introduced myself and she in turn introduced

me to another librarian and a library assistant. Paula has been the assistant director of the library

campus since 2005. She was previously an elementary school librarian for ten years. She offered

me tea and gave me the option of a tour of the building with a subsequent interview. The library

is staffed by three librarians, one full-time support staff, and one part-time library assistant. In

the future, they hope to fill two vacant part-time assistant positions. The library is open 52 hours

a week and closed on the weekend. Table 18 shows the library data.

Table 18: Ivy Tech–Indianapolis, Lawrence Library Data

CATEGORY	DESCRIPTION
Address	9301 East 59th Street, Indianapolis, IN 46216
Institution Size	Medium
Participant Title	Assistant Director
Type of Renovation	Architectural configuration (re-location) Refurbish (renovate, redesign)
Collection Volume	N/A
Door Count	23,778
Square Footage	10,000 square feet

Source: private communication

Paula gave me a brief history of the base and how the college came to occupy their

current building. The campus opened in 2005 with some federal assistance to repurpose the

building. Ivy Tech occupies the former Army education building and received a grant of $5

million from a foundation to renovate the space to meet the school's needs. The nursing program

was the first program at the college and was located on the second floor; the campus is the center

for health professions. The building was remodeled one wing at a time, and additional upgrades

followed that included an admissions office, bookstore, learning center, health professional

faculty offices, and the library. Additional programs are held at the downtown campus that also houses the central administrative office, which is three times the size of the current building.

The original space occupied by the library was about 5,000 square feet with a bibliographic instruction classroom, circulation desk, back office with a breakroom, and three study rooms. When the campus opened in 2005 and until about 2008-09, enrollment was approximately 8,000, but is currently approximately 3,000 students. During the years of enrollment growth, administration recognized that the library needed more space. Although the Fort was officially decommissioned, it was and is still occupied by various military offices such as the National Guard, that occupied a room down the hall to the left of the library. Library staff were told that, when the Guard vacated the last section in the building, the library would be relocated to the vacant space. The budget for the renovation is unknown as Paula noted that she was told that only carpeting and painting was available to refresh the space. Fortunately, the library director mentioned that a middle school had just been acquired and their shelving was available for the Lawrence library. Paula was very excited and continued to ask for various pieces of furniture from other sites at the Ivy Tech Facilities Department.

As we walked towards the new space, Paula noted that the new library space doubled in size to 10,000 square feet with additional space for library staff offices across the hall and an instructional classroom next door. The library moved from its original location to its new space in December 2016. The library space was partially occupied because, after two years, all the carpeting had to be replaced, which required that all the bookshelves had to be moved along with the furnishings. As we approached the entrance to the library, Paula unlocked the glass sliding doors that opened up to a space that appeared larger than the original library (Figure 9).

Figure 9: Lawrence Campus Library main entrance
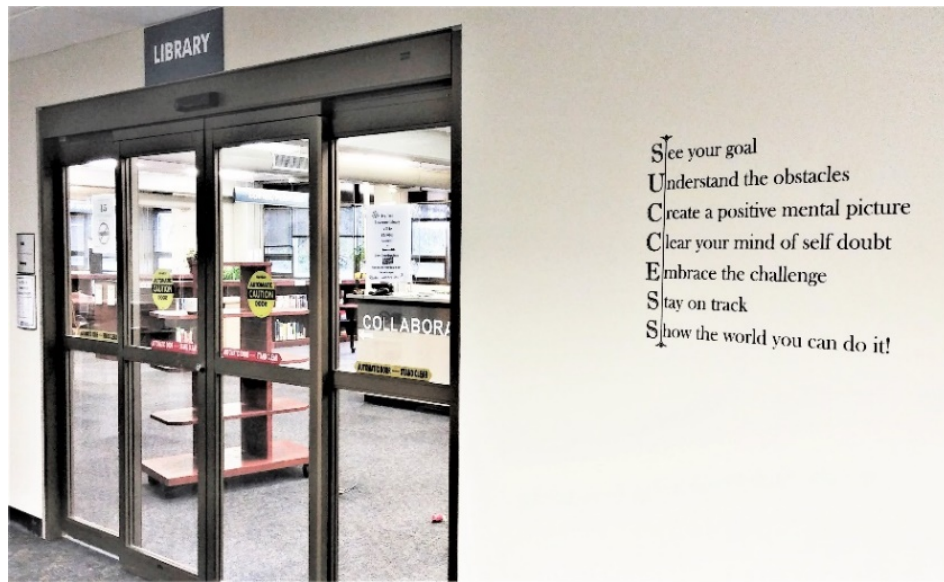
A few feet from the glass double doors were posts for the security gate and a Quick Picks display of popular books and DVDs to the immediate left, while a new books display was to the left. Facing the double doors was a large service desk with arrows indicating collaboration areas to the left and quiet study areas to the right. On the right side of the library were knee-wall-height shelving filled with ready-reference materials divided by a walkway next to tall shelves with a sign that read "General Collection." Behind the shelving were rows of low shelves lined with books against the wall on either side of the library. Directly behind the service desk to the right was a room designated for individual student assistance called the "Question Corner." Anatomical models of muscles and skulls were perched atop the low shelves for various nursing and medical programs.

To the left of the service desk were study carrels and copier/printers against a bank of windows. Directly in front of the windows was a round table with four chairs in a comfortable seating arrangement. Further down to the left were additional study tables, seating arrangements,

and a life-size skeleton (Figure 10). As Paula narrated the various aspects of the library tour, we

also explored the large instructional classroom across the hall adjacent to the staff offices. It is

important to note that Paula said she did not have input in the completion of the space change

and, in fact, was told to limit her visit to the new space during the renovation. As we talked about

the space changes a few themes emerged, and the findings and themes identified from the

interview are shown in Table 19.

Figure 10: Lawrence Campus Library study tables and Health Science Collection

Table 19: Themes that Emerged from Interview Analysis – Ivy Tech

Theme 1: Campus Strategic Plan
• ...in those years [enrollment] was building and growing, they [administration] said the library needed more space.
• So, before we were all jammed up right behind the circulation desk and it was really crowded.
• The college is required to have a library for accreditation purposes.
Theme 2: Space Configuration and Furniture
• So, when we moved, they said we'll give you paint and carpet.
• We got new leftover paint from two years ago. We liked the color, so we said 'yes, go for it.'

- So, they [Head of Facilities] said 'you get paint and carpet' but then our director said 'hey they bought the old Noblesville middle school and there are some shelves there,' and I said 'Send them over!'
- Facilities built the circulation table based on what we asked for.
- We got an inside book drop, previously we had an outside book drop.
- Directional signs came from the old library.
- The new signs in front of the circulation desk were made by Linda [another librarian].
- … In the grand scheme of things, it would make us feel better to have all matching furniture and all new stuff. We think that is inspiring to students, but we have to say… our students are so busy they don't notice that that chair doesn't match that table.
- But now the rectangle tables here. That was original. That little table that kind of matches that is an original. And you'll notice… this bookshelf and that original that one was from Noblesville school. So,… we've had to get over it.

Theme 3: Changing Technology

- Students bring their own devices a lot of times but then we have lots of students who don't have computers. So yes, the computers are fully used.
- We've spent… Perkins Grant money. We have spent lots of money through... Perkins on [anatomical and Anatomage table [virtual anatomy dissection table] and updating them [models].
- Both of these we call our media tables. All [students] share the screen plug-in your devices and... share. You know they all bring their own devices for this, but it is also hooked to a computer.
- They have all these motion lights, a switch, we were not used to [them].

Theme 4: Financial Resources

- Two years ago, in December, we moved here, and we didn't have enough money to get new furniture. I mean this is so cobbled together, but we made it work.
- So, we ask, well, 'could we have letters like those [signs for the circulation desk]?' Then I would hear those costs— like one hundred seventy dollars. So, no, we couldn't have that. Linda just made them; she laminated them and made them.
- So, we have money for books, and they keep cutting that.
- So, as far as trying to influence administration's support of us…we meet with varied success….I'll say when you have a tight budget you hear 'no' frequently. And you've got to stay on the positive side of that, right?

