LIBRARIES OF THE FUTURE: LEARNING COMMONS

A CASE STUDY OF A STATE UNIVERSITY IN CALIFORNIA

By

Jyoti Rawal

A Thesis Presented to

The Faculty of Humboldt State University

In Partial Fulfillment of the Requirements for the Degree

Master of Arts in Social Science: Environment and Community

Committee Membership

Dr. Mark Baker, Committee Chair & Graduate Coordinator

Dr. Armeda Reitzel, Committee Member

Dr. Jayne McGuire, Committee Member

December 2014

ABSTRACT

LIBRARIES OF THE FUTURE: LEARNING COMMONS

A CASE STUDY OF A STATE UNIVERSITY IN CALIFORNIA

Jyoti Rawal

Libraries used to be quiet reflective places where people went to find information and read and study. Even university libraries expected students to only talk in hushed voices and most of the space was taken up by book stacks. Today university libraries are encouraging students to interact, work in groups and not only be involved in silent study. Due to internet technology and the need to prepare students for future employers who expect problem solving and collaborative employees, university libraries are taking on a different identity - the learning commons.

An effective learning commons is based on sound learning theories, which acknowledge that true learning occurs when students observe or practice and interact socially. This comprehensive learning commons consists of three aspects – the physical commons, the virtual commons and the socio-cultural commons. The physical aspect includes the arrangement of space and the concrete objects within that space. This means the positioning of study areas, the type of furniture, the lighting and the location of resources and services. The virtual commons consists of the access students have to digital resources so they can reach out into the virtual world for information and interaction. The socio-cultural aspect includes the events and activities hosted or

sponsored by the library/learning commons. These are offered to enhance students'

insights about world and local events and to strengthen their sense of civic engagement.

These events may be lectures, exhibits and special collections. The interaction among all

three of these aspects creates a holistic learning commons, which fosters whole student

development.

This study investigates student perceptions of how well the Humboldt State

University library/learning commons serves student learning needs. Humboldt State

students were surveyed to find out if the physical, virtual and socio-cultural aspects of the

library meet their current needs. Interviews with library staff complemented the student

surveys. The results of this study identify some of the key dimensions of a successful

learning commons library.

TABLE OF CONTENTS

AKNOWLEDGEMENTS

I would first like to thank the library staff who granted me time to interview them to gain honest insights about their experiences with the changing Humboldt State University Library, their plans for the coming semester and their vision and hope for the future. Humboldt State University should be proud to have such a dedicated and talented staff. Without their help, this research would not have the depth and richness in the discussion about where the library has been and the directions where it may develop in the future.

I would like to also express appreciation to my faculty committee members Dr. Mark Baker, Dr. Armeda Reitzel and Dr. Jayne McGuire for guiding me in this process and standing by me when I felt lost. Without their expertise and compassion, this thesis would not have been accomplished.

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Imagine a university library as a bustling bazaar of idea exchanges, where small and large groups of students are engaged in critical debates, political discussions, and problem-solving activities. Such a library allows students to gather and strategize for advocacy of social and environmental justice; knowledge flows untethered to transform students into self-directed learners, critical researchers, and conscientious citizens. Physical and virtual space barriers are constantly monitored and eliminated wherever possible, to allow students to efficiently and confidently access information. Some space is organized to encourage dynamic exchanges among learners. This is where the furniture, lighting, and rules of behavior enhance the congregation of groups and the stimulation of conversation. Other spaces support quiet study for inspecting and creating knowledge on an individual basis. Architects of this kind of 21st-century libraries pay heed to theories about learning and knowledge construction to guide their planning and design, so that physical space, technology, and cultural activities support the learners' need to explore, observe, and practice. Such a space is nurturing to the inquirer and curious deliberator and is an asylum for the thinker and ruminator.

From serving as receptacles of scarce information to serving as resources of abundant knowledge-creation centers, university libraries have in fact started to transform themselves from their sole function as quiet, reflective spaces to vibrant, information-engagement places. Internet technology has forced universities to rethink the way in

which libraries play a role in the teaching and learning of students (Loertchester, Koechlin & Zwann, 2011).

Two additional components - a growing interest in learning theories and knowledge-production pedagogy in higher-education institutions, as well as the needs of the workforce to have critical thinkers and problem solvers in the future labor market - have required university libraries to reconsider how space, technology, and activities can best support such learning outcomes (Kaminski, Switzer & Gloeckner, 2009). This change does not just include the installation of more computers and digital tools. It also calls for strategizing, planning, and designing library space with an understanding of learning, as well as considering what kinds of skills learners will need to master for the current work world. (Loertchester, Koechlin & Zwann, 2011).

This library-space identity does not only serve the purpose of an information or knowledge reservoir. It creates a place where learners mingle to negotiate ideas and opinions. This 21st-century library is referred to as a learning commons. The design of a learning commons is based on learning theories and practices, and all aspects from furniture and space arrangement to technology, resources, and services are included to create a learner-centered environment. Whereas university libraries have historically housed, and made accessible, books and documents in order to support holistic student development, they have had to evolve into hubs for cross-cultural and citizenship activities, such as film screenings, voter registration events, and a speaker series (Bailey & Tierney 2008; Beagle, 2006).

Thus the best university libraries today are not only places where students go to get information about a specific subject. They are places where students learn skills in research and inquiry, receive current-event information, and partake in community and social citizenship exchanges. The university library is evolving into the learning commons, because its format fosters learning literacy, which is grounded in providing students with cultural and learning competencies (Loertscher, Koechlin & Zwaan, 2011).

HISTORICAL OVERVIEW OF THE ROLES OF LIBRARIES

In order to understand why libraries have evolved in the roles they play for academia and communities and why a university library is faced with changing its role in student learning today, a historical overview is necessary.

Early libraries were erected as physical environmental spaces where limited amounts of highly prized books and documents were housed in monasteries and temples. These were labor-intensive documents of knowledge, and both paper and skill were expensive commodities in their creation (Gayton, 2009; Ross & Senney, 2008). Access to such documents were limited to scholars and the upper class who could read and who could even afford private book collections as symbols of status (Gwynn, 2010). Educational institutions mostly held book collections for the purpose of instruction and not for other uses like those for recreational reading or for gathering spaces for community members (Clyde, 1999).

In 1807 mass-production of paper became inexpensive, thanks to the invention of the Fourdriner machine. As a result, magazines, books, and other paper documents became less expensive to buy, and information and knowledge began to be more widely disseminated in the nineteenth and twentieth centuries. There was a burgeoning of middle-class readers at this time, as education began to be accessible to more individuals (Augst, 1998; Bennett, 2009).

Before the internet technology upsurge in the West, the design of library environmental space reflected a reader-centered configuration (Weiner, 2010). The actual spatial design of such a library included features of a cloister's scriptorium and was mainly meant for self-study and silent thinking. The design made the reader central. There was usually a reading stand placed next to a window for light.

An example is Yale University's Sterling Memorial Library, which was planned with a Gothic Church design template. Adjacent to its massive entrance is a courtyard, which has two walls of small bays for reading light. Focusing the design on the reader is also apparent in the set of reading rooms opening off of the nave. The rooms were dominated by light, and the space was filled with tables for readers, not books.

Another example is the Gillman's Hall library at John Hopkins University. Designed with a Gregorian template, it was built to represent Enlightenment beliefs. Again, the purpose of the environmental space arrangements was to connect readers to books (Bennett, 2009).

As library collections began to grow, library space had to be rearranged to house increasing stacks of periodicals, books, and other print documents. The conceptualization of library space evolved from reader-centered designs to book-centered designs, with shelving needs of textual materials taking precedence over allocating space and resources such as furniture and lighting for readers (Bennett 2009; Ross & Senney, 2008).

In the 20th and 21st centuries, the introduction of the computer chip revolutionized communication of information by making available the personal computer

and the worldwide web (Bennett, 2009; Haglund & Olsson, 2008). Information

accessibility thus became less limited, less expensive, and quick to disseminate

(Applegate, 2009; Ross & Senney, 2008).

In the late 20th and 21st centuries, with the explosion of web technology and

computer use, printed material became increasingly digitized. Libraries began to evolve

into information-centered places, where users widely accessed information through

computers. Periodicals, books, and other forms of information began to become cheaply

and widely available through the Internet. In addition, through the development of social

and professional web networking sites, patrons began to use library physical space and its

resources such as computers to disseminate information and communicate through digital

means. In higher education, this evolution brought forth the debate of the decline of

human interaction, the increase of interaction through digital means, and the impact on

learning (Buzzetto-More, 2012; Turkle, 2008).

A few overarching questions that frame this research investigate how visioning

and designing a university library can help students achieve deep learning, which

includes exploration of unique ideas, observation and adaptation of impactful learning

behaviors, and experimentation with practices that lead to discovery. Also, this study

explores how the learning commons concept can propel a university library into a 21st-

century learning commons that is a hub for learning interchanges. In order to discover

what learners may need from a resource such as a library, information must be gathered

from the learners themselves. This research inquires student perceptions of a particular

university to find out how well that library serves the current needs of students and how

the changes made to the library have affected student learning.

LITERATURE REVIEW

Review of some critical literature on libraries transforming into learning commons point to the fact that the shift from silent study spaces to lively, social engagement places is that libraries are becoming hubs for helping learners or students become learning literate. Thus designers need to be aware of current learning theories as the basis for the commons and that the optimal 21st-century learning commons be configured with three main aspects in mind: the physical commons, the virtual commons, and the sociocultural commons. The following review discusses these components in more detail. Envisioning and designing a 21st-century library whose role it is to inspire sound lifelong learning necessitates exploring learning theories.

Current researchers in the field of learning theory argue that observation, modeling, and collaboration are the most instinctive ways of processing information and generating knowledge. Benjamin Bloom (1956), for example, in his taxonomy of learning based his ideas on the cognitive, psychomotor, and affective spheres of human behavior and interaction. Although recalling, understanding, practicing, categorizing, creating, and assessing are vital in this model to true learning, it is affective learning, which includes listening, judging, and interacting with others, that creates enjoyment and long-term learning. Because it is connected to emotions, empathy and responsibility, affective learning helps create a critical-thinking and problem-solving type of learner (Jones, J. R., & Carlson, D. P., 2001; Gardner, H., 1983). Dee Fink (2003) offers a taxonomy that includes a wider cross-section of learning process areas with the exception of a

psychomotor domain as in Bloom's taxonomy. He emphasizes learning to learn and also includes the affective, or human dimension, aspects of learning as being important for creating a self-directed learner. Also, having the time and space to experiment and apply the knowledge or skills being learned is critical in the process of creating new knowledge. Just accessing information is not enough as a learning process (Fink, 2013; Fallahi, Wood, Austard & Fallahi, 2009).

Albert Bandura, a foremost theorist in social and observational learning, suggested that behavior is learned or modified by interacting socially through observation, imitation and/or modeling. Learners gather information by observing the actions of others or their own. There are four processes in Bandura's (1986) observational learning model: attention, retention, behavior, and motivation. First, in order to learn from a modeled behavior, an individual must be attentive to it. Second, for the information extracted from the observation to be useful, it must be encoded and stored. Third, behavior can be exercised from what is observed and learned of the behavior being modeled. The fourth process is the motivation or reason for the behavior (Olson and Hergenhahn, 2009).

According to Bandura (1977), behavior is understood as being formed by "reciprocal determinism" (Grusec, 1992; Olson and Hergenhahn, 2009). This means that the reciprocal interaction among environmental, cognitive, and behavioral factors cause one's behavior to be affected within a certain context and that a single factor cannot be assumed as being the sole determinant in affecting behavior. The relationship among

those factors are interlocking and bidirectional (Bandura, 1977, Deeming, 2009). It suffices to say, then, that just as behavior affects the environment and the person, the environment affects the person and behavior. Bandura held that human minds are organized by the environment, the social interactions the environment offers, and the models that exist (Crain, 1994). Bandura (1997) also posited that to learn and acquire knowledge, individuals take pertinent information from the setting or environment and that this is an active, not passive observational learning process. Thus, in a learning commons setting, students will behave – study, converse, and so on – according to what they observe as happening in that space.

