

User Experience of Library Space and Services:

A Mixed Methods Study Proposal

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## **Chapter 1**

### **Introduction**

The purpose of the academic library in the campus ecosystem is continuously changing, especially with the technological advances of the late 20<sup>th</sup> century into the 21<sup>st</sup> century. Customer service, facilities, budget, and resources are four broad library concerns. A holistic overview of academic libraries is necessary to understand the complexities of all the systems and services of an academic library. The role of the academic library differs depending on the institution such as a community college, a public college, a small private college or a research university. Although it is necessary to study the diverse types of libraries to understand the differences, the overarching theme is the library must consider the space it occupies on the higher education campus as well as on the organization's website. The librarian's role is also changing, and this is significant to understand the student experience when using library services. Libraries must continue to learn and understand user behavior and adapt to what the users need to offer the services and space to support their college community.

### **Statement of the Problem**

Students and faculty continue to use library space, services, and resources although the use of physical library material continues to decrease as evidenced by the overall decline in circulation statistics— in all types and sizes of libraries (Allison, 2015). Allison (2015) compares an average student in 2008 would check out 80% fewer books than the average student in 1995. Understanding and anticipating the future is essential for libraries and librarians as a profession. Libraries need to be proactive to know where the academic library fits in academia. There are several studies about the transformation of library space, and how the library will transform to a lab or some form of makerspace is apparent as technology shapes space. Alternatively, the

library may be losing sight of its traditional function of a place for quiet study and solitude and the users who desire this as well.

### **Purpose**

The purpose of this study is to explore the use of library space and services through observation and an online survey. The study will take place at a public university with an enrollment of approximately 7,000 students—mostly commuter students with a small percentage of students in campus housing. Observation as the first phase of the study is essential to see how students are using library space; this will provide data that a survey and interview will not be able to provide on its own. Observing the interaction with library staff in addition to user interaction with furniture and technology will also be pertinent to this study. This study is significant because libraries must continuously evaluate their space and services to meet user needs as well as forecast their future role in academia. The results of this study will provide actionable data for the library to assess and improve space and services. The study will address the following research questions.

### **Research Questions**

1. How do college students use the physical library spaces on campus?
  - a. Will the library need to improve, eliminate or add services or make changes to the library space?
  - b. What will the library look like in the future? Will the library transform into a lab, lounge or maker space of some sort?
2. What is the role of the academic library on campus?
  - a. How will the library continue to support the needs of the students?
3. How does the use of library services or resources contribute to student success?

## **Limitations**

The limitations of the study include the time of the year the study will be taking place; it is not feasible to collect observational data each day during an entire academic year. Purposely avoiding finals week, the time frame will be a typical week in a semester. The goal is to observe typical use. Another limitation is the response rate of the online survey during the second phase of the study, and as is the case with mixed methods studies there is a possibility the two datasets may not support one another (Creswell & Plano-Clark, 2011). With the narrow focus of studying one institution, the conclusions from this study may not apply to all academic libraries.

## **Chapter 2**

### **Literature Review**

#### **Introduction**

The purpose of this literature review is to provide an overview of pertinent studies about current and future library use by undergraduate students within the confines of an academic library. The overview will include research studies using a variety of approaches such as observation, ethnography, case studies, focus groups, interviews, and surveys. The literature will provide a background of research in the role of the academic library and how the library contributes to student success.

The innovative spaces to accommodate students may be minimizing the role of the library on campus. For example, the March 2018 issue of *College Planning & Management* with the “State-of-the-art designs for student engagement” headline on the cover, feature article describes the “Learning Innovation Center (LINC)” at Oregon State University. The LINC is an instructional space in addition to informal study areas surrounding the classrooms, and this space holds from 60 to 600 students (Milshtein, 2018). The University in this example also has a library. Milshtein (2018) mentions numerous studies of how student engagement improves

retention. California State University also has a science and innovation building with various lab and maker spaces, and research and teaching labs (Milshtein, 2018).