Theme 5: Input from Staff, Faculty, Students, or Community

- Really at the library it's hard to get respect. And we were just kind of let in [during the renovation]. We would walk down and try to look at it, and they [Facilities] did not want our input... and after we walked down there twice, we were told … 'you're not allowed to go down there.'
- When we did surveys—and we're always trying to get student input— it was 'you can't please everyone.' Half of them seemed to want group workspace. And, 'I don't want to be shushed' with the other half like 'I want people shushing because I'm in here to study quietly.'
- Linda's survey… was in the form of a bulletin board outside our former space, and she had it all set up on like a Pinterest style. And you know: 'We're moving the library December of 2016, what would you like to see?'
- I mean they wanted the top of the line everything. So, we thought, you know, they do notice!

Theme 6: Lessons Learned

- During the move, the librarians received cubicles instead of offices because that was the trend then [but it limited the amount of privacy needed to talk to the students and answer questions].
- This is a good example of not asking for input. We got these doors… we don't need them …but it was for OSHA. But, anyway we got them; we never use them. We would never use them, and it hurt us because we're not allowed [to block them]. It took up all this wall space.
- Wish there were student study rooms: we lost our space to quiet study and collaborations stations.
- We wanted more outlets; we received two more after a year.
- We would love everything mobile [furniture] if we did get more money.
- Feedback from faculty and staff is 'We love it, but this is so far' from the previous location (which was closer to the college's main entrance).
- The vent is too loud and big, and it takes up window space.
- Don't dream too big; be more realistic.
- IT had input, and we did not.
- Try to make connections with the local community.
- Because you you've got to keep trying. Yes, it's irritating; it's super irritating not to be supported, yet we feel we are still able to accomplish things.

Conclusion

The staff at the Lawrence campus wrestled with limited access to funding to renovate their space. At the time when enrollment was high, the library needed to expand, but since then enrollment has decreased by more than 50%. The new focus became updating the space to meet the needs of the students, faculty, and staff. In the interim, the staff contended with pushback regarding what they wanted for their space and resorted to creative solutions, such as creating in-house signs for their new circulation desk, repurposing existing furniture, and bringing in plants and decor to improve the ambience of the space. Below are additional observations from the themes identified above.

- The college administration identified a need for the space to expand.

- Space previously occupied by the National Guard was earmarked for the new library.

- The move yielded new carpet and new paint and a new circulation desk built by Facilities.

- Furniture from an acquired local school in addition to existing library furniture was used in the new space.

- The library received two additional outlets and the librarians used power strips to augment the lack.

- A Perkins grant was instrumental in assisting the library in acquiring anatomical models and an Anatomage table.

- The library staff did not feel that their input was welcome or appreciated.

- The lack of funding limited the depth of the renovation.

- The library staff solicited input from students and faculty.

- The new library is further from the old location and is a concern for students and faculty.

- Staff would have loved to include community input in their renovation.

BAY DE NOC COLLEGE

College Size and Library Data

Bay de Noc College is a small residential two-year college in Michigan's Upper Peninsula in Escanaba, with a main campus in Delta County and a campus in Iron Mountain in Dickinson County. The college sits on 155 acres of land with 14 buildings and various parking lots. Escanaba has a population of 12,181 in a county of 37,069 residents as of the 2017 U.S. Census estimate (U.S. Census, 2018a). In 2014, the median age in Escanaba was 45.1 years with the median income at $33,230 (U.S Census, 2018a).

The college (often called Bay College) was established as a result of a referendum and the establishment of a school district in 1962. The history of the college began with the idea for a junior college in Escanaba from a $100,000 bequest from Mrs. Catherine Bonifas. Classes began in 1963 at two local high schools with the appointment of a president, and in 1965, the college had its first graduating class of 65 students. In 1969, the Science-Technical Center was the first

building constructed on the 150-acre campus, and by 1975, the college had over 1,000 enrolled

students (Bay de Noc College, 2012, para. 1- 2). Today, a local YMCA and childcare services

for the college and community members are co-located on the main campus. In 2006, the college

broke ground on 25 acres of donated land for the construction of the 67,000 square feet Bay

West campus in Iron Mountain (Bay de Noc College, 2018a, para. 1-4). Iron Mountain is

approximately one hour away from Escanaba in Dickinson County, Michigan.

The college offers courses in three broad areas divided onto into six academic divisions:

allied health, arts and letters, business, math and science, social and behavioral sciences, and

technology. With approximately 80 associate degrees, certificates, and online programs, Bay

College offers three associate degrees in art, applied science, and science degrees (Bay de Noc

College, 2019). In addition, Lake Superior State University offers several bachelor-degree-

completion programs on the Bay College campus (p. 9). As of the 2018 academic year,

enrollment at both campuses was 1,324 with an FTE of 1,090 students. Similar to most

community colleges, enrollment was as high as 1,731 in 2014 and has consistently trended

downwards for the past five years. The college employs a total of 226 employees, with 118 full-

time faculty, 89 part-time faculty, and 89 administrative staff (Bay de Noc College, 2019).

Like other community colleges, the college is funded by state appropriations, tuition and

fees, and property taxes. Tuition and fees account for 45% of the revenue, property taxes at 35%,

state aid at approximately 23%, and other funding at less than 0.1% (Zielak, 2019, pp.17, 26).

The annual operating revenue of the college for the 2018-19 academic year was $9,331,823.

Colleges in Michigan are funded on a performance-based system utilizing a performance

indicator formula that the state implemented in the 2006-07 fiscal year. The performance

indicators are based on information gathered from the colleges in October each year such as

meeting best practices standards related to partnerships in education, community services, business, and economic development. The indicators help determine if the budget will be increased or decreased from the prior year (Zielak, 2019, p. 18). Data for student demographics was retrieved from the college's fiscal year 2018 Capital Outlay Plan and Project Requests, and student ethnicity data from 2016 was provided by the librarian, Oscar (Bay de Noc, 2018b). See Table 20 for student population statistics.

Table 20: Bay de Noc Student Population Statistics

STUDENT POPULATION BY AGE/RACE	% OF STUDENT POPULATION
24 and under	72
25 and over	28
White	88
Two or more races	4
Native American or Alaska Native	3
Hispanic	2
Black or African American	1
Asian	1
Unknown	1

Source: private correspondence

About the Library

The former Learning Resource Center, recently renamed the HUB, houses the library, computer room, Student Success Center, online learning/instructional technology, academic and certification testing, study spaces, 19 support offices, art gallery storage, and a conference room (Bay de Noc College, 2018a, p. 21-22).

According to Oscar, the director of Library Services, the library began in a small space in the Catherine Bonifas building, which was built in 1970. In 1985, construction began on the Learning Resource Center, and the library took occupancy in September 1986. The space changed very little over the years, except for a roof replacement in 2014, until a major renovation

of the building began in March 2016 and was completed in September of the same year. The newly renovated building was renamed the HUB in 2016. The renovation of the library was the result of an overall building renovation that cost approximately $5 million. The original footprint of the library was 14,720 square feet, and at the end of the renovation, the library's footprint was reduced to approximately 10,000 square feet. Oscar noted that discussions about co-locating various disparate services on campus into a central location was the main driver of the renovation project. The discussions preceded his arrival on campus by two or three years. College administration wanted to see support services function as a cohesive unit. They had sought insight from other institutions that had completed a similar process and wanted to see how they could impact student success.

Prior to Oscar's arrival, library usage was low, and it was not functioning as expected. In preparation for the renovation, Oscar, who inherited the proposed renovation changes, weeded a portion of the collection, was receptive to the impending loss of space, and looked forward to a better functioning space. Currently, the library is staffed by the library director, a part-time reference and collection development librarian, and an administrative staff assistant. Oscar is responsible for supervising staff, budget oversight, and is the primary liaison to the college to increase awareness of library services among student, staff, and faculty. The library circulated approximately 2,825 items in the 2018 academic year and is open 52 hours a week from Monday to Friday and is closed Saturday and Sunday. Table 21 summarizes the library data.