A sociocultural framework for learning stresses the role of both social and individual processes and their interdependence for knowledge construction (John-Steiner and Mahn, 1996). Belarusian researcher Sev Semyonovich Vygotsky argued that engagement in a social environment was critical in the learning process and that human cognition or higher-level intelligence occurred within the context of culture (Rogoff, 1998). The first phase of learning happens through social interaction, and the second phase happens through the learner's mental structure. According to Vygotsky, cognitive or intellectual progress is limited to "a zone of proximal development." This zone indicates that a learner may be ready but in need of help and interaction with another in order to wholly develop cognitively (Briner, 1999; John-Steiner and Mahn, 1996).

Current learning theories and research also point to true learning as being possible through interaction and social exchange. Observation, reflection, and experimentation are

necessary for learning to occur and are vital for educating today's student who is required to step into a work-world that is multicultural and interdisciplinary (ASHE Higher Education Report, 2012; Weidner, 2009). Although there are differences in the way in which taxonomies are formatted for these learning theories they all contend that observation, social interaction and experimentation are critical components for significant learning to occur.

Technology and Its Impact on Social Interaction

According to the learning theories discussed above, social engagement is one key component of significant learning. Thus educators have been debating how technology may be currently affecting students. Students today are often referred to as "digital natives." However, some educators believe they are actually "digital immigrants," not born to access and synthesize information digitally but required to navigate the world in the digital realm by their predecessors' design (Bailey & Tierney, 2008). Many researchers make a distinction between the "digital natives" versus the "digital immigrants," but the "digital native/immigrant" is today's student born into or introduced to a world run by computers and media as a primary mode of accessing products, services, and learning (Bailey & Tierney, 2008).

However, many fear that the lack of concrete human interaction created by web technology is a detriment to the learning process and is harmful for the social development of students (Selwyn, 2009; Buzzetto-More, 2012). The use of books and

other hard copy material have been known to facilitate communication and social

interaction for they can be physically exchanged and borrowed. Some educators think

that utilizing web technology keeps students from developing communication skills

beyond text and images because students do not actually have to come in contact with

each other physically to communicate about the subject being debated or discussed. The

social strengths of technology is in its infant stage of development (Selwyn, 2009), and

the type of interactions students have on the computer, whether it be chat rooms, Skype-

ing, or many other ways in which engagement occurs online, shortchange students of the

nonverbal communication that is essential in negotiating ideas and information and that is

most optimally produced by face-to-face interactions. Sherry Turkle, a well-established

scholar in the fields of sociology and personality psychology, as well as a professor of

social studies of science and technology at the Massachusetts Institute of Technology,

concentrated her research on the impact of computers on learning and human

relationships. She points out that the increase in use of computers, especially for social

networking, gives the impression of hyper-connection and socialization, when in reality,

interpersonal interactions are taken away, and genuine relationships are hindered (Green,

2007; Young, 2011).

On the other hand, some educators and researchers believe that virtual technology

heightens learning by allowing students to synthesize information readily by the use of

blogs, images, text, and inexpensive interactions with others across continents (Selwyn,

2009; Tapscott, 2008). Even Turkle, in her early days of research on computers as

educational tools, discussed the idea that computers are good teaching tools because they expand attention span and require the learner to be constructive and active (Rodhes, 1986). In her later years, however, she realized that computers were deterring students from feeling connected to one another even though they had the capacity to engage with a wider audience (Turkle, 2008). Regardless of whether a student is born into the digital age or not, it is the vital job of educational institutions to guide and mentor students in their mastery of using technology as learning tools, integrated with sound learning models.

These theories, when used as base concepts for the now increasing concern for adapting library space, can help to create vigorous and intentional learning environments. In universities, libraries are transforming space to reflect the learning commons philosophy that has emerged as a response to advances in internet technology, the development of virtual spaces as environments for learning and workforce demands for skilled problem solvers (Educause Learning Initiative, 2011; Bailey and Tierney, 2008). As staff, faculty, and students began to pay more heed to learning outcomes rather than service outcomes, discussions and planning for the usage of library space have surrounded designing spaces that enhance student learning. Also, the events that take place in libraries have changed to play a critical role in the current sociocultural aspects of student development. This shift in evaluating how well and how often services are made accessible to students, to measuring how well services prepare students for graduating with a degree and for entering employment and life beyond college has

pressed university libraries to rethink how libraries can play a role in student

development. In addition, as universities move to diversify student populations in

admissions goals, making services such as libraries accessible and desirable to varied

students have become part of the consideration for reorganizing how space is planned and

utilized. The learning commons concept, where students can not only access services,

information and resources to enhance learning and networking needs in a one-stop shop

but where students are inspired to engage in dynamic and diverse learning activities

began to dominate the re-designing of library environmental spaces into learner-centered

places (Holmgren, 2010; Weiner, 2010). For such transformations to take place, however,

designers must consider the learning theories as guiding frameworks for rearranging

space (Bailey & Tierney, 2008).

<div align="center">Models of Revamping Libraries for the 21st Century</div>

As more universities are converting libraries to learning commons, the identity of

libraries is changing to suit the learning styles of the recent generation. Consideration of

the aspects of concrete and digital spaces is critical when a learning organization is

crafting or transforming a place into one which is creative, dynamic, vibrant, and

inclusive of all students. However, learning theories — which point to observation, social

interaction and experimentation as necessary ingredients for creating a learner-centered

place — need to be thought of, as well. Although tangible resources such as computers,

white boards and other concrete arrangements are often attended to first when learning

space design is being planned, current student-learning approaches and the sociocultural impacts of spatial design need to be addressed prior to decisions about technology and other resources (Massis, 2010; Weiner, 2010). Technology is critical in every aspect of this generation and is an essential element of a properly resourced learning commons (Holmgren, 2010; Selwyn 2009). However, a well-planned learning commons is one that reflects on how students will move through and access the learning resources without obstacles.

Although these types of commons are similar to information commons, there is a difference in the idea of a learning commons, which is based on how students learn and what role the library plays in the educational activities of students. Whereas libraries were once silent spaces for self-study, they are becoming hubs of collaborative learning interactions (Massis, 2010). The optimal model for a learning commons is one that is designed around a solid learning concept. Some current researchers express that students' learning behaviors are fast changing from an emphasis on information gathering to construction of knowledge (Educause Learning Initiative, 2005; Barr and Tagg, 1995). The changing methods of learning for students in higher education today has impacted the design of environmental spaces requiring a blended learning style including concrete interactions as well as computer and web based exchanges (Hiltz and Turoff, 2005). The idea of the learning commons places this "digital native/immigrant" at the center, and all aspects of designing and retrofitting are made with deep student learning in mind.

The well-planned learning commons, along with library services, houses a variety of student academic services including tutorial services, writing labs, and testing labs. The commons also includes different types of work areas, featuring group study areas, self-study areas, presentation rooms, and conference rooms. Students may also access technology support. Ultimately, however, an optimal learning commons is envisioned as a hub of interactive learning and information exchange and its design helps to facilitate student engagement face-to-face, as well as through virtual social and research interchanges (Bailey and Tierney, 2002; Beagle, 1999; Massis, 2010). As universities make changes to libraries toward the format of a learning commons, evolution can be seen in many different phases. However, the attempt at trying to create more interaction among students, staff and faculty remain as a key concept for the changes occurring in most university libraries. Whilst some universities are able to procure funding to build state-of-the-art library buildings that are robust in space, technology, and sociocultural activities, some universities are revamping old buildings to suit the commons philosophy. Following are some examples of universities at different stages of transformation.

Yale University.

Yale University's attempt at beginning a transformation to a learning commons are seen in the renovations of the first floor of Yale's Sterling Memorial Library and the two floors of Yale's Cross Campus Library. They are in the center of the campus, symbolizing the library as integral to student learning. The planning committee wanted to retain the traditional aspects of a library — silent study areas and the space reflecting a

cathedral style — while rearranging the space to enhance collaborative learning and access to student services.

The independent learning areas, which are found in Starr Memorial Reference Room on the first floor, the Linonia and Brothers Room on the first floor, and Cross Campus Library carrels have individual seating for self-directed private study. Active and group study rooms are interspersed throughout and are available to reserve. These areas have booths or clustered viewing areas for viewing videos. Library-assisted learning areas are meant for students who want to meet with library staff or work through machine guided learning. These areas, besides tables and chairs, may provide white boards, computer writing surfaces and quick access to help from circulation and library staff. Other group learning areas also consist of rooms for meeting and teleconferencing, social informal spaces where students can socialize and have access to food. There is little space allocated to group learning and most of it exists in the basement floor of the Sterling Memorial Library in what is referred to as Machine City. Yale has much to accomplish in its renovations to make the library truly a learning commons where student social learning, individual learning and contact with services can happen in more than designated areas. The planning committee has started the process, having thought first about the concept of the commons but will need to allocate more space and budget towards making the commons a seamless learning resource for the fast changing and technological generation of learners (Bennet, 2009; Peterson, 1999).

Seattle Public Library.

Another model is the Seattle Public Library. Although not a university library and not referred to as a learning commons, the designers and architects utilized the commons perspective to create a space that is seamless in regards to how users can access resources. The building was recently constructed from the ground up, so designers had the freedom to create the space in its entirety instead of having to retrofit an existing building space. The inside of the building has a "Spiral Collections" area which consists of a spiral ramp that starts at the bottom and moves upward through the first four floors. This feature removes the traditional building floors and makes for a more fluid transition from the bottom towards the top part of the collections (Bruce Mau Design, 2011). The design was less concerned with stacks of books and more interested in digital storage of material so that space could be freed up for human interaction and cultural education. The building also houses a reading area, a café for food, and a robust reference desk. The design considers natural lighting as important as well as internal lighting fixtures that make for an airy and well-lit space. Although this 11-story library may seem impersonal and confusing to navigate by some critics (Cheek Lawrence, 2007), many other critics have found the concept and the physical library to be lively, engaging, and very much a space for future learning and human interaction (Goldberger Paul, 2007).

Grand Valley University.

The Mary Idema Pew Library Learning and Information Commons at Grand Valley University in Allendale, Michigan, has recently opened a newly constructed

learning-commons-style building to replace the old library. The vision of this library embraces individual and social learning as key ideas behind the design of the environmental space arrangements. New and innovative technology is also available for students to use in learning groups and individual projects. Students can even check out iPads and laptops. There are four floors with myriad study spaces. The east side of the commons is for quiet study and the west side is for collaborative study. The group study areas are expected to be full of chatter, and a sound system projects pre-recorded audio to enhance the feeling of comfort and the culture of social networking. This system also communicates to the students in these collaborative learning areas that chatter and discussion are okay. The system delivers white noise in the individual study areas to drown out other sounds and help students stay focused. Aside from indoor study spaces, there are also outdoor study areas such as an amphitheater on the north side, patio seating, third floor garden seating, and a café on the first floor. The first floor also houses a Knowledge Market, a designated space for students to access consultation for specific services such as help with writing projects, presentations, and other discipline specific tutoring from peer consultants. This space is separated by glass signage that indicates its purpose and gives some privacy for the student and consultant to work, but it is still an open space, since there are no tutoring rooms with doors that shut.

Other features on this floor include a presentation room and workroom and office. There are rooms that students can reserve for group study and presentation practice and have flexible features such as chairs, tables, and moveable white boards in collaborative

zones. Some high-use books are stored on shelves on the second, third, and fourth floors.

Comfortable seats and carrels are placed near windows so students can browse

comfortably. Other books are stored in an Automatic Storage and Retrieval System

(ASRS), where students can request books online and pick them up at the service desk on

the first floor. This system stores the books without having to use enormous areas of

space for shelving (University Libraries, 2013). This learning commons also has a robust

presence on the university website, communicating to students that this building is an

intellectual and scholarly hub on campus.

North Carolina State University.

North Carolina State University's James Hunt Library was built from the ground up to

accommodate the growing number of students, staff, and faculty frequenting the original

library on campus. The building is a state-of-the-art green building with four floors of

library space and consisting of 221,000 square feet. Its water is warmed by rooftop solar

panels, and the building is flooded with natural light. Most of the book collections are

stored in a bookBot, a robotic book delivery system (North Carolina State University

Libraries, 2014). This system, similar to Grand Valley's ASRS system, frees up library

space by archiving books and allowing students to browse for books on a virtual system.