### **Literature Review in Context**

Library resources and services vary depending on the institution, as do user expectations and perceptions. Powell's (2006) evaluation research provides a synopsis of library service quality which he defines as the difference between user expectations and the library perception of its services. The author details the different research methods specific to libraries and discusses one instrument developed for libraries, the LibQUAL+ survey, a standardized web-based survey managed by the Association of Research Libraries (ARL) (LibQUAL+, (2018)). The LibQUAL+ survey focuses on library resources, operating hours and the facility. Some academic libraries decide not to use LibQual+ because of the limitations of the instrument. Bertot & McClure (2003) stress the need for multimethod research to assess library services as LibQual+ is not all-inclusive. The authors list the complexity of accessing the physical library and the online library while looking at service, cost/benefit analysis, and quality standards when it comes to resources and services.

Caniano (2010) provides the bleak picture of the decrease in library circulation of materials and overall library use—the libraries are no longer the only player in the information game. It has been that way for quite some time, and as more people have access to technology, the fewer people would go to the library or ask a librarian for information. Caniano goes through the history of library transformation from a library to an “information commons.” Information Commons refers to an open study area for group work and collaboration which may not appeal to users seeking quiet study in the library. There are some issues in the design of “commons,” mainly controlling noise levels, where if there is already conversation in an area – others will

conform to that, and then the users desiring quiet may leave and go someplace else. The author describes the modern Athenaeum design as a cultural center focused on scholarship where the librarians provide workshops and lectures. Caniano (2010) provides data from a review of the literature and contradicts the importance of user experience and the knowledge and learning as a result of library use is the measure of the success of the library. Technology and the users define the “information commons” model and sharing knowledge shapes the Athenaeum model (Caniano, 2010).

Brown-Sica, Sobel, & Rogers (2010) describe the importance of student involvement in all phases during the action, mixed methods research study of Auraria’s library strategy and planning process on how to design the library to create spaces for everyone—quiet and collaborative spaces, cafes, lounges, and meeting places. This approach is ideal to plan a library redesign if the organization has the funds and time to complete such a project. A library redesign planning committee was formed following the first phase of the study consisting of a literature review, and an analysis of usage statistics. The committee decided on an action research study design during the library redesign project. Students, staff, and faculty were involved in the process of the redesign of the Auraria academic library in Colorado serving the University of Colorado, the Metropolitan State University of Denver, and the Community College of Denver. Following the appropriate approvals, the researchers first decided on a convenience sample of users in the library and those working in the group study rooms. The researchers usually two researchers at a time would observe how the people were working in the library, then one would ask the individuals in the group study rooms permission for semi-structured interviews. The architecture department offered a course on the design of the library’s first floor. The planning committee wanted feedback from the those who do not use the library and decide on an 8-week

web poll consisting of one questions per week via the library webpage. The committee concludes “ongoing change and reflection” is necessary when providing and designing library services (Brown-Sica, Sobel, & Rogers, 2010).

Many studies about libraries use observation and ethnographic models with various designs. Asher, Amaral, Couture, Fister, Lanclos, Lowe, & Smale (2017) took the observation method to another level by following college students around campus on a usual day to see how the library and other activities fit into the life of a college student. The authors take a holistic look at the life of a college student and refer to the activities as “tasksapes.” Their study of 200 college students at eight different U.S. schools on a typical day demonstrates the difference in the needs and use of space of commuter and resident students, the role of the library in a student’s life, and an overall perspective and understanding the college student. The findings are important to plan services and programs to support student success and align with the institutional goals. Moore’s (2006) dissertation addresses many questions that relate to the purpose of this research proposal. Moore’s (2006) purpose of the two-phase sequential mixed methods is to study community college library directors’ attitudes about the future of the library. In 2002, (Lane as referenced in Moore, 2006), predicts the word “library” will no longer be in use as libraries are becoming “idea stores.” Moore’s (2006) mixed-method research focuses on community college environments through survey and interviews. Moore studies a large sample during the first phase, then follows up with a smaller segment of the population for specific in-depth reflections (Creswell, 2003, p. 22).