Table 21: Bay de Noc College Library Data

CATEGORY	DESCRIPTION
Address	2001 N Lincoln Rd, Escanaba, MI 49829
Institution Size	Small - Residential
Participant Title	Director of Library Services

CATEGORY	DESCRIPTION
Type of Renovation	Architectural configuration (re-location) Refurbish (renovate, redesign) 2016 - 2017 Summer
Collection Volume	28,299 Print and periodicals, 2,907 AV materials, 70 data bases and 224,012 digital items
Door Count	40,071 (2018-19)
Square Footage	10,000 square feet

Source: private correspondence

Initial Observation

On December 14, 2018, I conducted a phone interview with Oscar regarding the library renovation. Due to logistical concerns, I was unable to visit the Bay College Library. Figures 11 and 12 are pictures of the library from its website. Oscar was patient as I navigated the Skype system and was willing to make adjustments before the interview began. My impressions are based solely on pictures on the website and my conversations with the library director. Table 22 shows the six themes identified from the interview.

Figure 11: Learning Resource Center exterior

Figure 12: Library main entrance

Table 22: Themes that Emerged from interview Analysis – Bay de Noc

Theme 1: Campus Strategic Plan

- The idea behind it [renovation] became… bringing all of those services together: students had one place to go when they needed help instead of trying to determine which place they had to go. So that was the primary piece there.
- They [architects] also did interviews and focus groups and had many meetings with each of the different groups on campus that were going to be a part of this unified area to determine how we wanted to function what we believed the best layouts would be structured.
- They [administration] looked at other libraries.

Theme 2: Space Configuration and Furniture

- They [Facilities] built out the external walls, put the roof on it, and then tore out internal walls until they could restructure it to where it needed to be and laid it out with the new space.
- Our new space is open and we're using infrared cameras to read. So, we went from a unidirectional counting system that was easy to mess up.
- Most of the space is carpeted. There's a small swath that is polished concrete, but the bulk of the space is carpet.
- Throughout the library itself we have a series of nooks that are open, and individuals can go into them. They don't have a door or a fourth wall to them.
- We have a multipurpose room — a larger room for events
- Like I said, as we increase density on the shelves, but we also have a space that we're using for events, which was a large open area that we had removed stacks from, and we're using it to host things like family fun nights and other activities.
- Our entire Fiction collection is on 4-ft shelves with casters so when we have an event, we can move the shelves. So, we went for versatility, and we made the space able to adapt to

the different needs that we would have, as opposed to trying to dedicate specific locations for certain aspects, so that we could modularize what we needed to.

Theme 3: Changing Technology

- We did have some input from campus security to assist with some of the technical aspects, safety, or technology that would be going into the space and ensuring that we had the foundation that we needed.
- We switched over from white boards to glass boards.

Theme 4: Financial Resources

- The college—the board—had to approve the entire project. There had to be some millage... I believe was passed around that time. The Foundation donated a certain amount. The college had to agree to take on the debt for the rest and go through the process of paying down.
- The funding wasn't going to support it because it wasn't enough to handle that.

Theme 5: Input from Staff, Faculty, Students, or Community

- The architects did a lot of foundation work when they were trying to determine how the space itself would lay out which included doing focus groups studies with student groups.
- The responses that they [architects] got from the surveys and the focus groups and such actually led to a large variety of different type styles of spaces that people wanted. Some students don't want to quiet spaces. Others wanted collaborative spaces. Some wanted to study spaces that were closed off with doors. Others wanted more open spaces.
- We are constantly seeking input and feedback from the students and so that's through surveys that we offer.
- We also had input from I.T. in the process. Maintenance was heavily involved during the entire process.
- We did have some input from campus security to assist with some of the technical aspects, safety, or technology that would be going into the space and ensuring that we had the foundation that we needed for that maintenance was heavily involved during the entire process.
- Comments…a lot of it [feedback] just comes through general kind of suggestion box that individuals have told us what they liked about the space or didn't like.

Theme 6: Lessons Learned

- Be willing to adapt and be willing to change and know that input from different stakeholders. Input especially from maintenance and I.T. is invaluable.
- … and by bringing all of these services into one area, the library was also going to benefit the students [who] would be within the vicinity of the library more often, and potentially be in the library a lot more often.
- One of the current issues that's happening for us in the library specifically is sound.
- The new space is much more open, so sound travels more than it did before. And as a result, [in] some of our quiet spaces, sound is carrying from some of our modern spaces into our quieter spaces.
- And so, if we would have had meetings during the process to control sound transference, that would be would have been a big help.
- If you're planning a specific room in the library dedicated to a Maker space, you can plan that out all on its own with its own functionality and structure, and you're very mindful of that.

Conclusion

The renovation of the Bay College library was a result of the college administration's need to co-locate student support services. The plan had been in place for a while before the library director arrived, and he was able to help guide the rest of the process. A few additional salient points were identified from the interview transcript:

- The previous library layout posed challenges with the redesign as two gates ran across the entrance.

- The library removed a significant number of materials from the collection to make way for the renovation.

- The library lost approximately 4,700 square feet in condensing the stacks to decrease the footprint.

- Opening up the space created reverberations over the shelving units and the library director is currently exploring sound deafening technology.

CHAPTER SUMMARY

Chapter 4 focused on identifying colleges of various sizes in various settings. Six colleges in four states in the Great Lakes region were identified. Each college was unique and distinct in funding, demography, and setting. The factors that led to the renovation space changes were common, yet unique. Six themes were identified from the interviews: (1) campus strategic plan, (2) space configuration and furniture, (3) changing technology, (4) financial resources, (5) input from staff, faculty, students, or community, and (6) lessons learned.

Colleges in state-wide systems appeared to wrestle with funding more so than colleges that were independent in their states. The systems also appeared to limit the autonomy of the library staff in the decision-making process. The majority of the library renovations were a result of a joint or larger campus renovation focused on co-locating student support services. The librarians at each institution were creative and focused on the students and their needs as they sought to meet their technology, group study, and space needs. Collaboration among the library

staff or with other departments was the key in executing and achieving the desired results. The Ivy Tech Community College system in Indianapolis was unique in this instance because librarian input was not sought during the construction process.

Post Renovation

Upon completion of space change efforts, there are bound to be unanticipated issues, concerns, and some level of retrospection. It was important to have libraries that had completed a space change within a five-year range to ensure that participants were still at their institution and that time had helped inform the feedback from librarians, students, faculty, and community members. The UW–Green Bay, Manitowoc project had been planned by a previous librarian who had retired from the institution, and Anthony took the reins upon his arrival. Oscar, from Bay College, also joined the college post-renovation plans, but was present during the change, and finally, at the College of DuPage, one of the four librarians involved in the space change had already left the institution.

The college libraries had completed their space changes from as early as 2014 to as late as 2018. College of DuPage had more to say post-renovation and has made incremental changes since 2014. For example, Colin and Lisa noted that the original footprint of the media lab was smaller: "Well…part of what we added in the renovation was kind of a pilot media lab...digital production lab and…we kind of underspec'd the footprint of it, and just now we opened in a new larger space in the library. So that's an example of being able to adapt…by probably tripling the space."

Rebecca spoke about the need for more flexible collaborative classrooms and said, "We could even have more study rooms and people wouldn't mind…. There are times people want their own little room or pod to study in, and we don't have much individual space."

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Lisa also stated that, in retrospect, she thought their space redesign was too staid and formal in comparison to other recent renovations at peer colleges such as Harper College; she said that Harper College's renovation was more "funky and informal."