As part of this library's physical commons, space is designed to inspire social interaction

among patrons. It houses a café on the first floor, as well as an Institute of Emerging

Issues. The institute works to inform and engage people about pressing policy issues

(North Carolina State University Libraries, 2014). Establishing such an institute along

with other university departments in the library is an innovative way to create a robust sociocultural commons.

Although each of the above libraries is going about creating a 21st-century learning commons differently, they all have some common and critical elements. First, there is recognition that learning needs of students are changing because of changes in the workplace. University graduates are expected to have research and problem-solving skills and be able to use technology effectively to do them (Kaminski, Switzer & Gloeckner, 2009). As part of the physical commons aspect of renovation, each recognizes the need to have a flexible environment for both group and individual study areas with the comforts of food-friendly areas. Book stacks are shrinking, and more space is being allocated to study areas. As part of the virtual aspects of the commons each has attempted to keep up with the fast growing need to increase technology resources. Each of the above libraries has also added events and other elements of a sociocultural commons.

Underlying changes in library configuration, are changes in philosophy of use. Key concepts from the learning theories literature and the information from the different sample university models support the idea that a learning commons format is appropriate for libraries of the future and should include three main aspects to design a comprehensive library: the physical commons, the virtual commons and the socio-culture commons. The physical commons has to do with the arrangement of space, including furniture that can be rearranged, lighting that is natural and bright, and group study areas

as well as quiet study areas. Having essential services such a help desk, writing center and other labs should also be strategically placed for easy access.

The virtual commons aspect includes the digital learning spaces and the technology that supports such learning. The sociocultural commons includes events, lectures exhibits, and an overall culture for holistic student development. All three of these aspects of commons and a design philosophy that supports the idea that deep learning occurs through observation, social interaction and practice can help transform a library to a dynamic learning experience.

Also, because of the impact of technology and the necessity for current students to prepare to use this innovation for a fast changing workplace, university libraries have had to embrace the idea of configuring space to accommodate this need. Debate continues about the impact of technology on student learning and social interaction. However, the way in which students process information and learn remains the same and can be comprehended through social cognitive theoretical frameworks (Bandura, 1997; Schunk, 2008). Literature on learning theory supports the idea that these frameworks can help initiate comprehension. Investigation into student perceptions of what format of a learning commons can best facilitate the frameworks can ultimately guide design principles and appropriate transformation of space.

This study investigates student perceptions on how well the Humboldt State Library meets the learning needs of students. In the context of a comprehensive commons, this study explores student perceptions in three categories – physical, virtual,

and sociocultural. Some key questions about the physical commons surround issues of the concrete resources and services in the library meet student needs. Also, since a physical commons should encourage more social interaction among students and the learning theories point to this interacting as one of the three critical components of true learning, this study also looks at whether or not more students prefer studying in groups or individually.

In regards to the virtual commons key issues revolve around how students perceive the technology and digital learning access in the library. The study also questions which resources are most utilized and which are underutilized. Finally, since the role of libraries are changing to take part in student development, as part of the sociocultural commons this study inquires whether a good number of Humboldt State University students participate in paying heed to resources like focused exhibits and lectures and whether such offerings have or would enhance their insights about current world issues such as social and environmental justice.

Depending on how valuable and utilized the resources are in all three categories, recommendations can be made about student learning needs at Humboldt State University, and planning for further changes to the library toward becoming a more comprehensive learning commons can be impacted.

METHODS

For 13 years, I have been an employee of Humboldt State University and have experience

working with students in myriad capacities, including student advising, making student

referrals to support services, and working one-on-one with students to create academic

success plans. This means that I come to this research with knowledge regarding student

concerns about services and resources as well as learning patterns. In addition, I come

with assumptions based on anecdotal evidence from my experiences as a staff member in

the Learning Center in student one-on-one coaching meetings.

Students have shared, for example, that the library technology is only semi-

sufficient, because there seems to be a time lag between when computers, printers,

software, and other technological equipment gets updated at the university and when the

actual updates come out in the technological industry. These kinds of exchanges with

students are what prompted me to take on this current study of gathering data and

information on student perceptions of how well the Humboldt State University

Library/Learning Commons meets students' current learning needs and to find out

whether design, technology availability, and other cultural aspects of the services are

being well utilized by students.

That said, I also hold much respect both for the thought and debate put into

converting the Humboldt State University library to a learning commons and for the

energy that members of administration and staff have dedicated to researching what

students may need for their academic endeavors.

Data was gathered by offering student participants to take a three-to-four-minute survey regarding their perceptions of how well their learning needs were being met through physical space arrangement, technology availability, virtual access, and sociocultural aspects of the Humboldt State library/learning commons (see appendix A for copy of survey). Before the surveys were used as the formal tool for data gathering, a test was conducted to find out both how students would react to the questions and if the questions designed were appropriate for collecting the information. Ten students participated for this test.

Three to five minutes after each survey was collected, I verbally interviewed each of the students to collect strengths and weaknesses of the survey. Questions included opinions about the length and clarity of each question and whether the students felt I had missed any key questions. Each of these students responded very positively to my request for their partaking in the survey and for asking their opinion about the appropriateness of the survey. The survey tool was deemed valid; after a few minor changes to the organization of question format, final drafts were printed and readied for collecting data. Data from the test questions and notes about verbal interchanges regarding the Humboldt State University library was included in the results.

Surveys were distributed randomly on all floors of the library, including the very bottom floor where students can access services such as disability resources, writing help, and tutoring. Students were approached individually or in groups to request their volunteer participation in this survey. A total of 83 students volunteered to take part in

the survey. Before being given the survey, those students who agreed to participate were

asked to fill out a consent form for allowing their data to be utilized for graduate research

(see appendix B for copy of consent form). Each of these students got personal verbal

information about the survey. They were told what they were consenting to and were

informed that they could provide their contact information if they were interested in a

raffle drawing. After each student had read and signed the consent form, he/she was

handed a survey. Surveys were collected as students completed them and were stored in a

separate file from the consent forms. The last part of the survey offered students the

opportunity to participate in a focus group and asked those interested to provide an e-mail

or phone number so they could be contacted.

Once the 83 surveys had been collected, each question was given a question and

answer code. For questions that required a "yes," "no" or "sometimes" answer, a

numerical code was assigned. For qualitative questions which harnessed a varied number

of answers, the surveys were examined for patterns in regards to words utilized by

students to describe their experiences, and each question was assigned a code phrase or

several code alternatives that best represented the answer. All answers were recorded in

an Excel database and the database filters were used to analyze the answers. No students

volunteered to participate in focus groups, so focus groups were not included in the final

analysis.

The survey was designed to collect student perceptions about the library/learning

commons in three specific areas: the physical commons, the virtual commons, and the

socio-cultural commons. Thus, aside from collecting demographic data, each part of the survey was portioned into the above main categories. The first part of the survey asked students questions such as their college level, whether they live on or off campus, their ethnicity, their age group, whether they are the first in the family to attend college, and if they are a parent of a primary-school child.

Students were also asked to identify their ethnicity. These questions were coded into seven categories. Responses such as "White," "Euro-American" and "Caucasian," were coded as "Caucasian." Answers such as "African-American," "African" and "Black" were coded as "Black." Replies such as "Hispanic," "Chicano," "Mexican," and "Latino," were coded as "Latino." Responses such as "Chinese," and "Asian" were coded as "Asian." Responses such as "Native," "American Indian" and "Native American" were coded as "Native American." There were no answers reporting an identity as "Pacific Islander." Students who responded with two or more ethnicities or "Mixed" were coded as "Mixed."

The reason for collecting demographic data was to get a sense of the types of students who frequent the library and the resources they find most helpful in fulfilling learning needs. After the demographic inquiry section, students answered questions about the physical commons. This part asked about the resources most utilized by the students and how. Students were also asked to identify services they utilized such as help desk, circulation desk, and face-to-face librarian help. This part of the survey helped to gather information on the particular physical or tangible resources that are used by students and

to get a sense of resources and services not used or under-used by students. This part of the survey also gauged how well the physical aspects of the commons provide students with study environments that meet the critical aspects of learning as described through the learning theories discussed earlier: observation, social interaction, and experimentation. In making space arrangement as conducive to learning, designers or administrators could use this type of data.

The third section asked students to answer questions about the resources and services used as part of the virtual aspect of the commons. For example, this section asked questions about use of the website, databases, online library tutorials and social networking. These questions were asked to gather information on what types of networking websites or programs students use the most and to find out how students learn collaboratively online. It can also help to gauge what access points for virtual learning and social networking students find useful and whether the university is sufficiently providing these.

The last part asked about the sociocultural commons. These questions asked about exhibits or other cultural events sponsored or co-sponsored (with other departments or programs) by the library which students found interesting and useful in providing insights about current events. For example, the library participates in events like Campus Dialogue on Race and International Week by setting up thematic exhibits and highlighting specific literature or speaker events, including sponsoring film screenings

and discussions. These questions were asked to also find out if students are actually participating in such events.

At the end of the survey, when asked about any other unmet services or changes that the university should consider, students who answered gave such varied responses that it was inappropriate and impossible to code these replies. Thus, any responses not left blank or answered with "none" were typed out word for word (but with spelling errors corrected). Thirty-seven of the 83 students who participated in the survey approached me to verbally express ideas, concerns, and praises about the Humboldt State University library/learning commons. Those comments were noted down and grouped for common themes. The results and discussion of these interchanges were paraphrased and reported (see Results and Discussion section).

Since survey participants were approached personally, without prior warning, responses to take the survey varied. Some students were appreciative of the opportunity to voice their perceptions of how well their learning needs were being met. Many of these students remained after the survey was collected to verbally add more opinions. A few other students responded to the survey as a burdensome task but participated, anyway, and still others refused to participate entirely for reasons of time and/or scheduling conflict. One student even buried her head in her laptop as I approached her to non-verbally signal to me that she was overwhelmed with another task as the moment. Three Middle Eastern students shared concern that their voices did not matter because they were international students; even though I explained that their voices were very

important, they refused by saying they would think about it overnight and participate the next morning. We negotiated a time to meet in the library the following day, but the students did not show.

In addition to the student surveys, four library staff members were interviewed one-on-one in their offices during 30-minute sessions to gather staff perceptions of how the Humboldt State University library has changed over the years. Information gathered included current resources and services most used by students, strengths and weaknesses of the library as aligned for student needs, the success of the learning commons arrangement, and envisioning the future, to bring the library/learning commons into the 21st century. Questions were sent via e-mail to each participant and varied slightly between staff and library administration questions (see appendix C for a copy of the questions). The responses were paraphrased for confidentiality.

SETTING

Humboldt State University, founded in 1913, is a residential campus in Northern California. Considered a rural public university, it is located in the town of Arcata on Humboldt Bay. It is approximately 279 miles north of San Francisco and 144 miles south of the Oregon border. The university is part of the California State University system, which is made up of 23 campuses, including urban and rural university campuses, established from southern to northern California. About 8,293 students are enrolled in the university, most of whom are undergraduates. According to the 2010 United States Census, the population of the city of Arcata is 17,248 (Arcata Chamber of Commerce, 2014).

Although the university is slowly becoming more ethnically diverse, white students still comprise 50.8 percent of the student body. Table 1 shows the ethnic breakdown of the student population (HSU 2013). Arcata, as well, is predominantly white; 81 percent of its residents identify as white/caucasians (US Census Bureau, 2010). Table 2 shows the ethnic composition of Arcata (US Census Bureau, 2010).

Table 1: Ethnic breakdown of the student population (HSU 2013)

Ethnicity	Percent
White/Caucasian	51%
Black	4%
Latino/Hispanic	26%
Native American	1%
Asian	3%
Pacific Islander	0%
Two or more	6%
Unknown	9%

Table 2: Ethnic composition of Arcata (US Census Bureau, 2010)

Ethnicity	Percent
White/Caucasian	81%
Black/African American	2%
Latino/Hispanic	11.6%
Native American/Alaska Native	2.3%
Asian	2.6%
Two or more Races	6.6%

It should be noted that HSU's Latino population has been steadily increasing over the past few years. There is currently a greater percentage of Latino students at HSU than in the local community. This creates some interesting challenges for the retention of Latino students at the university. These students do not have a community in the local area with which they may identify, so homesickness becomes a prime reason why they

may want to return to their home communities. In many cases these students are from faraway places like the Santa Barbara or Los Angeles areas, so going home for a weekend to get nurtured by family is out of the question; for the students who are compelled to make the long journey over a few short days, it is detrimental to their educational achievements. Even though students may create their own communities on campus and the university may help them do so through sponsored events, clubs and activities, once the students walk off campus into the Arcata community, they may feel isolated, because the cultural resources they may be used to are not present.

