



## Service Design: Toward a Holistic Assessment of the Library

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### Introduction

"It must constantly be borne in mind that the object being worked on is going to be ridden in, sat upon, looked at, talked into, activated, operated, or in some way used by people individually or en masse. If the point of contact between the product and people becomes a point of friction, then the designer has failed. If, on the other hand, people are made safer, more comfortable, more desirous of purchase, more efficient — or just plain happier — by contact with the product, then the designer has succeeded" (Dreyfuss, 1950, p. 80).

The above quote by the industrial designer, Henry Dreyfuss, gets at the heart of why we conduct usability studies. Our goal is to eliminate that "point of friction" and create an optimal user experience. Over the years, libraries have taken the importance of the user experience to heart and we have seen an increase in usability studies (and subsequent articles) as they relate to library websites. But user experience is not limited to user interface (Polaine, 2013). The overall experience is the user interacting with the entire library system. A close look at the library reveals that it is a highly integrated system with its own behavior (Meadows, 2008) and traditions (Bell, 2002). When we consider the library to be a system, we need an assessment method that looks at environments holistically: enter service design.

Service design is a holistic method for assessing service delivery that requires service providers to take on a user-centered perspective, that focuses on how each piece makes up the whole and the cumulative impact on the user's experience. Service design also necessitates that during the assessment we think about the library as a set of services within a highly integrated system. When we, as service providers, look at the library through this lens, we begin to see the library through the user's eyes. This article will define library services in the context of service design and discuss the service design project being conducted at the Reed College Library before sharing our own personal insights into the process and its benefits.

### What is a Service?

Libraries provide a service. Clear examples of this can be seen when a user comes to the circulation desk and checks out a book or sits down at a library table to write a paper or decides that her book is better read in a comfy library chair rather than in a coffee shop. Services are intangible exchanges that can only be experienced (Shostack, 1982, p. 49), but not possessed (Marquez & Downey, 2015; Pine & Gilmore, 2011; Shostack, 1984). They are co-created between the user and the service provider at the point of exchange.

When we begin to look at how the infrastructure is used by our patrons, we see them entering the library with a "job to be done" (Christensen & Raynor, 2013). They may want to check out a resource, use a public computer, or read a book in a friendly, quiet place. Essentially, the user comes to the library to perform a task and they access the infrastructure and resources to help them complete their task. By looking at the library holistically, we see how tightly coupled the various library services, including touchpoints

and infrastructure, really are. It becomes clear that the user's overall experience is not limited to a single touchpoint<sup>1</sup>, but rather spread out across various touchpoints that are reflected across multiple library spaces. Services happen everywhere in the library, and almost everything can be seen as a service.

### **Why Service Design? (or, Why is it Important?)**

The benefit of the service design approach is that it allows us to look at the library from the user's perspective and as a system rather than as a series of independent departments created around tasks and processes. It opens a window into how resources are used by the user (Norman, 2009) and reinforces the notion that services do not happen in a vacuum (Marquez & Downey, 2015) and are an intended product created by the system that is the library. It is a system complete with elements, interconnections, and purposes (Meadows, 2008). If one department altered a process, it may affect the other departments and the overall service delivery model (Meadows, 2008; Morville, 2014) so it is important to view the library as a system with various interconnected and working parts.

### **Service Design Elements**

The elements of service design help define its ethos: what it means to do service design. An understanding of these elements will help put a research team in the right mindset to investigate properly and gather meaningful insights.

*Co-Creative.* Services are co-creations between the service provider and the user at the point of the service exchange. The process of service design involves working directly with actual users to understand user behavior, and create solutions that fit into those behavior patterns.

*Empathetic.* Service design is empathetic, requiring researchers to walk a mile in a user's shoes. Empathy is "the ability to step outside of yourself and see the world as other people do" (Patnaik, 2009, p. 8). Once we understand actual need, the environment or services can be adapted to better serve users (Tripp, 2013).

*No Devil's Advocate.* According to Tom Kelley, voicing opposing thoughts under the guise of the devil's advocate "may be the biggest innovation killer in America today" (Kelley, 2005, p. 2). While opposing viewpoints can be valuable, we need the ability to gather insights, synthesize the data, and make informed decisions with creative freedom, which by proposing issues from the perspective of a devil's advocate are often shut down. For instance, imagine you are in a meeting and a new idea is presented. Often, someone will take the position of the devil's advocate and voice an opposing viewpoint. The position of devil's advocate allows the speaker an open forum to speak their mind, regardless if the ideas being shared are in the best interest of the institution.

Service design is about being open minded and taking in all evidence before suggesting a solution or proposal, whether positive or negative. Once the insights have been synthesized, then the group can begin a discussion about next steps and at this point, voice concerns or issues. Opposing viewpoints are still respected; it is just a matter of when they are presented. We do not want to limit any possibility before we know what is possible.