Anthony, from UW-Manitowoc, wished that he had pushed for more electrical outlets, and Jane, from Waukesha, wanted better carpeting and soundproofing in certain areas in the library. Similarly, Oscar, at Bay College, was exploring sound-deadening options because sound in the new space was bouncing over the stacks into the quiet areas. At the UW-Waukesha branch, Jane was concerned that installing booths for collaborative spaces would encourage eating in the space:

> We wanted booths because it was for collaborative study, and it's kind of trendy, and it might be sound barriers, too, because of the high backs. The negative side of that is we knew there was going to be maybe a lot of talking and food because it looks like restaurant seating or Starbucks seating and the food would come in. And I'm telling you right now, it did come in, and it's a mess.

Njambi, from Harper College, believed that the mission to change the library space had been fulfilled. She noted that observing the students having conversations, staking their place, while faculty and staff were utilizing the space were a pleasure to see. Lisa, from College of DuPage, offered advice on the beginning stages of embarking on a renovation project, "You can't have enough conversations; you can't have enough time for people to give their input. You have to think about people and their fear of change." Because the College of DuPage was able to pass a referendum, Colin noted that the passage "was really a message from the community that we were worth it; we are a valuable community resource."

Chapter 5 will take an in-depth look at the commonalities and connections between the various institutions and how their renovations directly and indirectly impacted the college overall.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents an analysis, summary, and conclusions drawn from the data collected in Chapter 4. This qualitative multi-case study focused on two-year colleges located in four states in the Great Lakes Region that had undergone a library space change of varying degrees. Of the colleges that responded to invitations for interviews, six colleges met the criteria of having completed a space change within the past five years as of 2018. The colleges also met the criteria for the five sizes listed in the Carnegie Classification from very small to very large. The colleges chosen for this study were the College of DuPage (Illinois), Harper College (Illinois), University of Wisconsin-Green Bay and Manitowoc (Wisconsin), Ivy Tech Community College (Indiana), and Bay de Noc Community College (Michigan).

The colleges in Wisconsin and Indiana were in state-wide funding systems, while the college in Michigan was in a performance-based system that increased or decreased funding based on prescribed metrics met from the previous year. The two Illinois colleges in the study were independent colleges funded by taxes, tuition, and state allocations. The site visits and interview process began in October 2018 and concluded in January 2019, although there were additional follow-up questions by emails several months after the interviews. This chapter provides an in-depth examination of the findings from the interviews, recommendations for libraries that are looking at renovating their spaces, and a checklist to help guide the renovation process.

SUMMARY OF THE STUDY

The summary of this study begins with a review of Chapters 1-4 with the subsequent results and an analysis of the data collected. It concludes with recommendations for further research and a renovation checklist.

Chapter 1 covered a brief history of academic libraries and the work of academic libraries and librarians, particularly the two-year community college library. It chronicled some of the changes that have occurred as technology and student study habits began to evolve and the efforts college libraries made to keep pace with these changes. It covered the significance and the purpose of the study as the researcher sought to understand and expand on the existing body of work related to library space changes.

Chapter 2 included elements that helped to situate the study with an examination of existing literature focused on four-year institutions, the scant papers written about the efforts at community colleges, and several articles by architects who had completed work at colleges, with some outside the Great Lakes Region, the boundary of this research study. It also examined the historical and seminal work of Bennet, Shill, and Tonner and other significant contributors to this very important work. The existing literature helped to ground the need for a narrower focus on community colleges and the often-excluded portion of their research work.

Chapter 3 identified the conceptual framework and methodology that informed the study design; the selection of a qualitative method with a multi-case approach were the best suited methodology for the study. It detailed the steps to design the study with four stated criteria and boundaries. A method for identifying and contacting potential cases was also included in the study. Triangulation methods were used to help ensure trustworthiness and validity that included data collection methods, student survey results, and source documents. In addition, I sought to

use various triangulations methods to connect the theoretical framework to the purpose of the study through the data collection process.

Chapter 4 reported the findings of the study by situating each interview site in the context of the communities they served and providing a brief history of each college, the demographics of the college and surrounding area, the available history of the library, and the funding sources for each institution as gathered by me or provided by the participants. Also presented was a brief introduction to the eleven participants at the six colleges and their insights and evaluations of their space change project over time. An identification of the themes that emerged after each site interview were noted.

Chapter 5 outlines an analysis of the findings that emerged from the interview process and the connections to existing literature. The conclusion of the chapter details the implications for the future of two-year college libraries, a renovation checklist, and recommendations for further research.

The study was guided by three questions:

1. What factors led to the realization that the library space no longer met student and faculty needs?

2. What steps were taken to improve the learning environment?

3. What financial considerations were needed to approve the changes?

While it was the researcher's aim to visit each college campus, the weather became a deterrent to the on-campus visit at Bay de Noc College. In the case of the Ivy Tech Lawrence campus, a walkthrough before the interview was not possible because the library was closed for recarpeting. However, I received a guided tour of the previous library space and the new space with the librarian during the interview. At the conclusion of each interview, I received a guided

tour from the participants along with supporting renovation documents such as survey results, planning documents, and floor plans of the spaces. The documents helped me gain a better understanding of the renovation and connected my initial observation to the participant's narrative.

Guiding Question 1: What factors led to the realization that the library space no longer met student and faculty needs?

There were five factors that contributed to the need for a change in space. These factors emerged and remained important with each site interview. The factors were administrative directive, student and faculty space usage, integration of services, updating technology, and library staff observations.

In this study, some of the same themes resonated as catalysts for some two-year college renovations that were similar to the four-year institutions. At the conclusion of the sixth interview, there appeared to be a saturation of response data and confirmation of the commonalities and differences in the findings. Jennifer, from the UW libraries system, fully encapsulated the need and reasons for space changes at the UW Manitowoc and Waukesha branches. She noted,

> I made the determination that in a modern library, our space and how our space is used is of equal importance to the collections that we put inside it. So, we knew our students were using our physical collections at a declining rate. We knew that the library resources they used...were in large part resources that they could access from anywhere through our subscriptions to...electronic resources.

Administrative Directive

The now-defunded Academic Facilities Act of 1963 illustrates the importance the federal government placed on the maintenance and construction of academic facilities. Saunders' (2014)

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assertion that academic buildings are fixed assets and are consequently an integral part of a college's strategic plan confirm the notion that enhancing, renovating, or creating physical spaces are foundational to how colleges house and deliver instruction.

Before a college endeavors to make space changes, placing an emphasis on the need to make the change is a common discussion between college administrators and their governing board. Detailing the importance of the change and the benefits it will yield are key components of the campus master plan. As financial considerations and finals decisions are made, the renovation may be added to a long list of other capital building projects. These projects are usually a part of the mission and strategic plan of the institution and may take years before the goal is realized.

Each college surveyed in this study reflected on and confirmed that the literature that administrators played a key role in the assessment and approval of each space change. Bay de Noc College, Harper College, College of DuPage, Ivy Tech, and the University of Wisconsin colleges were projects that were integrated into a larger campus remodel. The space changes were included in each college's campus master plan either as a renovation project or, in the case of UW–Milwaukee, Waukesha, as an asbestos-abatement restoration and renovation project.

A noteworthy revelation about the Harper College and College of DuPage renovation initiatives was learning that the driver of the referendum for funding and renovations of both colleges was the same president who had moved from Harper to COD. Since the Harper College referendum had been approved years before the renovation occurred, the task of completing the space change fell to the next president. Lisa, from the College of DuPage, mentioned that one factor that contributed to their renovation was a result of research done "as an administrative team as well as [by] the librarians of what was out there." They noted that a lot of the decisions

for design and furnishings were "driven by the previous president and the look that he was trying to achieve throughout the campus…. So, we had a color palette that we could use… and that really did dictate a lot… we didn't really have a say in those choices." Administrators also made the decisions about the benefit of co-locating student support services.

Integration of Services

In Halling and Carrigan's (2012) paper on utilizing user feedback for library redesign, the authors called on librarians to move from viewing the academic library as a collection warehouse to envisioning the library as a composite of services in a space integral to the overall campus learning environment.