Due to the growing number of Latino students at the university, Humboldt State University qualifies as a Hispanic Serving Institution. This is a Federal program meant to support colleges and universities that try to assist students who are first generation, low income Hispanic students (United States Department of Education, 2009). This means that the latino student population at Humboldt State University has reached 25 percent. However there is a lack of representation of this ethnic group in the local area as seen by the population numbers reported by the Census. In this case, it is optimal for a library/learning commons to consider creating an atmosphere that is inviting to this growing ethnic population and to provide resources and information specific to the current issues faced by this ethnic group in the United States.

Staff at the Humboldt State University library shared that they are trying to diversify the exhibits and book resources to include current issues being faced by the latino population. More resources and information are being added concerning

immigration and undocumented residence. The staff also expressed concern that the library staffing is not diverse enough to reflect this increase in the Latino student population and may signal to students that being professional means not being Latino. It seems necessary for the critical identity development of the students to have role models who can exemplify to students that they too can achieve professionalism, to become active participants in an intellectual community. Library staff members shared that despite the challenges of hiring people from all different backgrounds to this local area, they are hopeful that under new leadership, there will be some positive changes and a growing interest in diversifying the staff.

The biggest urban area in proximity to Humboldt State University is Eureka, California, a city of 27,191 population and located seven miles south of Arcata. The university borders a majestic redwood forest, which provides students the opportunity for hands-on outdoor learning and recreation.

The university offers 44 baccalaureate programs, 73 minor options and 12 graduate programs. According to the 2013 retention report, the three-year retention rate for a cohort of first-time, full-time undergraduate students was 55 percent. Most prominently known for Marine Science, Environmental Studies and Wildlife Studies, the university also offers other popular programs such as English, art, psychology, business administration, kinesiology and elementary education (Humboldt State University Institutional Research and Planning, 2013).

The library at Humboldt State University has been remodeling its building in phases. The Learning Commons conceptualization is to make student services easily accessible to students along with rearranging furniture and space on the first floor to foster collaborative learning. The first phase was the installation of the café and WiFi capability on all four floors of the library. Second, many academic support services such as the Learning Center, Tutorial Center, Writing Center, Student Disability Resources, Testing Center and Veterans' Affairs were relocated to the basement floor of the library. Making it a one-stop shop for students seeking such services (Humboldt State University Learning Commons News, 2010). Although services for student academic support are now housed on the same floor, except for a shared reception area, each service operates individually, with some cross collaboration and referrals. Space configuration makes it difficult to house more student collaborative zones on this bottom floor. A learning lab, writing lab, and individual tutorial rooms are available to students, but most other spaces house staff offices where students consult with staff one on one. The first floor resembles more of a commons area. Students can access collaborative, flexible workspaces that include re-arrangeable features such as moveable white boards and chairs. Group work carrels are also along the edges of the floor and provide students with semi-private workspaces. A semi-open computer lab and the old contained computer lab, as well as the technology help desk are available on this floor. The circulation desk also serves as a starting point for many students and is a remnant of the past, situated almost at the entrance of the first floor. The second floor remains a space for book stacks and quiet study, and the third floor is a place for stacks, with an area for children to browse books

and newspapers (Humboldt State University Library, 2014). Although the library has a good presence on the website, it does not seem to convey a Learning Commons perspective to students. In the past, a different web page explained the renovations as they were being conceptualized, but this page was not linked to the library web page. Currently, the university lists the Learning Commons in its index, but no information is available when one goes to this item on the index. This library is in its infancy to becoming a true learning commons where more space is allocated with learning in mind and where a commons perspective is communicated appropriately to students, staff, and faculty.

OUTCOMES AND INSIGHTS

Eighty three participants took the survey. The completed surveys provide a preliminary idea about students' perceptions of how well the library meets their learning needs in the context of the physical, virtual, and sociocultural learning commons.

Of the 83 students who completed the survey, there were 11 freshmen, 19 sophomores, 23 juniors, 21 seniors, four graduate students, two who indicated they were in the "other" category, and three who declined to answer the question. Persons who chose the "other" category may be a community member, an alumnus/alumna of the university, or a student who did not want to divulge his/her class level. Figure 1 shows the percentage breakdown by class level of the survey participants.
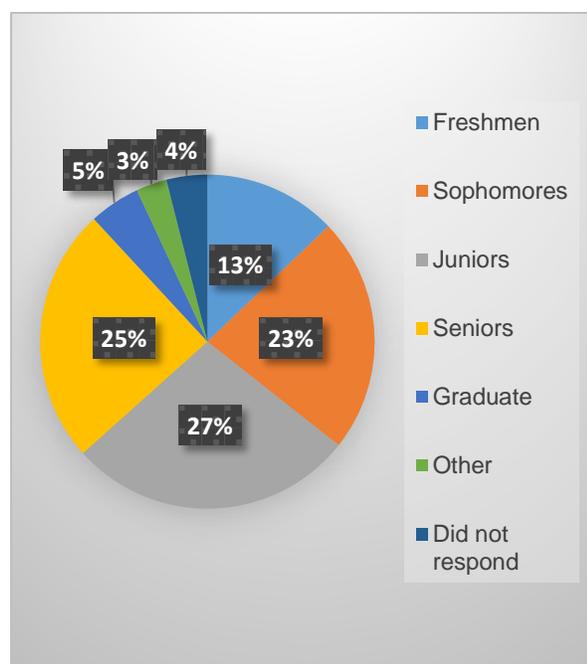

Figure 1: Class level breakdown of students surveyed

The largest population surveyed was at the junior level, followed by seniors, then sophomores and freshmen. This could indicate that as class level goes up, so does the frequency with which students visit the library.

Of the 83 students surveyed, only five students reported being over the age of 24, four students did not respond to the question about age, and 74 students reported being between the ages of 17-27. With using such large age ranges of 17-27, 28-37, 38-47, and 48 and up I was not able to capture usable data for the ages of the students surveyed. Also, only six of the 83 students said they were parents of primary-school-aged children. Forty students, or 48 percent, reported that they were first-generation college students.

The ethnic breakdown of the survey participants included one Asian student, five Black students, 33 Latino students, five Mixed Race students, five Native American students and 30 Caucasian students. Five students declined to answer this question. Figure 2 shows the ethnic/racial composition of the survey participants.
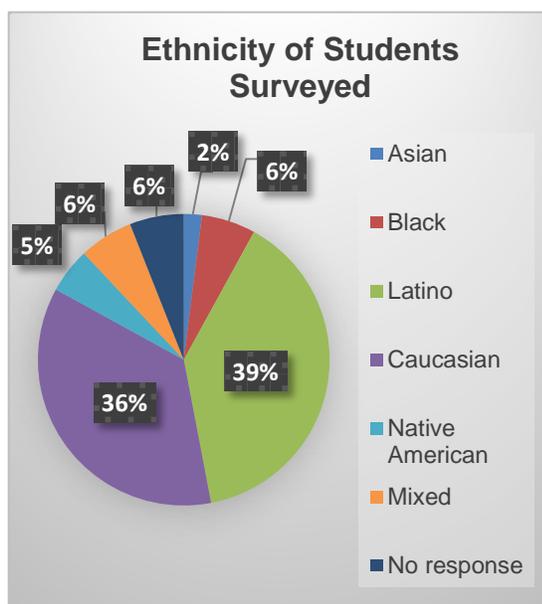

Figure 2

In regards to the ethnic breakdown, the number of Latino student participants is slightly higher than that of Caucasian students. According to library staff, this could be because of the overall increase in the Latino student population.

The ethnic breakdown of the students surveyed is somewhat reflective of the larger Humboldt State University student population for the Asian (3.4 percent) and Mixed groups (6.3 percent) when compared but I was able to get more students in the other categories than reported for the larger campus – 3.8 percent Black, 1 percent Native American, 28.8 percent Latino and 47.9 percent White. An even more diversified survey population would have been ideal but it could be concluded a reasonable amount of varied voiced where heard on the surveys from varied ethnicities.

Physical Commons

The physical commons consist of the concrete arrangement of space. It includes furniture, lighting, and the location of certain resources. It also includes resources like computers, printers, circulation desk where students can check materials, face to face help from library staff, the café, help desk where students go for technology support, research help desk where students work with a librarian, individual and group study areas, and ways to

find resources like signage and maps, etc. The figure below shows the reported usage patterns of the resources and services in the physical aspect of the library/learning commons.
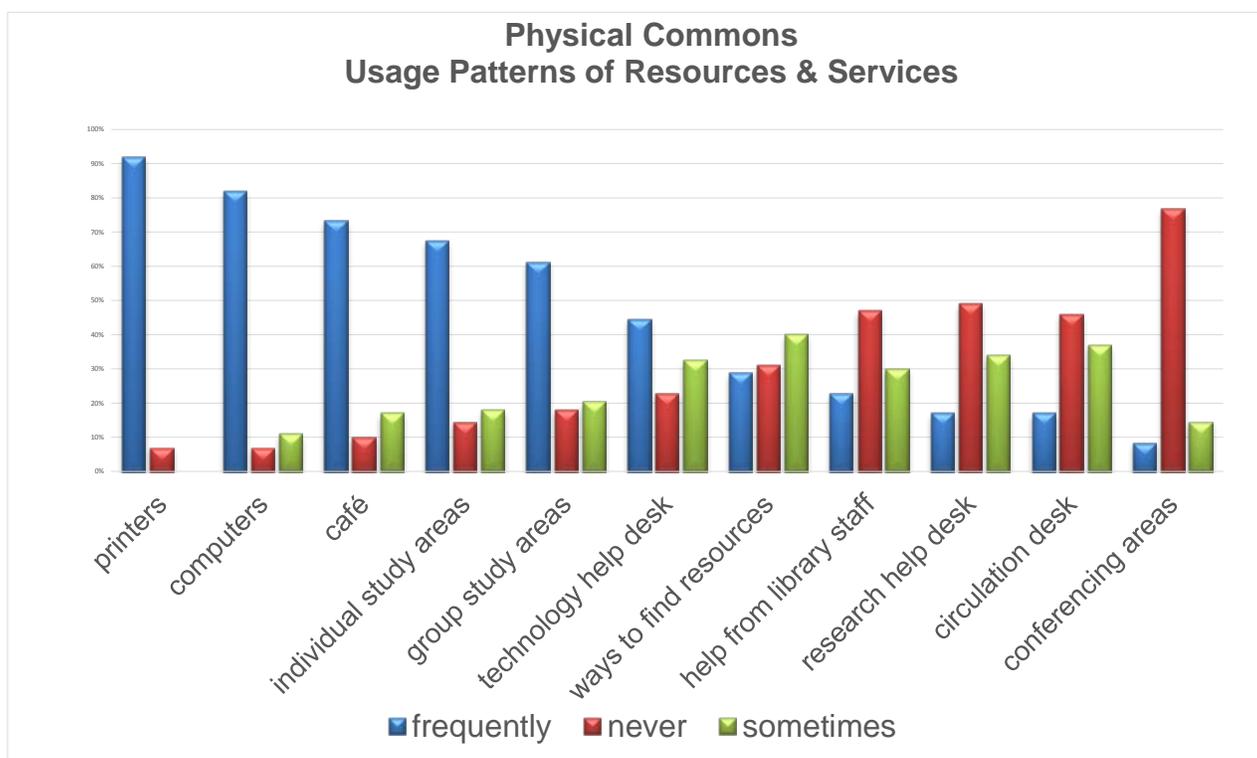
Figure 3.