The Khoo, Rozaklis, Hall, & Kusunoki, (2016) study is the basis for the qualitative phase of this research proposal. The research uses a mixed-methods case study to learn about the relationships between space, place, and technology in addition to studying user experience and

differences of individual work and group work. The researchers used in library one on one surveys with “map annotations” using open-ended questions about different areas of the library. The researchers also used a seating occupancy survey to record what areas the students are using in the library. The researchers named the two phases of the study the “space survey” (observation/ recording of seat occupancy) recorded in June 2010 and the place survey in June 2011. The researchers interviewed students during the “place survey” phase. O’Kelly, Scott-Webber, Garrison& Meyer’s (2017) action, mixed methods study uses observational methods, but the researchers took pictures of students using the space, and additional observations then group interviews supports how design can influence behavior. The researchers determine four behaviors of space use in the library: private/alone (isolated); public/alone (working alone but in an open space or people are around); private/together (group work either is a collaborative seating area); and public/together (O’Kelly, Scott-Webber, Garrison& Meyer, 2017).

The Rozaklis (2012) study breaks down the library in the components of spaces, access points (i.e., website, databases, physical collections), and librarians to understand how undergraduate students use levels of library services and spaces. One major finding from the research is many of the undergraduate assignments during the first two years of college do not require the use of library resources (Rozaklis, 2012).

## **Summary**

The library and information science field is multidisciplinary, and the existing literature covers a broad variety of research studies, designs, and methods. The literature and studies presented in this proposal all stress the importance of understanding student perception and the actual use of the library and library services. Another theme in the literature is the underutilization of resources and how librarians must define their roles on campus and



contribution to student success, as well as increase their online presence as more education is moving online. Skiadas, Katsirikou, & ASMDA International (2010) recommend mixed methods research to study the complex nature of libraries as an exclusive quantitative or qualitative study could be limiting.

### **Chapter 3: Methodology**

#### **Introduction**

This study will be a mixed methods study using an exploratory sequential design. One goal of the sequential exploratory mixed methods model is to obtain a broader view of the small narrow sample of qualitative results with quantitative information (Huff, 2009). Quantitative data will support the data from the observational studies (Creswell, 2011). The worldview will shift from constructivist worldview during Phase I to a post-positivist worldview during Phase II. There is a need for more mixed methods research in library science and the library, and information science field lends itself to mixed methods design (Malliarand & Togia, 2016). There is a need to understand the user and the many interactions the user has with the library space and resources, as well as the interactions with peers, faculty, and library staff in academic libraries. An academic library is a place full of social interactions. According to the social constructivist worldview, social interactions drive knowledge creation, management, and sharing. (Burger & Luckmann as referenced in Huff, 2009).

#### **Research Design**

Phase I will consist of qualitative data collection of observation data using the ethnographic method. The Bedwell & Banks (2013) and the Dominguez (2016) studies provide the framework for Phase I of this study. Dominguez (2016) used “seating sweeps” defined as seating usage studies. Bedwell& Banks (2013) used an ethnographic study using observation of

library spaces. As with any study, there are challenges with field research, such as the researcher will need to create a “configuration” of several variables happening at the same time and location Zelditch (1979) calls this an “incident.” For this research proposal, each recorded person at a section of the library will be referred to as an interaction (i.e., interaction with the computer). The observation will be during a typical week of the semester. The observation study by De Jager (2015) was at the end of the semester where library use is high due to papers and exams. Use during the year may not be consistent based on the week, that is why this proposed study will take place during a typical week. The initial research is qualitative to learn more with observation and include any observations as a question in the survey instrument to a wider audience. Also, having the quantitative results while conducting an observational study may influence observations in the field. The completion of the qualitative research during Phase I will provide the groundwork for a survey instrument in Phase II (Swanborn, 2010).

Phase II of the study will entail the use of an online survey via email to the entire student body. The email is sent to all the students because it is significant to gather information from students who do not use the onsite library but may use the online library resources. This method was selected for this study following the review of the literature that most researchers will conduct on the spot interviews or schedule focus groups. Focus groups are unpredictable, for example in the Hall & Kapa (2015) article, many expected participants did not show up for the focus group. On-the-spot interview data is useful for only understanding a narrow segment of the student population. The web-based campus-wide student survey instrument is based on the Princeton University Library 2010 Library Services Survey (Princeton University Library, 2011).

### **Population and Sample**

The population and sample in Phase II will differ than the sample in Phase I. The qualitative (Phase I) population is a convenience sample of library users in the library during a typical week. The quantitative portion of the study will consist of the response from the quantitative web-based survey emailed to the 7,000 undergraduate students enrolled at the school. During the observation studies, an instructor or staff member could very well be using the library, but most library users are the students.