Bay de Noc College administrators had looked at other colleges that had successfully co-located student support services into a common space before implementation of the space changes. Oscar admitted that discussions about co-locating various disparate services on campus into a central location was the main driver of the renovation project. The services included tutoring, testing, TRIO (Federal student services programs designed to identify and provide services for individuals from disadvantaged backgrounds), accessibility department services, and the library helped the students gain access to academic support tools in a centralized location. UW–Green Bay, Manitowoc's renovation saw the addition of a media lab, dedicated tutoring, and library instruction spaces integrated into the new library space.

Likewise, Harper College and the College of DuPage had co-located services in their spaces. Similar to Manitowoc, Harper's student support services for writing and tutoring and the Center for Teaching Excellence share the same building as the library. Two of the six libraries, Ivy Tech Indianapolis and UW–Green Bay, Manitowoc, relocated either from one floor to another or from one space to another. In some instances, the footprint of the original library

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remained the same, yet in the case of Bay de Noc, the square footage shrank by 4,700 square feet, while Ivy Tech Indianapolis doubled their space from 5,000 to 10,000 square feet. Harper College Library relocated to a temporary facility during the 21-month-long construction, while College of DuPage moved the majority of their collection to offsite storage facilities as they completed their renovation in phases from 2011 to 2014.

Student and Faculty Space Usage

In Bennett's 2003 study, the reasons college presidents advocated for library space changes were growth of the collection, the changing character of student study behavior, and the growth in library instruction. In fact, colleges were willing to give up user space to allow for larger collections. Just a few years after the Shill and Tonner (2004) study, Freeman et al.'s 2005 research reported that students wanted spaces that provided solitary and collaborative environments. Foster and Gibbons' 2010 paper illustrated that students at the University of Rochester had unofficially created their own noise zones and were particular about the spaces in which they studied. Oliveira's (2016) research regarding why students chose not to study at the library revealed that they found the building old, lacked adequate lighting, and was not conveniently located on campus. They also reported that seating was uncomfortable, and the temperature did not promote comfort. The result of his study illustrated that centrally locating the library on the college campus as the heart of an institution was of importance to the students.

In contrast to Bennett's (2003) revelation that libraries were willing to trade user spaces for expanded collections, this study highlighted the fact that libraries have slowly pivoted towards space expansion for users while reducing their collection size. This course reversal, a result of reduced circulation, allowed libraries to reduce the footprint of their physical collections and open up their spaces for additional study tables and discussion rooms. Similarly, all libraries

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in this study did a considerable amount of collection weeding before the space change projects commenced. Rebecca at College of DuPage was clear about their goals, "We really wanted to try to create spaces for every type of user. So, we have gotten loud rowdy collaborative open spaces and then places for people to get away from the din and really want to hunker down." College librarians also noted that the nature of instruction included increased collaborative assignments, and the library provided the space and technology needed to aid students in their efforts.

Technology

The 2004 Shill and Tonner study revealed that the growth of internet resources, off-site eResources, the need for institutional technology upgrades, and declining usage statistics were the major factors for implementing a renovation. The authors also noted that students abandoned academic libraries due to facilities lacking good computers and extensive network access infrastructure for laptop computer users. Wegner and Zemsky's 2007 outlook for the future of libraries emphasized the critical role of technology as librarians considered replacing print materials with electronic resources while focusing on negotiating licensing agreements for digital content.

Stewart's 2009 study of new construction completed from 2003 through 2009 revealed yet again that changes in information technology and the changing character of the students' space needs were major factors in new academic library construction. Karasic (2016) described the active learning classrooms as spaces where students not only attend class but also interact with the newest technological tools to engage them in learning. Finally, Gstalder's 2017 work on understanding space planning revealed that technology was a disruptor in how students learned and wanted to use library spaces. From the findings, Gstalder's study confirms that technology continues to play a critical role in college library renovations.

In this study as in the literature, technology became a driving force in the need to renovate library spaces. Jane at UW–Milwaukee, Waukesha revealed that while students brought their electronic devices to the library, they also used library computers to access the web and course content. The results also revealed information about the students' increasing need for electrical outlets to charge their phones and devices while also needing access to connected learning tools such as large monitors for collaborative assignments.

The need for physical resources such as reference books has been superseded in many instances by the use of electronic resources. The addition of and increasing demand for electronic resources such as databases, online learning tools such as MOOCs, eBooks, videos, and streaming media have fundamentally changed the way students conduct research, collaborate on, and complete assignments. Consequently, while circulation of monographs was declining, the use of electronic resources was increasing.

Observations from Librarians

Librarians are often the first to observe the changes occurring in library spaces. They may observe that students are rearranging chairs in order to collaborate or that others are seeking quiet areas in the library. Librarians also notice the reduction in the number of reference questions, reduced door count, or circulation. Students may complain about noise levels, variances in temperature, or request study rooms, laptops, and location of the best wi-fi signals. They look to the librarians as guides to help them navigate the space and resources. It may take as little as a few days, months, or even years before librarians can find or even offer solutions. Some solutions are as easy as temperature controls, while others, like space limitations, may take years to remedy. Paula, from Ivy Tech, noticed that the library space had become crowded. It was her first response as she was asked about factors that led to discussions about a space

change: "Crowded fussiness was our first indicator… in a typical day we'd have to call security and say 'hey, you know we're having a meltdown in here,' and we attributed that to the crowded space." She also mentioned that the campus site director said, "Wow, they're getting crowded in the library."

Community College Audiences

Finally, while this study examined the needs of faculty and students during renovation planning, two-year colleges also need to identify and understand the needs of all users. To add to the current literature, this study is significant as it identified additional audiences that use community college libraries in contrast to four-year college libraries. A unique aspect of the importance of the community to the two-year college environment is the issuance of library cards to community members, often with extensive access to library offerings and databases. Rebecca, at the College of DuPage Library, stated that the library issues cards to residents and those who work in the district: "They can check out anything that circulates and use any of their computer facilities…when they're on campus, they can use all the databases, just about any of the databases, and the electronic resources."

Two-year colleges often solicit the support and input of the community for the passage of referendum to improve college facilities. Such was the case at the College of DuPage as community members were invited to add to the flip charts used to gather renovation information and vote to approve funding. These audiences provide direct input into the space change process at the college library. Audiences that two-year colleges serve include:

- Children who attend summer camps
- High school teens who enroll in dual credit programs
- Alumni

- Adults who hold a four-year degree and are retooling their skillsets

- Lifelong learners such as retirees enrolled in senior programs

- Working adults who want to earn a certificate or associate degree

- Traditional students age 18 – 20 who enroll after high school

- Students seeking to complete their GED

- Students seeking to learn English as a Second Language (ESL)

- Community residents and local businesses

- Stay-at-home parents, or those returning to school after their child has earned an associate degree and are sold on the merits of community college.

Course offerings from community colleges can be remedial, credit, and noncredit such as life enriching programs that are of personal interest or career related. Members of communities without libraries, such as the Village of Inverness in Illinois, take advantage of the resources and services provided by the Harper College Library as they use study rooms, borrow materials, and use the fitness facility on campus.

Guiding Question 2: What steps were taken to improve the learning environment?

Wegner & Zemsky (2007) noted that college administrators need to plan for the allocation of funds as the college librarian envisioned the role of the library in the budget process. Foster and Gibbons (2007) began the first phase of their space change by informally surveying students by using a flipchart at the library entrance to ask the questions, "Why do you like to come here?" and "What is missing?" Oliveira (2016) gathered data at his institution through space usage observation, interviews, focus groups, and undergraduate and graduate student usage surveys. He also examined data from other institutions to understand the same phenomenon.

While this strategy was used at a four-year school, Jane, from UW–Milwaukee, Waukesha, did something similar to Foster and Gibbons: She set up a flip chart with pictures of furnishings and asked for input from students. She also used a heat map to understand library traffic and where students preferred to sit.