The questions on the survey and interviews with staff were designed to investigate

two key questions regarding the resources available as part of the physical aspect of the

commons in the library. The first was to explore whether more students preferred to study

in groups versus individually. The second was to find out what resources are most

utilized versus those that are most underutilized. The following graph shows the patterns

of frequency of use for each of the resources provided as part of the physical commons.

When examining if students utilized the group study areas and individual study areas as part of the physical commons resources, the numbers were quite close. For example, 56 students indicated that they do utilize the individual study areas, 12 said they do not, and 15 said they do sometimes. On the use of group study areas, 51 students said they utilize them, 15 said they do not, and 17 indicated they do sometimes. However, when asked which mode of study (individual, group or both) student participants preferred, 51 percent of students tended to choose studying alone rather than in groups. Following is a table that shows the breakdown.

Table 3. Preferred Study Style

style	number	percent
Individual	42	51%
Group	17	20%
Both	19	23%
No response	5	6%

It must be noted, however, that although it is surprising that half the students surveyed chose individual as a preferred style of study during a time when employers are looking for collaborative workers, the question about whether or not student participants utilized the individual or group study areas is different than the question about their preferred manner of study. Students may use one or both types of areas, but how they like to study may be one or the other. Nevertheless, since social interaction is a key

component in creating deep and impactful learning experiences and is a critical and expected behavior in a learning commons, the fact that a high number of students may value or prefer to learn individually does not follow the learning theory by Vygotsky, for example, who argued that social interaction was a crucial component in learning (Rogoff, 1998).

Pertaining to study style preferences and the first qualitative question on the survey about how the resources and features of the physical commons meet student learning needs, two main themes emerged. First, the study environment was a very important feature and the library does a fine job, according to the surveyed students, of upholding a safe and productive learning atmosphere. This included focused study spaces that are conveniently located close to resources such as technology and professional staff. Students commented that the library study spaces that do exist, whether for group work or individual study, are clean, comfortable and located in convenient areas of the library. However, some students also commented that when the library gets crowded, there are not enough quiet areas and not enough convenient access to printers on the floors that are quieter. Some students expressed that the quiet floors are the second and third, but one has to walk down to the first-floor lab for printing and that this was disruptive to them. Yet others commented that regardless of the chatter on the first floor, it is an attractive and nicely lit place for study whether one is studying alone or in groups and one can usually find sufficient space. Students also expressed that the new furniture and bright lighting is more comfortable and conducive to study. Students especially commented that

the group kiosks that have white boards and moveable chairs are inviting and pleasant for long hours of studying.

As an interesting aside to the theme of space and quiet study areas, three of the juniors surveyed and two of the seniors surveyed (I know this because they offered the information) expressed that they lived off campus in living situations with roommates who are noisy. These students said they often came to the library, in order to study in a quiet place. However, these specific students were surveyed on the first floor, which is normally a floor of much activity. Both the café, where students often stop to pick up a snack or take a break, and the entrance foyer, where two of these students were surveyed, are noisy because of social exchanges going on or collaborative work happening among students. The other three students, who were studying individually, were doing so in the group work areas on the first floor, which are noisy, as well.

As I was collecting the surveys from these particular students, they huddled around me as a group and each expressed, although in different words, that it was inspiring to study in a place where the chatter is intellectual versus distracting to study in their homes, where televisions or radios are blaring. One student said that it was easier to focus in the library, because others were doing so, too. This idea that students behave according to the environment within which they are currently and mimic what activity is deemed appropriate in that context relates back to learning theories that argue that observation is a critical component in learning, because one sees and then models that same behavior (ASHE Higher Education Report, 2012; Weidner, 2009). So although the

first floor of the library was busy with activity and conversation, those students were still able to focus, because the activity signaled that those around them were engaged in focusing on their own work, as well.

According to other comments by students, another reason that the first floor is so popular in terms of a study space is that resources such as circulation, research help, and the technology support of the help desk are conveniently located on that floor. Regardless of complaints about a shortage of printing and computer availability, the resources that students described as being of most value at the library at Humboldt State University were those provided by the staff. Students have high regard for the expert help and friendly environment created by the people who work there. Students commented that the library staff members are very welcoming and helpful to students; they said that the inviting, safe atmosphere was the reason so many of the participants liked the library not only as a study space but also as a hangout.

Another theme was that the physical aspects of the learning commons provide easy access to resources such as computers and printers, when not being used by others. This availability to technology, for some students, is vital for their success in classes. Some students said they did not have computers and/or printers at home, so the only way to easily access class materials, get on the university portal system, or conduct research for class assignments was to do so through the labs at the library. Since a large number of the surveyed students (48 percent) consists of first-generation college students, financial constraints may be an obstacle for owning personal technological devices such as

computers or printers, so this necessitates the use of other campus labs or the library computer and printer resources. This may be an issue overall for Humboldt State University since, according to the Fast Fact Fall 2014 report, 57.1 percent of the students are first-generation students, and 37.7 percent are from low-income backgrounds.

Almost half of the students surveyed also commented that the support services on the ground floor were a little hard to find, since that floor is maze-like and the signs don't help to show where the services are. However, the students had positive comments about the services themselves. Even though the services are difficult to find, once a student is at the reception area, the staff are very helpful in getting students to the right place. They said the staff members in the Learning Center are very compassionate about helping students; the students who use the Student Disability Resource Center commented that the advocates there are wonderful in dealing with student issues surrounding disabilities and learning. Many students who took the survey and who had used this service in the past seemed unwilling to mark this on the survey but felt more comfortable giving verbal feedback. For this reason, I had about four students talk with me after having taken the survey that the elevator to come from the first to the ground floor was inconvenient, since students had to check out a key to operate it. Two students responded that the stairs were steep and uncomfortable but that the accommodated workstations in the library were great.

Reiterating many of the students' comments about the physical arrangement of study spaces, interviews with staff indicated that the refresh project, which was the

remodeling of the first floor, has greatly improved the atmosphere with the comfortable furniture, café, and group work areas with flexible arrangements such as moveable whiteboards and chairs. Staff expressed that this kind of space empowers students to take charge of their learning by making it an expectation and appropriate behavior to manipulate their environment to fit the task at hand. For these reasons, staff members say they feel both the frequency and duration of visits from students has increased. Although it is difficult to count the number of students visiting per day, staff members were very clear that the library has become a more popular place for students than they remember from five years ago.

As part of the resources and services provided in the physical commons, some are concrete resources such as computers and printers, others are spaces such as the café and study areas and yet others are help services such as the research help desk and circulation. The data from the survey indicated that the top two utilized resources tend to be printers and computers. The café and study areas have heavy usage, as well. The most underused resource seems to be the conferencing and instructional areas. Also, 65 of 73 respondents said they do not use the family area, and the other eight said they use the space as a hangout or do observations for class assignments. However since most of the students indicated that they do not have children, they may not have use for it.

As for the conferencing and instructional areas, 37 of 71 respondents said they do not use these areas. Only one student indicated using the spaces for practicing presentations, while the others use them for group study. There is a chance that the

students may have misunderstood the question, because all areas in the library can have multiple purposes, and students may not differentiate one from the other except for the quiet spaces.

As expressed earlier, the printers tend to have the highest use, followed by computers. However, even though it may seem that services such as library staff, research help desk, and circulation have a low frequency of use, these services are not always needed by students once they have learned to navigate the resource themselves. So it may be that staff members are doing a fine job of giving instruction to students on how to become independent learners for the tasks that need to be completed. Also, the nature of the resources of computers or printers is that these are tools by which students accomplish other types of tasks such as performing research or typing up papers, whereas the nature of a service like technology help desk is a resource that helps students be able to master the tools that aid in using the appropriate technology to eventually accomplish a task.

Along with resources and services, another important aspect of the physical commons is the student support services such as the writing and math labs, as well as tutorial services. The following graph shows the frequency of use for these services.

**Physical Commons
Usage Patterns Student Learning
Services**

Legend: ■ frequently ■ never ■ sometimes
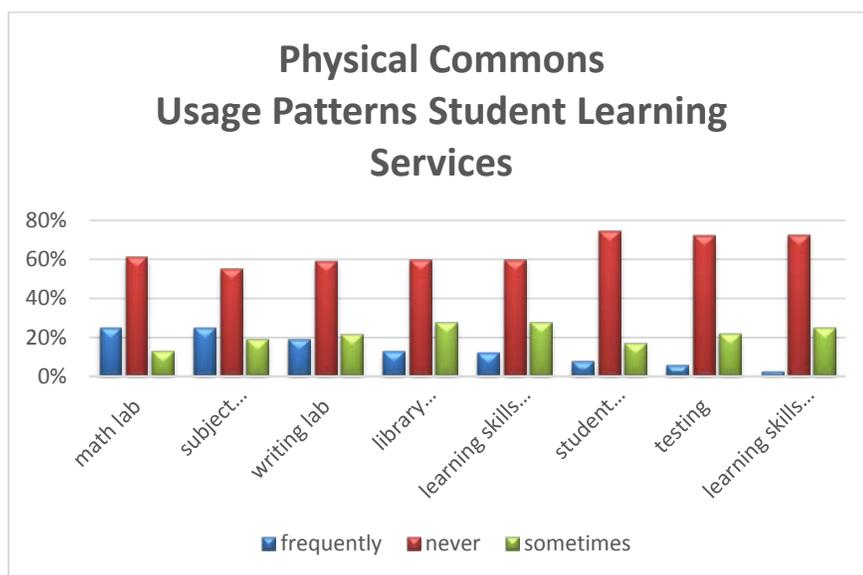
Figure 4

At a glance, it may seem that the math lab, specific-subject tutoring, and writing

lab get the most frequent use by students and that learning-skills coaching gets utilized

the least. This may be for several reasons. The first is that students may need regular

tutoring for specific subjects throughout the semester but services like skills coaching

help students gain foundational learning skills like time management or note -taking,

which may only need to be a service that a student needs once. So, the less frequently a

student needs such a service, the better, as long as students have access to it when

necessary.

Another reason could be that the services are not found front and center, in terms of where they are located. If a skills coaching lab were situated upstairs in the library, next to the math lab or research help desk, perhaps more students would be inclined to use such a service.

Lastly, the data gathered may not be accurate in telling the frequency of use, because students who were in sessions with professional skills coaches or in meetings with the Student Disability Resources staff were difficult to survey. Due to confidentiality issues and the fact that time with tutors and others is paid time for students, it seemed inappropriate to take up that time for a survey. Besides, it was difficult to access the students utilizing these services on the ground floor, because most did not want to be distracted while there. The sign-up record for these services would be a more accurate gauge for frequency of use. The few students I was able to capture were those in the reception area as they awaited their meeting with a professional or student staff person. These few students commented on two main themes. One was that there is a need for more tutoring; the second was they wished the writing lab and learning skills lab were in more convenient locations.

Comments from the library staff regarding the commons concept and the services on the ground floor suggested that there is very little collaboration or interaction between library staff and the staff in the commons area on the ground floor. One common theme that was highlighted was that just because the two, library and support services, are collocated does not mean they work together and that they are practicing true learning

commons philosophy, which is to integrate the services so that students access them seamlessly without any inclination that the two are separate.

One main problem the staff expressed was that they and their student staff are not well informed of what goes on in the services on the ground floor. They commented that what they do know is superficial and so it is hard to make proper referrals. It is easy to tell a student to get help from a service downstairs, but it would be more of a benefit for students if a directed referral could be made to a specific service, so the student is clear about what to look for when he or she goes downstairs seeking help. Staff also had comments about the location of services. They commented that more strategizing needed to happen in order to make sound decisions about where certain services reside and redundancies should be eliminated. For example, the kind of help in researching a broad topic that students get from the Research Help Desk on the first floor, the guidance they may receive from the Learning Lab about narrowing a topic, and the consultation they may get from the Writing Center about crafting a paper on the topic are all a natural flow of services and should be located in proximity to one another. This would mean less running around for students and more collaboration and cross training for the staff of those services. The staff members said they felt this would cause a spectacular synergy of idea exchanges among staff and benefit students.

The staff members were, however, excited about the future of the library at Humboldt State University, because having new and positive leadership and dedicated,

creative staff means they can revise, plan, and change to bring the library into the 21st century.