## **Procedures**

### Phase I

- Request approval for the proposal from the Institutional Review Board (IRB). The proposal will include the details of the observational study and the web-based survey with a mention of the future survey instrument.
- The librarians have formed a Library Survey Working Group. The members of the working group will gather background information about the library in addition to circulation statistics.
- The working group created a library layout diagram (See Appendix A)
- The group creates a list of user actions with corresponding codes.
- The next step is to identify sociology students and members of the working group to pilot the layout diagram and the corresponding codes. The pilot or test of the documents will take two days.
- The group will review any issues with the pilot and may make changes to the recording documents. Once the documents are ready, the observations can begin.
- The observation will take seven days to complete. The researchers will observe the library at three different intervals during operating hours. The observations will occur at

the same spot and at the same time each day for three one-hour intervals for a total of 21 collection points. The library also has three floors, and there must be at least three researchers at each interval.

- The researchers will collect and analyze the data; the researchers will ensure the anonymity of participant data. Considering this is observational data, there is no personal information of the library users.
- Develop preliminary “customer journey maps (Stickdorn & Schneider, 2011)” to understand the role of service design to understand user behavior to create or improve library services (Marquez & Downey, 2016).

## **Phase II**

- Request permission to use elements of the Princeton University Library Services Survey (See Appendix B)
- Contact IRB for permission to email the web-based survey (see Appendix C) to all students and to approve the survey instrument.
- The survey will be emailed during a typical week in the semester; depending on the turnaround time of the qualitative data analysis and approvals, ideally, the survey would be emailed during the same semester.
- The students will have two weeks to respond to the survey, perhaps more time depending on the response rate.
- Table 1 lists the type of data collected that will be used to complete the final analysis and report.

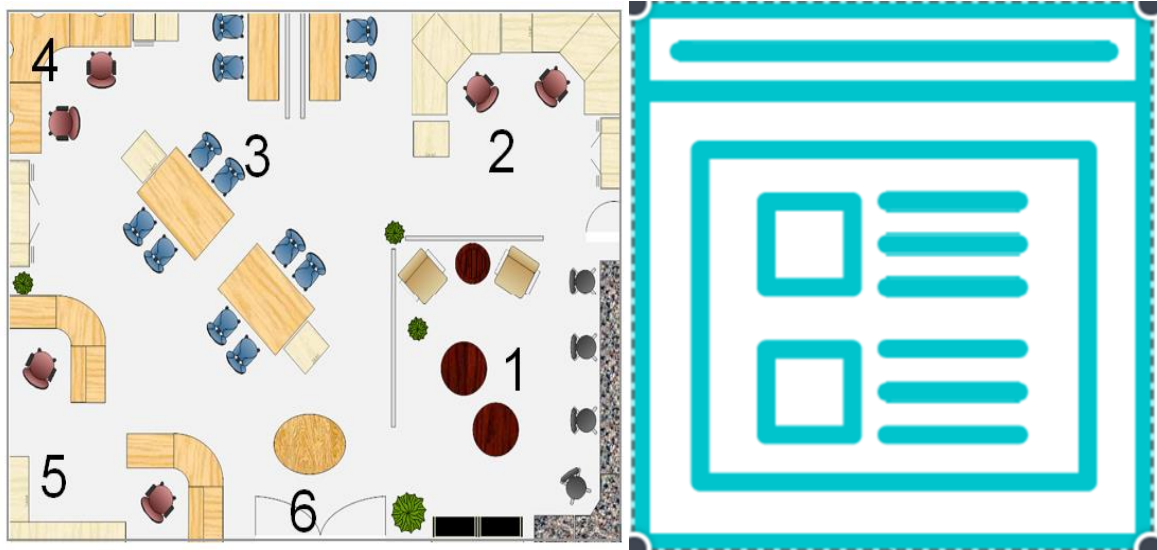
## **Table 1**

<b>Research Question</b>	<b>Data Type</b>	<b>Collection Item</b>	<b>Participant/Respondent</b>
RQ1: How do college students use the physical library spaces on campus?	Qualitative	Observation forms with codes	Undergraduate College students/library users
RQ2: What is the role of the academic library on campus? a. How will the library continue to support the needs of the students?	Quantitative	Surveys	Undergraduate College students
RQ3. How does the use of library services or resources contribute to student success?	Quantitative	Library circulation data research existing data and Student Survey	*Existing data and Undergraduate College students