In this research, Harper, UW-Wisconsin, and College of DuPage had read literature reviews about how to begin a space change process. Other sites had visited other libraries and attended furniture conventions to get ideas regarding seating and placement. Lisa and Rebecca from COD held staff forums, set up a blog, surveyed students, and created a video to tout the benefits of the needed renovation. Additionally, Paula from Ivy Tech created a blog that contained pictures from other institutions and also conducted a student survey. Each institution had done some preliminary work such as reaching out to students and or faculty, meeting with other affected departments in the renovation, and creating renovation committees that helped to ensure that all voices were heard. Paula noted, "We did a lot of talking and planning and looking at design books and in our staff meetings and team meetings...we just kept a folder, we called it ...space utilization." Finally, each institution did some extensive weeding of their reference and circulating collection prior to the space change to allow for more student space.

Guiding Question 3: What financial considerations were needed to approve the changes?

Bobinski's 2007 work on libraries and librarianship presents facts about the Academic Facilities Act of 1963, which was created to provide matching funds for the construction of academic libraries at public and private institutions. He noted that the federal government has contributed to the growth and relevance of libraries through targeted funding for information technology needs, collections, and electronic resources. Saunders (2014) affirms that keeping facilities consonant with the strategic plan the budget is crucially important, particularly because

physical facilities are fixed assets and changes cannot be made without long term planning" (p. 68).

Gstalder's (2017) work asserts that renovations, while not as expensive as new construction, still had a large price tag. Murray's (2010) article about Grand Valley University's efforts to raise funds for the college library included fundraising efforts and donations in addition to funding from the college itself. The fundraising effort resulted in the renaming of the library in honor of the donor's mother.

In this research, funding was a result of various efforts. The most common form of funding appeared to be from the college, with occasional matching funds from the state. In addition, colleges often appeal to voters through a millage or referendum placed on the voting ballot to fund their building activities. During the economic downturn, colleges were hard pressed to begin or continue library renovations. When state appropriations were withheld, construction activities ceased due to a lack of funding.

As colleges sought other large funding sources such as endowments, planned giving, or donations, their fundraising efforts often resulted in the college renaming the library after the donor or donor preference. Such was the case with the newly named David K. Hill Library at Harper College when the college received a substantial sum from the donor. College foundations have been known to contribute to renovation efforts. Such was the case at the Manitowoc and Waukesha campuses of the UW system. The Ivy Tech Community College grappled with funding for the newly relocated library and received funding only for new carpeting and paint surplus from another project. They also received furniture from the college system warehouse that stored furniture from various institutions within the system. The Manitowoc campus of the UW system received funding based on an agreement with the county and donations from the

college foundation. The UW Waukesha campus from the same system received funding to abate an asbestos issue. Through the creative work of the director of libraries and campus librarian, funding was identified and allocated in addition to donations from the foundation and they received repurposed furniture from the UW Business Library. Finally, Bay de Noc received funding through donations and a capital outlay from the college.

RESEARCH DISCOVERIES AND OBSERVATIONS

As with most research, in the course of the fieldwork there are bound to be unexpected discoveries; such was the case in this study as the research revealed new facts. What I found surprising about majority of the space changes was that the library renovations were residual effects of other anticipated goals and efforts at four of the six colleges. Goals such as co-locating services that included the library were unexpected as I had anticipated that the majority of the reasons would be based on student complaints. Another surprise was the funding limitations identified in the college systems where each campus was competing for funds for their various needs. Jennifer, from UW Libraries System, used the asbestos-abatement renovation as an opportunity to secure additional funding to make further changes,

> They...repaired the roof...all new ceiling tiles. They also had to get all new carpeting because of damage done [and] I realized that that was our moment. That was the remodeling that this campus was going to get. And so, we had to figure out some creative ways to find funding.

Another revelation was the notion that the Ivy Tech Lawrence campus renovation did not appear collaborative in nature between the library staff and facilities department. This fact proved to be a pain point for Paula, because she had been excited about contributing to the renovation process yet was told to limit her visit to the renovation site during construction.

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It was also important to learn about the creative ways that libraries sought to innovate by ensuring that access to electrical outlets became critical in their ability to attract students to their spaces, as they needed access to charging stations. Additionally, three colleges did the opposite when it came to number of entrances and exits to the space. The College of DuPage opted to add more exits to their space; Harper College reduced the number of exits from two to one; and Anthony at UW Manitowoc remarked that, "Students love the space, they value the study areas, the furniture, and the group study rooms. They don't understand why there is only a single entrance to the space, and why can't they go out of the commons area."

There also appeared to be a loose correlation between the median income of each college district and the funding challenges they faced. The two Illinois colleges in relatively affluent areas did not have funding challenges yet had to stay within the prescribed budget. However, the low median income colleges struggled to procure the funding they needed for their projects and, in fact, librarians appeared to have heavily advocated for funding for their projects from college administration. Jennifer at the UW Libraries noted that "the colleges were well known for not being well funded," while Paula, from Ivy Tech, was vocal about how, "Two years ago, in December, we moved here, and we didn't have enough money to get new furniture. I mean, this is so cobbled together, but we made it work." Jennifer, from the UW Library system, noted that "One piece of advice is you can modestly make some fairly impactful changes if you are creative and innovative." Soliciting input from all audiences and ensuring that each stakeholder has a voice in the process is the key to ensuring a successful outcome.

Finally, the most prevalent theme that emerged from the research was that two-year colleges and universities have similar reasons for renovating their spaces, yet the two-year college with its commuter student population and community members have to make concerted

efforts to attract users to their spaces to discover the many valuable resources available to them. This study was significant as it sought understand the innovative methods libraries and librarians at two-year colleges used to meet the needs of their student body and community. The findings of the study helped to reinforce the importance of academic libraries to their constituents.

IMPLICATIONS FOR THE FUTURE OF TWO-YEAR COLLEGE LIBRARIES

The community college will continue to provide a quality and affordable education and adapt to the changing needs of its constituents. As community and business partnerships grow, there will be an increasing need to continue to work to understand the needs of the changing workforce and the surrounding community. Badging, a digital credential "used to recognize and demonstrate skills students have developed in a range of learning environments" (ALA, 2015a), is a game changer in the world of academia and business partnerships. Currently at Harper College, digital badging is being utilized on the noncredit side of the college to issue credentials for competencies met for a course that can be easily understood by employers. Competencies required to earn the badges are imbedded by the badge provider and can be added to online resumes on sites such as LinkedIn.

Within the past couple of years, colleges have begun offering badging as an integral part of the educational journey. Badging in college libraries can be utilized in meeting library instruction competencies. Librarians can partner with faculty to provide classrooms for badging assessment and incorporate badging into the bibliographic instruction space. Librarians can create self-directed courseware for students that requires a fixed amount of bibliographic instruction hours completed as a part of their course grades. The information literacy badging at the University of Pennsylvania is an example of academic libraries creating badging levels of search and information competency (ALA, 2019, para. 7). How the library at each institution can

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be positioned to support the work of students, faculty, and the community will be reflected in the quality of instruction, learning environment, technology, and services they provide.

The field of education is ever changing, and technology will continue to pay a major role in the future of academic libraries. ALA's Center for the Future of Libraries, headed by Miguel A. Figueroa, is working to keep libraries informed of trends in the library sphere. Figueroa writes extensively about trends such as face recognition software, an existing feature in government spaces but relatively new in the public arena: "Some have predicted a future for libraries that is not unlike China's current system, where librarians will know as soon as individuals walk into the library who they are, where they live, what books they have checked out, and if any of their books are overdue" (ALA, 2018).

The Make Shop and media lab at Harper College and College of DuPage are examples of how libraries are evolving to provide access to technology that are still priced out of the budget of the average student. The use of 3-D printers has become key in how students utilize the hands-on learning experience to visualize assignments and bring them to life. The Harper Make Shop is open to students and provides access to various equipment with guidance and usage instruction from a librarian.