The library at Humboldt State University has begun the process of transforming the spaces in the library to suit a true physical learning commons format by starting with the renovations on the first floor. However, with no new renovations having been made recently, inertia has begun to set in. To keep up the momentum and to signal transformation possibilities, new — even if small — changes should happen more frequently. These changes should be communicated via website and other types of showcase activities to maintain excitement and engagement from the campus community.

To encourage students to engage socially in an academic setting, the learning commons philosophy and library mission should be articulated clearly through written materials, signage in the library and campus events. Perhaps the preference for individualized study is a remnant from the past and still permeates the manner in which academia in the West behaves. A gradual shift toward collaborative learning, however, is springing up. This recent change in the way in which students are encouraged to learn needs to be nurtured by constant communication through all possible ways as a dynamic and creative way to engage in scholarship.

For underused spaces like the conferencing areas, ways should be explored to showcase to students how these spaces can be utilized. For the conferencing area that seems to be underutilized, recorded or live conferences should be presented every so often, so the capabilities of the space could be demonstrated. This could invoke more

creativity on the part of the student as to other ways to use such space rather than just for club meetings.

Resources should be easily accessible without discouraging barriers. Computers and printers, along with help desks and support services, should be integrated according to student workspaces, should not be divided by immense counters, and services should be front and center. Labs should not be tucked away in places as they are currently, where the Writing and Learning Center reside.

In a proper learning commons, the student should feel empowered by the space arrangement and feel safe to move from one resource to the other without having to navigate around barriers.

Virtual Commons

Unlike the resources in the physical commons, the resources in the virtual commons have to do with online services, web availability, and tutorials on how to access virtual tools. The general library website consists of information about library services and is an access point for students to work with a virtual librarian, sign up for room use, etc. Online library help is the 24/7 librarian that students can access at any time for questions about research. Other online resources include guides for research, the interlibrary loan program and the online tutorial among others. Online outreach by the library has to do with the way in which students can access information about new services, events, and any other changes. This could be through emails or announcements.

The online tutorials are a way for students to learn how to utilize the databases and such for research. The group teleconferencing consist of the group rooms which are fitted with big screens and portals through which students can work on projects collaboratively.

The questions about the virtual commons asked students to give their perceptions of how well the technology and digital resources met their needs. The second key question explored which resources of the virtual commons are most used and which are the most unused. For the most part, students commented that the virtual tools and WiFi accessibility in the library was sufficient. Students also praised the online library services such as posting of events, the 24-hour service that lets one speak with a librarian online, and the online research guide. There were only a few comments about unmet needs. Some students responded that what would be helpful are workshops on the best way to put a presentation together with web or digital tools, a session on Internet researching, and workshops on how to use certain software. Students also complained that the Humboldt State University portal doesn't always work well.

It is important to understand that when students comment on wanting more workshops, they may be unaware that library staff will gladly spend the time putting on workshops if there was enough interest. According to staff, workshops can be time consuming to prepare and not worthwhile if students do not show up to participate. Staff time is often best used for one-on-one coaching for specific needs. Staff also commented that gradually, more and more web resources have been added to the library webpage so

that even though students can access resources in the physical building, the virtual

presence of the library can be accessed from anywhere on the Internet.

The second key question was to investigate the virtual resources that are used the

most by students and the resources that are used the least by students. Utilizing the

databases for periodical and journal searches was the most used resource in the virtual

commons at 64 percent, followed by the general library website at 54 percent. Following

is a graph depicting the frequency of use by the survey participants.


Virtual Commons resources and services
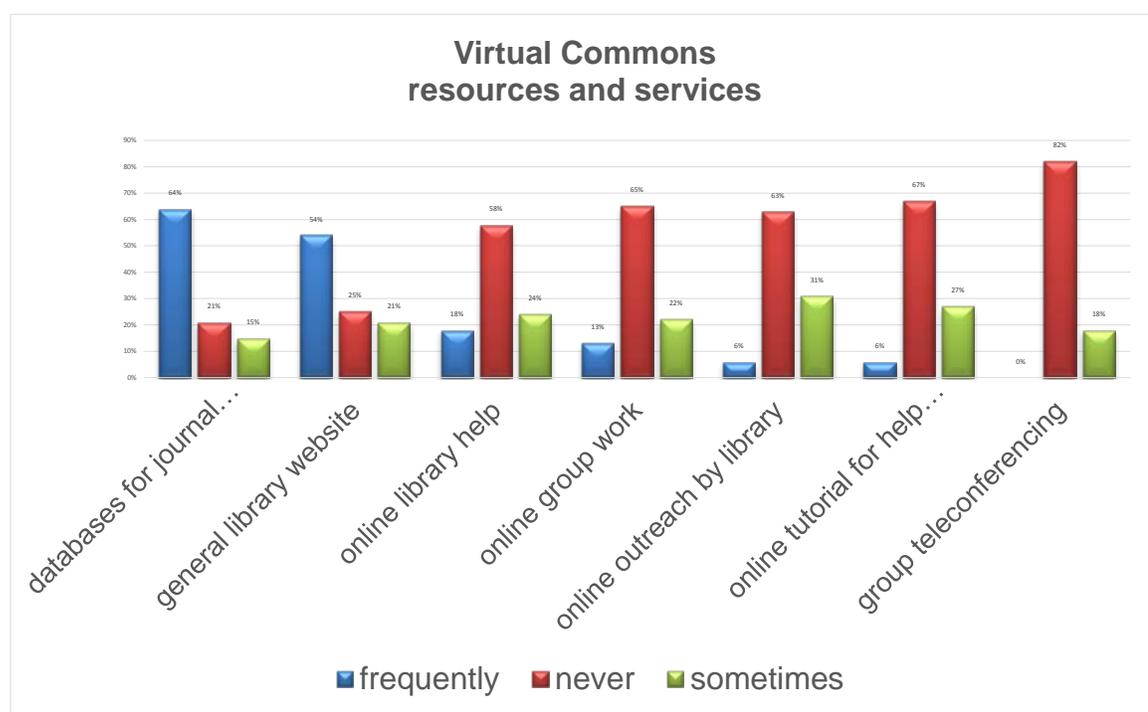
Figure 5.

The databases for journal and periodical research is the most prevalent way in which students are currently conducting research for class assignments. These databases are accessed through the library website. Students commented that working on a computer or surfing the Internet are easy tasks; however, they added, as soon as an academic task like finding appropriate periodicals or researching through databases is introduced as a dimension to accomplishing an assignment, surfing the Internet or using a computer take on another meaning. For that reason, the students appreciate the online tutorials, guides, and the ability to access a librarian online at the instant that one is needed. Although not shown on the above graph, 86 percent of the students surveyed reported that the heaviest use of the computers and WiFi in the library was for accomplishing class assignments, and only 22 percent reported that they use it to access social networks like Facebook to keep in touch with friends and family at home. Here, some students may not have been completely honest, fearing that school WiFi should not be used for social purposes.

Students also commented that they come to the university library because the WiFi connection is faster and more reliable than that off campus and they liked having technology support close by, in case there are some connection problems or they have difficulty connecting other mobile devices like iPads or tablets.

Thirteen percent of the surveyed students commented that information and tutorials online are too overwhelming and that they would rather talk to someone face to face to get help. They said it takes too long to navigate to the tools one needs and this

cuts into assignment time. Eighty-seven percent of the students, however, felt very comfortable using the online help. They said it was a fast way of getting help when being off campus or away from the library.

Staff interviews indicated that the presence of the library online has been gradually increasing because along with the creation of a dynamic physical library learning space, an interactive learning and workspace allows the library to expand its services. Access is the prime reason for having a virtual dimension to library services. Now, students don't even have to enter a library building to be in a library. Digitization of material has greatly increased access to material and decreased costs to students. Staff shared that students still want hard copy textbooks to check out but now that faculty are digitizing articles and other materials more than in the past, students are benefitting by not having to purchase expensive textbooks.

According to the staff members, more employers are seeking virtual-savvy employees who can access information, write research and policy, teleconference and e-evaluate programs from the helm of a computer and through the path of a digital realm. It then becomes the job of a university library, as well as a university as a whole, to prepare students to feel empowered and comfortable to enter such a future work world.

At Humboldt State University, the library's shift toward having a more robust virtual presence through online services is forward progress and an intentional way to meet current student learning needs. As the digital native or immigrant becomes the most prevalent learner the need for more access points to the virtual will need to grow. This

means that not only will more computers and printers need to be available, more communication between the library and students will have to be established. The Humboldt State University library is gradually making this effort. However, in order to inspire virtual creativity, students need to be given demonstrations for how online tools can be used to learn interactively. The learning theories discussed pointed to observation as a critical component of learning so showing students how a technology can be utilized is necessary.

It needs to be communicated, through demonstration and opportunities to practice or try out, that social networking is a collaborative learning experience. Also, through interactive exhibits or presentations, students should be given the opportunity to learn about innovative ways to exchange ideas through technology such as teleconferencing and group conferencing. At the Humboldt State University library students reported that they sometimes use the group conferencing and staff shared that rooms are always fully but the technology set up for such virtual group work does not get heavy use. The rooms are, however, used heavily for group work.

Guiding students in learning how to use virtual innovations to break through the boundaries that hold back information exchange and letting students practice using these innovations can enable them to become powerful problem solvers and producers, rather than just receivers, of knowledge.   The frequency with which students are utilizing the computers and printers imply that the digital native is the next generation of learners and as the population of students increase so will the use of these virtual resources.

Sociocultural Commons

The sociocultural aspect of a commons consists of the activities and events that take place in a learning commons to further the holistic growth of a student and perhaps connect the student to the community and world. This role of the library helps fosters citizenship and civic engagement so students learn to voice their concerns and eventually to be empowered to impact policy. These activities may include special collection exhibits, film screenings, and lectures. The challenge can be to persuade students to engage. At Humboldt State University this includes thematic exhibitions such as displays of historical and current events information and artifacts. For example, the exhibit on scientific instruments. It also includes speakers and lecture series housed in the library such as the Christopher Richard lecture on ecology and rotating art exhibits. The two investigative questions revolving around the sociocultural experience for Humboldt State University students was to find out if students participate and if the events enhance their insights about current world or local issues.

When asked about participation in the last year, the numbers from those surveyed came up low. For participation in thematic exhibits such as displays of historical or event-specific artifacts, 84 percent answered no, and 16 percent answered yes. To speakers or lectures held in the library, 84 percent said they did not attend, and 16 percent said they did. For rotating art exhibits, 77 percent said no, and 23 percent said yes. The following graph shows participation levels.

**Socio-cultural Commons
student participation level**
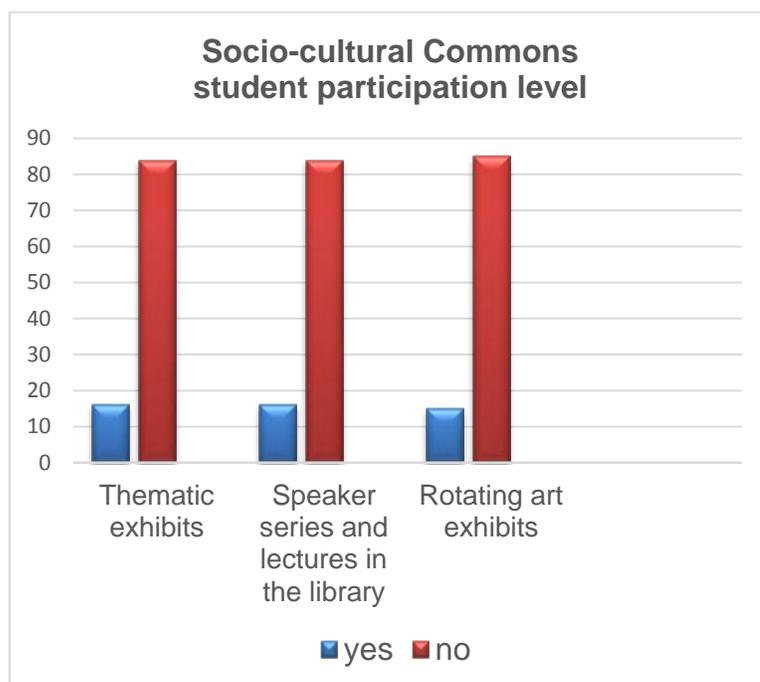
Figure 6.

The students who did attend or participate commented that they were moved by

the exhibits. Two students said that it compelled them to read further about the subjects

on race. Two others commented that they got insight about immigration that they did not

know about. One student said a group of students met regularly some years ago to plan a

protest against tuition fee hikes. The student said the instructional rooms were great for

such meetings. This a good example of the type of student activism that the library can

support so that students can rally their voices for their rights and learn to be proactive in

the process. The learning theory introduced by Benjamin Bloom (1956) supports that

affective learning, where students have to judge and interact with others emotionally help

to create life-long learners (Jones & Carlson, 2001; Gardner, 1983). Also, as mentioned

in the prior discussion about prominent learning theories, Dee Fink (2003) stressed that acquiring knowledge about how to learn and become a self-directed learner requires one to delve into emotive social encounters. Also, having an environment where one can practice or apply what is learned is vital for knowledge production (Fink, 2013; Fallahi, Wood, Austard & Fallahi, 2009). Therefore, the students who did attend and express that they felt compelled to read more about a subject or felt moved by an issue they learned about at an event are good examples of affective learning.