**Appendix A**

Library Layout Diagram  
(sample)

(retrieved from Microsoft PowerPoint, <http://insertmedia.office.microsoft.com>)



**Observations: Activity Legend**

Write code on diagram

Activity	Code
Using desktop computer	PC
Using a laptop	LT
Using a tablet	TB
Using a calculator	CA
Reading a book	RB
Reading a magazine	RM
Browsing the collection	SC
Working alone	WA
Working in a group	WG
Listening to media with headphones	LH
Eating/Drinking	ET
Relaxing	RL
Working with a librarian	WL

**Appendix B**

Mr. Keith Gresham  
Library Services Survey Working Group  
Princeton University Library  
Princeton, N.J. 08540

Dear Mr.Gresham:

I am requesting your permission to use your survey instrument included in your publication, “2010 Library Services Survey: Summary Data Report” to complete my dissertation research. I have enclosed a consent form for your approval. I am college student use of library services and resources. I would like to use certain questions that pertain to my research. I will forward a copy of my research when complete.

Please return the signed consent form if you will grant me permission to use the survey tool. Please contact me at [sgadallah@njcu.edu](mailto:sgadallah@njcu.edu) if you have any questions.

Thank you for your time and consideration.

Sincerely,

Susan Van Alstyne  
Doctoral Student  
New Jersey City University







8. Do you have any suggestion to improve the library tools or finding aids?

**RESEARCH HELP**

9. The following lists some library services. For each item listed below, please mark if you were aware of this service prior to the survey, and how important each item is to your coursework.

	Awareness		Importance				
	Not Aware	Aware	Not Important	Somewhat Important	Very Important	Essential	No Opinion
Assistance from library staff (onsite)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assistance from library staff (email, chat, text)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research Guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Librarian in class instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Library Workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Please share your overall satisfaction with research help:

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	Not applicable
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. How do you prefer to contact library staff? Please place a 1 next to the method you prefer the most, then 2 to 4 being the method you least prefer.

in person	
by email	
by phone	
via chat	
via text	

**LIBRARY SPACES**

12. The following lists the spaces in the library. Please let us know how satisfied you are with the library spaces.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	Not applicable
Computer Station	0	0	0	0	0	0
Printing Station	0	0	0	0	0	0
Collaborative Open Space	0	0	0	0	0	0
Group Study Room	0	0	0	0	0	0
Private Study Desks	0	0	0	0	0	0
Quiet Zone	0	0	0	0	0	0
Entrance	0	0	0	0	0	0
Seating Area	0	0	0	0	0	0

13. What activities do you engage in most frequently when visiting one of the Library's spaces?

- individual study
- group study
- do research
- write a paper
- ask a question
- consult or use the collection
- check out or return materials
- use computers, printers, or scanners
- other (please specify)

14. Do you have any suggestion to improve the Library's physical spaces?

**FINAL THOUGHTS**

15. Please rate how you agree or disagree with the following statement.

**The library contributes to my academic success and personal enrichment.**

Strongly Disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly Agree
0	0	0	0	0	0	0

16. Final Comments

A large, empty rectangular box with a thin blue border, positioned below the section header. It is intended for the user to provide final comments or feedback.

### References

- Allison, D. (2015). Measuring the academic impact of libraries. *Portal: Libraries and the Academy*, 15(1), 29-40. doi:10.1353/pla.2015.000
- Asher, A., Amaral, J., Couture, J., Fister, B., Lanclos, D., Lowe, M. S., & Smale, M. A. (2017). Mapping Student Days: Collaborative Ethnography and the Student Experience. *Collaborative Librarianship*, 9(4), 293+. Retrieved from <http://draweb.njcu.edu:2079/apps/doc/A528382227/AONE?u=jers45639&sid=AONE&xid=d393feb9>
- Bedwell, L., & Banks, C. (2013). Seeing through the eyes of students: Participant observation in an academic library. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 8(1), 1-17. Retrieved from <https://draweb.njcu.edu:2056/docview/1466526354?accountid=12793>
- Bertot, J. C., & McClure, C. R. (2003, Spring). Outcomes assessment in the networked environment: research questions, issues, considerations, and moving forward. *Library Trends*, 51(4), 590+. Retrieved from <http://draweb.njcu.edu:2080/essentials/article/GALE%7CA105046542?u=jers45639&sid=summon>
- Brown-Sica, M., Sobel, K., & Rogers, E. (2010). Participatory action research in learning commons design planning. *New Library World*, 111(7), 302-319. doi:<http://draweb.njcu.edu:2097/10.1108/03074801011059939>
- Caniano, W. T. (2010). Academic library design: A commons or an Athenaeum. *Library Philosophy and Practice*, 1-9. Retrieved from <https://draweb.njcu.edu:2056/docview/759006209?accountid=12793>