Blockchain, the technology that powers bitcoins that may appear to have a nefarious reputation in the marketplace, can and has been considered as a useful tool in the academic space for recordkeeping and authentication of digital badges. Blockchain stores information for transactions conducted in a distributed network and can be useful for archival purposes in libraries and even in the authentication of digital literacy badges (ALA, 2017a).

Artificial Intelligence (AI), the use of machines to facilitate deep learning, will become a useful tool in college libraries as it uses AI in searches to recognize patterns and improve data.

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Semantic Scholar, similar to Google Books, is one such endeavor that helps researchers find more precise matches for their academic journal searches. The Open Educational Resources (OER) initiative seeks to make textbooks more accessible to students as they wrestle with the rising cost of education and textbooks. This cost-saving movement is heavily supported by academic libraries and faculty who understand the critical nature of access to course materials (ALA, 2019).

Libraries will continue to be spaces that engender creative space-making. Harper College Library's new space includes a programming room for the college and community collective to gather and present programs that incorporate the arts, cultural education, and entertainment. ALA's (2017b) article on creative space-making notes that, "One of the most obvious values creative place making advances is the sense of place, transforming spaces that might not be particularly inviting or personal into places that are attractive, convey meaning, and build and sustain memories" (para. 6). The article goes on to say that libraries are spaces for meaningful memory-making and as they continue to flex to the needs of their audiences, they help to foster an environment of community, life-long and connected learning.

SUMMARY

This research study focused on the efforts made by two-year colleges to change their spaces to meet the changing needs of their constituents. The students' needs included access to technology, flexible spaces earmarked for solitary and group study, and temperature-controlled comfortable environments. College administrators and library staff were proactive in their efforts to adapt to the changing needs of their students as they observed the changes in popular culture, technology, and how the students' use of library spaces had evolved from centers for study and homework to gathering spaces for social and scholarly pursuits and collaboration. Their

increasing need for technology and environments similar to those provided in class and their high school libraries was reflected in a statement from Njambi, Tom, and Christine from Harper College who stated that it was important for the college to be better prepared to match the resources students were accustomed to from their school libraries. This study found that colleges that incorporated their renovation into the campus master plan had better budgetary outcomes. For each college renovation, years ensued between concept to completion and, for the most part, required input from various college constituents for a successful final outcome. Finally, this study aimed to provide two-year colleges a strengthened and detailed pathway to their library renovations.

RECOMMENDATIONS FOR FURTHER RESEARCH

Innovation in library spaces based on unique college demographics can be useful to researchers that wish to explore the trends in library spaces. Recommendations for further research on the space changes are:

1. Conduct research at community college libraries across the United States to collect national data beyond the Great Lakes Region.

2. Conduct research of private two-year institutions due to their affluent demographics.

3. An examination of rural versus urban libraries due to their unique industries such as coal mining, logging, avionics and funeral science.

RENOVATION CHECKLIST

Table 23 provides a checklist that is a pathway for two-year colleges that are considering how to address their space needs with the changing study needs of their students and faculty.

Table 23: Checklist for Two-Year Colleges Addressing Space Needs

ACTION	DETAILS
1. Observation and exploration of the problem	Understand the space limitations based on observations, comments, and discussions with staff, students and faculty.

ACTION	DETAILS
2. Identify the needs	Conduct formal and informal surveys to gather data to inform decision. Examine existing literature for best practices and similar undertakings at other institutions.
3. Make the case	Use data to make your case to stakeholders: administration, facilities, and other parties. Investigate spaces at other institutions.
4. Identify barriers to the process	Detail possible barriers exclusive of funding; structural, technology, furnishings, collection size, etc. Evaluate and weed collection as needed.
5. Seek approval to be included in the Master plan or Capital project plan	Articulate need for renovation in master plan if project approved.
6. Fund allocation - Administration	College will advise of plan approval and allocated budget. Identify possible concessions, belt tightening through collection reduction, work re-organization, etc.
7. Create renovation working group with stakeholders	Identify affected departments and create a working group or committee to identify needs of various affected constituents and meet regularly.
8. Submit Request for Proposal (RFP)	Select most qualified bidder, adhere to college guidelines.
9. Hire designer or architect and builder	Collaborate in imagining session - to communicate the needs, create design plan and articulate the college vision.
10. Work with architect to select architectural plan	Decide on final plan with administration, builders, architects, staff and students.
11. Finalize funding	If stand-alone institution, college will advise of available funds.
12. Communicate timeline	Inform college community of space change plan and timeline. Hold all-campus sessions to inform college community of possible service disruption. Plan for weeding and relocation of service points and materials.
13. Plan for continuation of services	Begin relocation of services points.
14. Plan for architectural changes and time over runs	Plan for contingencies like, structural surprises, schedule or budget over-runs.
15. Begin construction	Have weekly meetings with construction project manager and bi-monthly calls with the architect to address unforeseen issues.
16. Continue to meet regularly	Maintain construction meeting with stakeholders
17. Notify stakeholders of upcoming completion	This is an opportunity to make all voices heard and translate feedback into needed changes.
18. Make necessary changes as needed	Ensure that all planned targets have been met, and changes needed have been completed.

ACTION	DETAILS
19. Finalize plans with a walk through before renovation completion	Walk through space with library staff, then complete walkthrough with contractors and stakeholders.
20. Evaluate renovation	Continue to observe how space is being used, request feedback from users, and stay open and flexible as user needs continue to change and evolve.

CONCLUDING REMARKS

Two-year colleges play a critical role in the lives of not just recent high school graduates and returning adults, but they provide intrinsic value to their communities by way of continuing education, job recertification, vocational degrees, and partnerships with local businesses. In addition to these important services, they also provide access to life enrichment programs and recreational facilities.

Two-year college libraries, in particular, provide access to the rich resources available to their constituents through the use of modern, comfortable, and flexible spaces with access to technology and current leisure and scholarly library pursuits. Community members seek leisurely pursuits such as access to meeting and reading rooms, popular books, magazines, and assistance with technology and eMedia. These invaluable resources are unique to the two-year college community and reinforce the significance of library spaces and their value to their unique constituent's needs. The concept of the library as the third place reiterated by Legat Architects in Chapter 3 reinforces the need for students to access a place on campus that is separate from home and the classroom, yet offers an oasis for collaboration, solitary study, homework assistance, or access to the latest technology such as smart boards, 3-D printers, and the like. The work of two-year academic libraries parallels that of their four-year counterparts, as they work to assist students in discerning fact from fiction, understanding credible information sources, and

playing an important role in the delivery of critical support services and information literacy to

their students and the communities they serve. Jennifer, from the UW libraries System, pointed

to the significance of the study by asserting that,

> To get them in the library space and interacting, we had to invest more in how their experience was when they were in the space, and that had maybe as much or more I'd argue, much more impact on student success than building our physical collections to the level we used to.

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APPENDIX A: IRB APPROVALS

FERRIS STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECT RESEARCH
1010 Campus Drive FLITE 410 Big Rapids, MI 49307 | (231) 591-2553 | www.ferris.edu/irb

Date: November 8, 2018

To: Sandra Balkema
From: Gregory Wellman, R.Ph, Ph.D, IRB Chair
Re: IRB Application for Review

The Ferris State University Institutional Review Board (IRB) has reviewed your application for using human subjects in the study, " *Community College Libraries: Anatomy of a Transformation.*" and determined that it does not meet the Federal Definition of research on human subjects, as defined by the Department of Health and Human Services or the Food and Drug Administration. This project does not meet the federal definition of research on human subjects because the unit of analysis is the institution rather than individuals. As such, approval by the Ferris IRB is not required for the proposed project.

This determination applies only to the activities described in the submission; it does not apply should changes be made. If changes are made and there are questions about whether these activities are research involving human subjects, submit a new request to the IRB for determination. This letter only applies to Ferris IRB Review; it is your responsibility to ensure all necessary institutional permissions are obtained and policies are met prior to beginning the project, such as documentation of institutional or department support. Note that quality improvement project findings may be published, but any findings presented or published should be clearly identified as part of a quality improvement initiative and not as research.