Most students commented that they like the artwork and other exhibitions and expected them to be available. When asked if they would participate in film screenings with discussions held by library staff, book circles or dialogue forums if offered, 23 percent said they would attend film screenings and 77 percent said they would not, 18 percent said they would join book circles while 82% said they would not and 24 percent said they would participate in dialogue forums while 76 percent said they would not.

According to staff, more events and opportunities to connect with students are being attempted. Staff are working on The Book of the Year project with the English department and the local community college and are going to hold their own book circle next semester. Staff are also interested in more collaboration with other departments, have established orientation presentations with athletics called the Thunderboldts and more focused presentations for other classes. As usual, staff are also involved with Campus Dialogue on Race and International week this semester. The library makes space

available for faculty and other speakers to hold lectures or film screenings during these event weeks. Staff also participate whenever possible in discussions.

Since the idea of enhancing the socio-cultural aspect of the library is important in creating an environment for social interaction and debate among the students, getting more students to participate is critical. Even the learning theories point to social interaction as an important method for creating true and deep learning. It is also a way to help students develop an understanding of the world and encourage them to not just be apathetic citizens. In addition, staff participation in facilitating such events, model to students how appropriately to engage in dialogue about current issues affecting them. For example, a student mentioned that participating in events surrounding dialogue on race modeled how he/she might engage in asking critical questions. This goes back to the learning theories which argue that observation and practice are important components for the learning process.

The implications of the low number of participation in socio-cultural events could be that students are not interested in activities that don't directly concern their class assignments. A few students expressed that their time was constrained by school work and they needed to prioritize what was most important to attend. A few others said that they would only attend if given credit for class work. This may indicate that our current credit system may be causing many students to think that only those activities that are linked to credit are important. Low attendance may also be occurring because there are too many activities going on in other departments and students may be overwhelmed. For

example one student expressed that the campus is too inundated with activities, from those in the residential halls to those that happen in departments on campus and the local community.

The main reason for the socio- cultural commons is to engage students in collaborative activities that broaden their understanding of current and world situations which impact them. The challenge, however, seems to be to get students to engage, For example, although the library at Humboldt State University is making an increased effort to put together more events to engage students in out-of-the classroom learning experiences, there is low attendance from students. Perhaps, one way to enhance participation is for the library to collaborate with more faculty across disciplines to negotiate lesson plans that include credit for attendance at events. Lessons in classrooms could be co-created with library staff to design exams, assignments and presentation topics around the event which are offered by the library.

The socio-cultural commons is a fairly new dimension of the learning commons which university libraries are exploring in order to take a more proactive role in comprehensive student development. As more universities receive support from administration and departments and as more libraries reach out for collaboration with other university entities, perhaps the interest among students to partake in socio-cultural exchange as an expected learning behavior will increase.

Conclusion: Library as a Holistic Commons

Albert Bandura (1977) argued that there is a reciprocal relationship among the factors of environment, cognition and behavior. He expressed that the interlocking and bidirectional interactions among these factors means that no one factor is a determinant for affecting how one behaves. He believed that the human mind is arranged according to the environment, social interactions within that environment and the models of behavior that exist (Crain, 1994). Thus, a student will behave in a setting dependent on what the environment allows and what is observed as happening within that space. The three different aspects of the comprehensive learning commons – the physical, the virtual and the socio-cultural fit within this paradigm of reciprocal factors that affect behavior. The physical commons is the environmental factor that consists of the arrangement of space. Students get signals both from how a space is arranged and what is observed as appropriate behavior within that space to act a certain way in that environment. The physical design has to be open and inviting to encourage social interaction and collaborative learning. Spaces have to be provided so that students can practice what they have learned and observe and model good learning habits.

The virtual commons is made up of the access points for and the interactions that happen beyond the physical facility of the commons. A student can be present in the physical commons but be accessing information and interacting socially with others through the virtual commons. The learning theories explored in this research indicate that social interaction and applying what is learned are vital components of learning.

Therefore, enough resources need to be available so that students can engage interactively in a digital setting and practice what they learn.

The socio-cultural aspect includes the activities and events that occur within both the physical and virtual space that are social interactions which help develop an individual's capacity to negotiate ideas and collaboratively solve problems. The socio-cultural aspect should provide activities that enhance learning through engaging debate about relevant issues because, as Bloom (1956) reminds us, true learning happens when a student is moved emotionally. For students, the socio-cultural commons offers experiences that help them develop insights about the world around them so that they may successfully navigate it with a strong foundation of knowledge and critical thinking skills.

At Humboldt State University, overall, the surveyed students responded positively to the physical and virtual aspects of the commons. I think the first floor design is an attractive place and students like to spend time on this floor because resources are arranged in proximity. Students also like the open computer lab area on the first floor. Perhaps more open computer labs could exist on the other two floors because the ones on the first floor are heavily used. Another highlight of the Humboldt State Library, according to the students surveyed, was how helpful and compassionate they thought the library staff and the support staff on the ground floor have been when students have needed help.

A concern some of the students surveyed expressed was that the accessibility of the elevator is inconvenient. For students with disabilities, the elevator is an important way to access the services provided on the ground floor and the inconvenience with which students face when accessing the elevator should be eliminated. The second area that should be addressed is the positioning of services. For Humboldt State University to truly embrace a commons idea, services, especially on the ground floor, should be placed according to student convenience and proximity to other resources where staff collaboration can occur among support services and library services.

Future research about student satisfaction with HSU Library's learning commons should require a larger survey sample. In order to do so in an efficient way, perhaps electronic surveys should be considered. The only problem with electronic surveys would be that one might not get an opportunity for the richness of personal discussion with students. Paper surveys are time consuming to disseminate and the data a bit tedious to code. Also, in order to get a larger sample, better incentives should be considered. More vouchers and relevant gifts like iPads or Kindles may attract more survey participants. There is the question, of course, of expense.

Another area for future researchers to be thoughtful of is language used in the survey and the means for disseminating it. This is targeted to accommodate English-as-a-second-language or foreign-language speakers. The three international students I had approached and who ultimately did not participate means that international student voices got left out. In order to make the survey more accessible for them, I could have

approached the International Student office and spoken to their mentors prior to approaching them directly without warning.

The study should also gather data about gender, in order to track the learning resource usage patterns of males versus females. Also, to get accurate data regarding age, either the actual age of the participant should be asked or the age ranges should be shortened.

Debates among researchers regarding the impact of technology on social interaction among students and learning still persist. Some argue that technology strips students of genuine cross communication and social interaction, while others argue that technology enhances interaction by expanding the possibility of students to reach out to one another without boundaries. Although the review of literature explores these debates as important considerations in the creation of a comprehensive learning commons, the scope of this research does not allow for an in depth look at these arguments. Any further research on libraries and their roles in facilitating the development of students as collaborative learners and informed technology users should look deeper into these debates.

This is an exciting time for research about libraries because of the fast pace with which all libraries are evolving. Due to the digital native as the next generation that libraries must help to educate and prepare for the work world, change is going to be inevitable. Change, however, should be made intentionally by considering how a student may move through the physical space, access the virtual dimension and navigate the

socio-cultural facet. Like Bandura's (1977) idea of "reciprocal determinism," where the interactions among environmental, cognitive and behavioral influences create the synergy to affect how one behaves in a specific context, so does the reciprocity among the physical, virtual and socio-cultural aspects of a learning commons affect how students learn within a commons. A truly holistic learning commons is a nexus for negotiating ideas and producing new knowledge. It is that bustling bazaar where knowledge, discoveries and innovations are born, nurtured and set forth to impact the rest of the world.

REFERENCES

Adam, Barbara (1990). *Time and Social Theory*, Cambridge: Polity.

Arcata Chamber of Commerce (2014, July 14). Demographics. *Arcata Chamber of Commerce.* Retrieved from http://arcatachamber.com/visitors/demographics

ASHE Higher Education Report. 2012. Developing a Pedagogy That Supports Intercultural Competence. *Engaging Diversity in Undergraduate Classrooms.* 38(2), 45-63.

Bailey, Russell & Tierney, Barbara. 2002. Information Commons Redux: Concept, Evolution and Transcending the Tragedy of the Commons. *The Journal of Academic Librarianship.* 25(2), 227-286.

Bandura, Albert. (1977). Toward a Unifying Theory of Behavioral Change. *Psychological Review,* 84 (2), 191-215.

Beagle, Donald (1999). Conceptualizing an Information Commons. *The Journal of Academic Librarianship.* 25(2), 82-89.

Bennett, Scott (2009). Libraries and Learning: A History of Paradigm Change. *Libraries and the Academy* 9 (2),181-197.

Bloom, B. (ed.) (1956). *Taxonomy of Educational Objectives, the Classification of*

Educational Goals – Handbook I: Cognitive Domain. New York: McKay.

Bruce Mau Design (2013, October 13). The Seattle Library. Retrieved from

http://www.brucemaudesign.com/4817/97353/work/seattle-public-library

Buzzetto-More, Nicole A. (2012). Social Networking in Undergraduate Education.

Interdisciplinary Journal of Information, Knowledge & Management, 7, 63-90.

Cheek, Paul. 2007. (2007 March, 26). "On Architecture: How the new Central Library

Really Stacks Up. *Seattle Intelligencer.* Retrieved from

http://www.seattlepi.com/ae/article/On-Architecture-How-the-new-Central-

Library-1232303.php

City of Arcata, 2014 A Brief Land Use History of the Arcata Marsh and Wildlife

Sanctuary. *City of Arcata*. Retrieved from

http://www.cityofarcata.org/departments/environmental-services/water-

wastewater/wildlife-sanctuary/history.

Clyde, Laurel A. 1999. The Schole Lybrarie: Images of Our Past. *School Libraries*

Worldwide, 51(1).

Crain, W. 1992. *Theories of Development: Concepts and Applications.* Englewood Cliffs,

New Jersey: Prentice-Hall.

Deeming, Paul & Johnson, Laurie L. (2009). An Application of Bandura's Social

Learning Theory: A New Approach to Deaf Blind Support Groups. *Journal of the American Deafness and Rehabilitation Association.* Conference Issue Supplement, 7, 203-209.

Donald, Scott. 1980. The Popular Lecture and the Creation of a Public in Mid-Nineteenth Century America. *Journal of American History,* 66 (4), 791-809.

Educause Learning Initiative. (2011 April). 7 things you should know about the modern learning commons. *ELI Publication*. Retrieved from http://www.educause.edu/library/resources/7-things-you-should-know-about-modern-learning-commons

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses.* San Francisco: Jossey-Bass.

Gardner, H. (1983*). Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Goldberger, Paul (2004). High-Tech Bibliophilia. *The New Yorker.*

Retrieved from http://www.newyorker.com/archive/2004/05/24/040524crsk_skyline

Green, Penelope (2007 November, 8). Really Thinking About Things. *New York Times.* Accessed October 13 2013. Retrieved from http://global.factiva.com.ezproxy.humboldt.edu/ha/default.aspx

Hall, Richard , Hall, Melanie (2010 September). Scoping the pedagogic relationship

between self-efficacy and Web 2.0 technologies. *Learning, Media & Technology,* 35 (3), 255-273.