- Creswell, J. W. & Plano-Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: SAGE Publications, Inc.
- De Jager, K. (2015). Place matters: Undergraduate perceptions of the value of the library. *Performance Measurement and Metrics*, 16(3), 289-302. Retrieved from <https://draweb.njcu.edu:2056/docview/1735302889?accountid=12793>
- Dominguez, G. (2016). Beyond gate counts: Seating studies and observations to assess library space usage. *New Library World*, 117(5), 321-328. Retrieved from <https://draweb.njcu.edu:2056/docview/1822460226?accountid=12793>
- Hall, K., & Kapa, D. (2015). Silent and independent: Student use of academic library study space. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 10(1), 1-38. Retrieved from <https://draweb.njcu.edu:2056/docview/1699221115?accountid=12793>
- Khoo, M. J., Rozaklis, L. r., Hall, C. c., & Kusunoki, D. h. (2016). "A Really Nice Spot": Evaluating Place, Space, and Technology in Academic Libraries. *College & Research Libraries*, 77(1), 51-70. doi:10.5860/crl.77.1.51
- LibQUAL+®. (2018). Retrieved from <http://www.libqual.org/home>
- Malliariand, A., & Togia, A. (2016). An analysis of research strategies of articles published in Library Science journals: the example of Library and Information Science Research. *Qualitative and Quantitative Methods in Libraries (QQML)* 5: 805-818. Retrieved from <http://qqml-journal.net/index.php/qqml/article/view/6>
- Marquez, J. J., & Downey, A. (2016). Library service design: a LITA guide to holistic

- assessment, insight, and improvement. Retrieved from <https://ebookcentral.proquest.com>
- Milshtein, A. (2018, March). The new class. *College Planning & Management*, 18-20.
- Moore, K. A. (2006). *The impact of technology on community college libraries* (Order No. 3214381). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (304913130). Retrieved from <https://draweb.njcu.edu:2056/docview/304913130?accountid=12793>
- O'Kelly, M. & Scott-Webber, L. & Garrison, J. & Meyer, K. (2017). Can a Library Building's Design Cue New Behaviors?: A Case Study. *Portal: Libraries and the Academy* 17(4), 843-862. Johns Hopkins University Press. Retrieved April 22, 2018, from Project MUSE database.
- Powell, R. R. (2006). Evaluation research: An overview. *Library Trends*, 55(1), 102-120. doi:10.1353/lib.2006.0050
- Princeton University Library Services Working Group. (2010). *2010 Library services survey*. Retrieved from <http://library.princeton.edu/library-services-survey>
- Rozaklis, L. (2012). *The academic library in the life of undergraduate: An investigation of undergraduates' academic information behaviors in the digital age* (Order No. 3534790). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (1266446352). Retrieved from <https://draweb.njcu.edu:2056/docview/1266446352?accountid=12793>
- Skiadas, C. H., Katsirikou, A., & ASMDA International, S. (2010). *Qualitative And Quantitative Methods In Libraries: Theory And Application - Proceedings Of The International Conference On Qqml2009*. Singapore: World Scientific.

Stickdorn, M., & Schneider, J. (2011). *This is service design thinking: Basics, tools, cases*.

Hoboken, NJ: Wiley.

Swanborn, P. G. (2010). *Case study research: What, why and how?* Los Angeles, CA: SAGE.

Zelditch, M. (1979). Some methodological problems of field studies. In Bynner, J. M., &

Stribley, K. M. (Eds.), *Research design: The logic of social inquiry* (2010 reprint, pp.122-

136). New Brunswick, NJ: Aldine Transaction Publishers.