Your project will remain on file with the Ferris IRB for purposes of tracking research efforts at Ferris. Should you have any questions regarding the determination of this letter, please contact the IRB.

Regards,

Gregory Wellman, R.Ph, Ph.D, IRB Chair
Ferris State University Institutional Review Board

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Harper College

Go Forward®

NOTICE OF APPROVAL
EXEMPT REVIEW

Date: November 29, 2018

TO: Victoria O. Akinde
From: Dr. Katherine Coy, IRB Chair
Re: Project Entitled: *Community College Libraries: Anatomy of a transformation*

The Chair of Harper College Institutional Review Board (IRB) has reviewed your application for using human subjects in the study, *Community College Libraries: Anatomy of a transformation* and agrees with the Ferris State University determination that it does not meet the Federal Definition of research on human subjects, as defined by the Department of Health and Human Services or the Food and Drug Administration. This project does not meet the federal definition of research on human subjects because the unit of analysis is the institution rather than individuals. As such, approval by the Harper College IRB is not required for the proposed project.

This determination applies only to the activities described in the submission; it does not apply should changes be made. If changes are made and there are questions about whether these activities are research involving human subjects, submit a new request to the Ferris State University IRB for determination. This letter only applies to Harper College IRB Review; it is your responsibility to ensure all necessary institutional permissions are obtained and policies are met prior to beginning the project, such as documentation of institutional or department support.

Your project will remain on file with the Harper College IRB for purposes of tracking research efforts at Harper College. Should you have any questions regarding the determination of this letter, please contact the IRB.

Sincerely,

Katherine C. Coy
Harper College Institutional Review Board
Director, Office of Institutional Research

File #FY19_003

APPENDIX B: INFORMED CONSENT

Dear Participant,

I thank you in advance for your participation in my dissertation research. The goal of the interview is to understand the decision-making process that led to your library renovation. Additionally, I hope to learn about your role in the process. The interview will be approximately 60 - 90 minutes long.

Your participation in this study is voluntary which is explained along with other details in the informed consent form.

If you have any questions, please contact me at 630-701-0424 or send an email to vakindedccl@gmail.com

Thank you,

Victoria O. Akinde

INFORMED CONSENT FORM

Project Title: Community College Library Space Transformation

Principal Investigator: Sandy Balkema
Email: SandraBalkema@ferris.edu   Phone: __xxxx_____

Faculty Advisor: Norma Nerstrom
Email: nnerstro@harpercollege.edu   Phone: ___xxxx_____

STUDY PURPOSE
You are invited to participate in a research study about Community College library space transformation. The researchers are interested in gaining insight from library regarding the decision-making process and factors that contributed to the space change.

PARTICIPATION
Taking part in this study is completely voluntary.
You are eligible to participate in this study because you are affiliated with a community college library. If you agree to be part of this study, you will be asked a series of questions related to the how the space change occurred.

POTENTIAL RISKS/DISCOMFORTS
There are no known risks associated with this study.

ANTICIPATED BENEFITS
This research is designed to examine the nature of the space change at your library, and the factors that led to the change.

CONFIDENTIALITY
Signing this form is required in order for you to take part in the study and gives the researchers your permission to obtain, use and share information about you for this study. The results of this study could be published in an article and may identify you. There are some reasons why people other than the researchers may need to see the information you provided as part of the study. This includes organizations responsible for making sure the research is conducted safely and properly, including Ferris State University.

In order to keep your information safe, the researchers will protect your confidentiality. The data you provide will be stored in a locked file. The researchers will retain the data for 3 years after which time the researchers will dispose of your data by standard state of the art methods for secure disposal. The data may be made available to other researchers for other studies following the completion of this research study.

CONTACT INFORMATION
The main researcher conducting this study is Victoria Akinde a doctoral student at Ferris State University. If you have any questions you may email her at vakinde@ferris.edu or call xxxxxxx. You may also contact the faculty advisors: Dr. Sandra Balkema at balkemas@ferris.edu or Dr. Norma Nerstrom at nnerstro@harpercollege.edu.

If you have any questions or concerns about your rights as a subject in this study, please contact: Ferris State University Institutional Review Board (IRB) for Human Participants, 220 Ferris Drive, PHR 308, Big Rapids, MI 49307, (231) 591-2553, IRB@ferris.edu.

SIGNATURES

Research Subject: I understand the information printed on this form. I understand that if I have more questions or concerns about the study or my participation as a research subject, I may contact the people listed above in the "Contact Information" section. I understand that I may make a copy of this form. I understand that if my ability to consent for myself changes, either I or my legal representative may be asked to re-consent prior to my continued participation.

Signature of Subject: _____ Date of Signature: _____

Printed Name: _____

Contact Information: email - _____ phone - _____

Principal Investigator (or Designee): I have given this research subject (or his/her legally authorized representative, if applicable) information about this study that I believe is accurate and complete. The subject has indicated that he or she understands the nature of the study and the risks and benefits of participating.

Printed Name:_____

Signature: _____ Date of Signature: _____

APPENDIX C: RESEARCH INTRODUCTION AND INVITATION

To: [Community College Administrator and Librarians]

Subject: Community College Library Space Change Research

Dear Administrator / Librarian,

My name is Victoria Akinde, I am a doctoral student at Ferris State University in the Community College Leadership Program, and I am interested in understanding the decision-making process regarding community college library space changes.

Your college was identified as a location that recently renovated its library. I am writing to gauge your interest in being interviewed for my doctoral research. Understanding the process that your library underwent to improve your space would be very valuable to other libraries that are considering such a project.

 The interview will be no more than 60 – 90 minutes long, and can take place in the location of your choosing. I am happy to answer any questions you may have and I appreciate your willingness to participate in my study. Please reply to this message, and I will contact you to make arrangements for the interviews with you and others you identify could contribute to the discussion.

Thanks for your consideration, and I look forward to your response.

 My contact information is listed below.

Sincerely,

Victoria O. Akinde

vakindedccl@gmail.com
vakinde@ferris.edu

APPENDIX D: PARTICPANT CONFIRMATION LETTER

From: Victoria O. Akinde [mailto:vakindedccl@gmail.com]

To: PARTICIPANT

Subject: Community College Library Space Change Research

Dear PARTICIPANT,

Thanks for agreeing to participate in my doctoral research on Community College Library Space Changes through Ferris State University. The study aims to understand the decision-making process that led to the library renovation. The interview will be approximately 60 - 90 minutes long.

Information collected from the study can be helpful to other institutions considering a library space change. I am hoping you can provide the following for the Manitowoc Library if available:

1. Space usage numbers before the renovation if available
2. Copies of any student/faculty or staff surveys conducted before the space change
3. Architectural renderings before and after renovation if available
4. Usage data collected after the renovation
5. Any notes you think would be useful aids to understanding your process

Participants are free to withdraw from the study at any time. There are no anticipated risks to the participants. However, it is anticipated that this research will generate relevant information and possible insights to community college library renovations.

Thank you for your time and consideration. I look forward to our meeting on DATE at TIME. Please do not hesitate to contact me if you should have any questions.

Victoria O. Akinde
             · Cell
             ' Work
vakindedccl@gmail.com

APPENDIX E: INTERVIEW QUESTIONS

1. What factors helped you realize that the library space no longer met student and college needs?

2. What steps did the college take to explore how to improve the learning environment?

3. How did your college improve your library space?

4. Did you demolish, renovate, repurpose or rebuild, and can you share some in-depth information about how you made this decision?

5. Who were the stakeholders (generic titles) and how were they involved in the project?

6. Were there any objections to the project, if so from whom?

7. Did you have to make any concessions or change plans to move forward? If so, what concessions had to be made, and by which campus group?

8. Do you feel it was the right decision?

9. What financial considerations were needed to approve the changes?

10. How was the project funded?

11. How long did the project take from concept to completion?

12. In your opinion, did the project fulfill the original mission?

13. What kind of feedback did you receive from the students, community, and college employees?

14. What would you have done differently?