Holmgren, Richard A. (2010). Learning Commons: A Learning-Centered Library Design. *College & Undergraduate Libraries*, 17(2-3), 177-191.

Humboldt State University Institutional Research and Planning. (2014). *HSU Fast Facts report.* Retrieved from http://www.humboldt.edu/irp/fast_facts.html

Humboldt State University. (2011). Humboldt State University (HSU) History and Academics *Humboldt State University,* Retrieved from http://humboldt.stateuniversity.com/?gclid=CNXTzfLa4r0CFYqIfgodMXgA5A#i xzz2yxwZ8GGz

Kaminski, Karen; Switzer, Jamie; & Gloeckner, Gene. (2009).

Workforce readiness: A study of university students' fluency with information technology. *Computers and Education,* 53(2), 228-233.

Martin, (Jack. 2004). Self-Regulated Learning: Social Cognitive Theory and Agency. *Educational Psychologist.* 39(2), 135-145.

Massis, Bruce E. (2010). The Academic Library becomes the Academic Learning Commons. *New Library World.* 3 (4), 161-163.

North Carolina State University Libraries. (2013 June, 24). Hunt Library. *Hunt Library*

Fact Sheet. Retrieved from

http://www.lib.ncsu.edu/sites/default/files/files/pdfs/HuntLibraryFactSheet.pdf

Pensky, Mark. (2001). Digital Natives, Digital Immigrants, On the Horizon 9 (5).

Rhodes, Lewis A. (1986). On Computers, Personal Style and Being Human: A

Conversation with Sherry Turkle. *Educational Leadership.* 43 (6), 12-16.

Rosa, Hartmut. (2003). Social Acceleration: Ethical and Political Consequences of a

Desynchronized High-Speed Society. *Constellations,* 10 (1), 1-33.

Simons, Kevin; Young, James B.; Gibson, Craig. (2000). The learning library in context:

community, integration, and influence. *Research Strategies*, 17(2-3), 123-132.

Tapscott, D. (1999). Educating the Net Generation. *Educational Leadership.* 56(5), 6-11.

Turkle, Sherry. (2008). Falling for Science: Objects in Mind. *Chronicle of Higher

Education.* 54 (35), 11-13.

United States Department of Education. (2009). Definition of Hispanic Serving

Institutions. *Hispanic Association of Colleges and Universities.* Accessed October

30, 2014. Retrieved from http://www.hacu.net/hacu/HSI_Definition.asp

Unites States Census Bureau. (2010). State and County Quick Facts. *U. S. Department of

Commerce*. Retrieved from

http://quickfacts.census.gov/qfd/states/06/0602476.html

Weidner Laura E. (2009*). Understanding and Application of Learning College Concepts*

Among Community Colleges. Ann Arbor Michigan: ProQuest LLC.

Weiler, Angela. (2005). Information-seeking behavior in Generation Y students:

Motivation, critical thinking, and learning theory. *The Journal of Academic*

Librarianship (1), 46–53.

Weiner, Sharon A. (2010). The Learning Commons as a locus for Information Literacy.

College and Undergraduate Libraries. 17 (2-3), 192-212.

Young, Jeffrey R. (2011). Programmed for Love. *Chronicle of Higher Education*; 57

(20), 9-11.

APPENDIX A: Student Survey

STUDENT PERCEPTIONS OF THE HSU LIBRARY LEARNING COMMONS

Grade level (circle one): **Fresh Soph Jr. Sr. Grad Other**   *Circle one:*
live **ON** or **OFF** campus

*Ethnicity:*_____   *Age (circle one):* 17-27   28-37 38-47
48+

Are you the first in your family to go to college? (circle one): **YES   NO**

Are you a parent with a primary school aged child? (circle one): **YES   NO**

1) *Physical Commons-* ***Circle*** *the services and resources you use* ***frequently*** *and* ***cross*** *out the ones you* ***do not use.*** *The ones left* ***unmarked*** *will be considered as being used* ***sometimes****:*

Computers   Printers   Circulation desk   Face to face help from library staff

Conferencing and/or teleconferencing   Café   Help desk – technology support

Research help desk   Individual study area   Group study area   Ways to help you find resources (signs, maps, etc.)

How do the above features or resources meet your learning needs?

_____
_____

Describe the mode of studying you prefer (individual or group) and explain where you study in the learning commons:

_____
_____

How do you use conferencing or instructional areas?

_____
_____

Which food friendly areas in the library, aside from the library café, support your needs and why?

_____

_____

How do family or children friendly areas meet your needs? Why or why not?

_____

_____

Circle the services and resources you use *frequently* and *cross out* the ones you *do not use*. The ones left *unmarked* will be considered as being used *sometimes*:

Math lab   Writing lab   Subject specific tutoring   Student Disability Resources Testing   Study Skills coaching

Library sponsored workshops (i.e. Zotero, database use, etc)   Learning skills workshops (test taking, note taking, etc.).

Describe other services you use:

How did you or do you become aware of resources and services?

Are there any unmet support services or resource needs?

2) *Virtual Commons- **Circle** the services and resources you use **frequently** and **cross out** the ones you **do not use.** The ones left **unmarked** will be considered as being used **sometimes**:*

Databases for periodical and journal searches   General library website   Online library help   Online group work

Online outreach by library regarding events   Online library tutorial for help with research   Group teleconferencing

3) **For what purpose do you utilize computers in the library and how frequently?** *Circle the reasons you use computers **frequently** and **cross** out the*

*ones you **do not use.** The ones left **unmarked** will be considered as being used **sometimes**:*

Class assignments   **Social networking (i.e. Facebook, Twitter, Mooc, etc.)**
      Research through library databases

General internet research   **Moodle**   **E-mail**   **Blogging**
      Other:_____

Are there any unmet web or online needs the university should be aware of?

_____
_____

4) *Socio-Cultural Commons – **Circle** the library sponsored events that you have participated in during the last year:*

     Thematic exhibitions (i.e. displays of historical or event specific artifacts)
     Speakers or Lectures in the library
     Rotating art exhibits

How did any of the above events help you develop insight into issues surrounding social and environmental justice? (i.e. immigration reform or waste management)?

_____
_____

Which events would you participate in if offered by the library learning commons? (Circle as many that apply)

       Film screenings with discussions held by library staff
       Thematic Book Circles (i.e. group discussions about a book surrounding a specific topic like food security)
       Dialogue Forums (i.e. discussions about current or historical events)

What other unmet services or changes do you think should be included as part of the learning commons to support your learning needs? Why?

If interested in participating in a focus group to give further feedback about the library learning commons, provide e-mail or phone number:

APPENDIX B: STUDENT CONSENT FORM

Consent Form

Dear Student,

You are being invited to participate in a survey concerning your perceptions of how the Humboldt State University Library/Learning Commons supports your learning needs. This survey is part of a thesis project that graduate student Jyoti Rawal has undertaken as her fulfillment for a Master's degree in the Environment and Community program. Information you provide may inform the campus community of student learning needs and how the learning commons supports those needs. The information from the surveys will be compared to a theoretical model for successful learning commons and will inform the researcher and university regarding student perceptions of ways in which the Humboldt State University learning commons supports student learning necessities.

The survey consists of questions regarding your personal use of the library/learning commons resources and your perceptions of how the resources support your learning needs. The survey should take 3-4 minutes and will benefit the university by informing the campus community of the resources most valuable to students. The survey may also be beneficial to you for the opportunity it offers to reflect on your own usage and needs of resources that support your achievements as a student and intellectual.

If interested in entering a drawing for vouchers to the movies or $10.00 vouchers for Arcata Pizza Deli or STARS Burgers, provide your e-mail or phone:

_____

Although the researcher does not foresee any risks to you for participating in this survey, you may contact the investigator Jyoti Rawal through e-mail (jvr51@humboldt.edu) or by phone at 707-498-9911; you may also call the investigator's faculty supervisor Mark Baker through e-mail (j.mark.baker@humboldt.edu) or by phone at 707-826-3907.

Please **DO NOT** put your name on the survey. Confidentiality will be retained by assigning numbers to the surveys once they are completed and names of students will not be utilized as identifiers for any data gathered from the surveys.

You must be 18 years of age to participate in this survey.

If you have any concerns with this study, contact the Chair of the Institutional Review Board for the Protection of Human Subjects, Dr. Ethan Gahtan, at eg51@humboldt.edu or (707) 826-4545.

If you have questions about your rights as a participant, report them to the Humboldt State University Dean of Research, Dr. Rhea Williamson, at Rhea.Williamson@humboldt.edu or (707) 826-5169.

Please sign and date below:

I understand that the Investigator will answer any questions I have about this study. I also understand that my participation is voluntary and that I may stop at any time or refuse to answer particular questions.

I agree to participate in this survey and give consent to use the information I provide for this research project.

_____

Signature   Date

APPENDIX C: STAFF INTERVIEW QUESTIONS

Library staff interview questions:

1) What are your general and overall thoughts about how the HSU library has changed in the last 5 years and how students currently utilize the services and resources?
2) What is your understanding of the learning commons concept for the library?
3) What positive changes to the library have you witnessed in the last 5 years in regards to supporting student learning?
4) What elements are missing or of concern?
5) How do the changes impact your work with students?
6) What do students seem to complain most about or give praise to in regards to the library?
7) Is there anything else you would like to share about the library that I should reflect upon as part of my research?

Library administration interview questions:

1) What thoughts do you have about the strengths and weaknesses of the Humboldt State University Library?
2) How do you see learning theories and research playing a role in the future of the planning and visioning of the HSU library?
3) Is there specific knowledge about learning that should be considered when making decisions about change to the library and its services?
4) How is the library and its service to students impacted by HSU being designated as a Hispanic Serving Institution?
5) What is your understanding about the learning commons concept and do you think it is an appropriate concept for the HSU library?
6) In what directions are libraries of the future headed in regards to how patrons/students are served or how libraries are utilized?
7) How are or will the identities of libraries evolve to meet future needs of patrons or students? How do you see HSU following such trends?
8) Is there any other information about how libraries are changing or about HSU's library changing that I should reflect upon as part of my research?

APPENDIX D: STAFF CONSENT FORM

Consent Form

Dear Staff Member,

You are being invited to participate in an informal interview concerning your perceptions of how the Humboldt State University Library/Learning Commons supports student learning needs. This interview is part of a thesis project that graduate student Jyoti Rawal has undertaken as her fulfillment for a Master's degree in the Environment and Community program. Information you provide may inform the campus community of student learning needs and how the library or learning commons supports those needs. Three library staff members are being interviewed individually. The information from the interviews will be compared to a theoretical model for successful learning commons and to other library learning commons to inform the researcher and university regarding staff perceptions of ways in which the Humboldt State University learning commons supports student learning necessities.

The interview consists of 6-9 open ended questions regarding your personal views of the library/learning commons resources and your perceptions of how the resources support student learning needs. The interview should take 10-20 minutes and will benefit the university by informing the campus community of the resources most valuable to students in their scholarly and networking necessities. The interview may also be beneficial to you for the opportunity it offers to give your feedback about the commons and how it can impact your work with students.

Although the researcher does not foresee any risks to you for participating in this interview, you may contact the investigator Jyoti Rawal through e-mail (jvr51@humboldt.edu) or by phone at 707-498-9911; you may also call the investigator's faculty supervisor Mark Baker through e-mail (j.mark.baker@humboldt.edu) or by phone at 707-826-3907.

Please **DO NOT** say your name in the interview. Interviews will be recorded and transcribed. Confidentiality will be retained by assigning numbers as identifiers for any data gathered.

If you have any concerns with this study, contact the Chair of the Institutional Review Board for the Protection of Human Subjects, Dr. Ethan Gahtan, at eg51@humboldt.edu or (707) 826-4545.

If you have questions about your rights as a participant, report them to the Humboldt State University Dean of Research, Dr. Rhea Williamson, at

Rhea.Williamson@humboldt.edu or (707) 826-5169.

Please sign and date below:

I understand that the Investigator will answer any questions I have about this study. I also understand that my participation is voluntary and that I may stop at any time or refuse to answer particular questions.

I agree to participate in this interview and give consent to use the information I provide for this research project. I also agree to the use of quotes from this interview, if necessary.

_____

Signature   Date