*Making the Intangible Tangible.* Services are intangible and cannot be possessed by anyone. The role of a service design focused research team is to make the connections and elements known and visible. We do this in a number of ways, including talking about them, sketching, and creating maps and blueprints with users. By looking at a service and visualizing the connections across library departments involved in making the service happen, the system

<sup>1</sup> Touchpoints are the physical points of contact that a user has with a product, a service, or an interface. They are physical aspects of the library (e.g. reference or circulations desks, the website, a library kiosk, a self checkout machine).

for all of its parts is revealed. By seeing the whole system, we can understand the complexity of library operations and the various elements required for smooth operations.

*Service Ecology.* When looking to refine or create new services, it is helpful to look at the library literature to get a sense of what is happening at similar institutions. However, that is where the comparisons should stop. Libraries are ecologies with their own rules and behavior (Bell & Kaye, 2002) created over time. As a result, each ecology is its own unique environment and assessment of it should be tailored to that environment.

### Phases & Tools of Service Design

When conducting an assessment using service design, there are four phases: Pre-Work, Observation, Understanding/Thinking, and Implementing. The phases do not have starting or finishing points, but flow from one into the other. What delineates one phase from another is the type of data being gathered and the tools used to gather that data. The process is not completely linear, a research team can return to a phase to gather additional insights if it will help their current phase. The fifth phase of service design involves managing and assessing the final product. This phase is highlighted below to emphasize the importance of nurturing and measuring a project once it is no longer a work in progress and has become a service in the library.

The tools used also help delineate the phases of service design research. While the items below are not an exhaustive list, these tools will help any team get the necessary insights into their users' behavior.

*Pre-work.* Pre-work is about project management. In this phase, the research team is formed, ground rules are established, and communication methods and processes are created. While these do not all have to be formalized and signed by the members, it is good to agree on how best to communicate with the library at large and among the members of the group.

### Phases of Service Design

- Pre-Work
- Observation
- Understanding/Thinking
- Implementing
- Maintenance and Continuing Feedback Loop



### Teams

There are two teams that will be formed: the research team (internal) and the user working group (external). When creating the research team, you need representatives from the various divisions or departments in the library to provide different perspectives and to act as liaisons to their departments. It is good to remember that communicating what the team is NOT doing is just as important as communicating what they are doing. Depending on the scope of your project, the team may investigate issues and seek solutions such as focusing efforts on specific touchpoints. As this change affects the whole of the library, it may be seen as a small group making changes without the knowledge or consent of the larger library staff. In this light it is important to remember that good service design involves continually getting relevant stakeholder feedback, both internal and external. This should be communicated clearly and often.

The user working group (UWG) needs a broad perspective and should be composed of a wide variety of user types. This is not a focus group. Focus groups react to content being provided: this group discusses experiences. One voice should not be allowed to dominate and influence the group and it is the responsibility of the research team leader to focus discussion and nudge it along. It is helpful if all members attend all meetings because a dynamic will be created in the group that can push your project along.

### **Administrative support, buy-in, and scope**

Often, initiatives to revitalize the library come from the top. Whether that is the case or not, getting buy-in early from the director is key. Transparency is important so getting the director to make a formal announcement about the team and their efforts will also help alleviate any confusion or back channel discussions about what the group is doing.

As the scope of the project will probably be influenced by someone outside the team, the team will need to make sure the scope is manageable. Just because service design can scale up, does not mean you should scale it up. Focus your efforts and expand as necessary, but only attempt what is feasible by the team in the given timeframe. We have taken two years to complete our project at the Reed College Library. This was not because we took on too much, but because no one on the team worked on the project full time and we all had to fulfill other job duties as assigned. We were also working with student schedules and did our best to accommodate everyone's schedules and schoolwork.

Once the scope is created and defined, the team can begin to draft their schedule and list activities that will be best suited for gathering the necessary insights. Make sure to leave room for discussion sessions to discuss the activity results. Service design is, essentially, a long, drawn-out conversation with your users so there should be a level of comfort between the research team and the user. As a level of comfort is attained, the information will flow and insights will be gathered.

*Observation.* The observation phase is more than just sitting and watching your users, although sitting and watching may be part of it. Observation is about gathering initial insights through observation, interviews, surveys, discussions, and other methods as appropriate. "Our participants do not make facts, they do acts" (Salvador, Bell, & Anderson, 1999, p. 37). We observe so that we learn about those acts and facts. The point of this phase is to get a basic understanding of how services are being used. The research team should ask initial questions to get a sense of where problems may lie in order to determine further questions and to identify the right activity to get at additional insights.

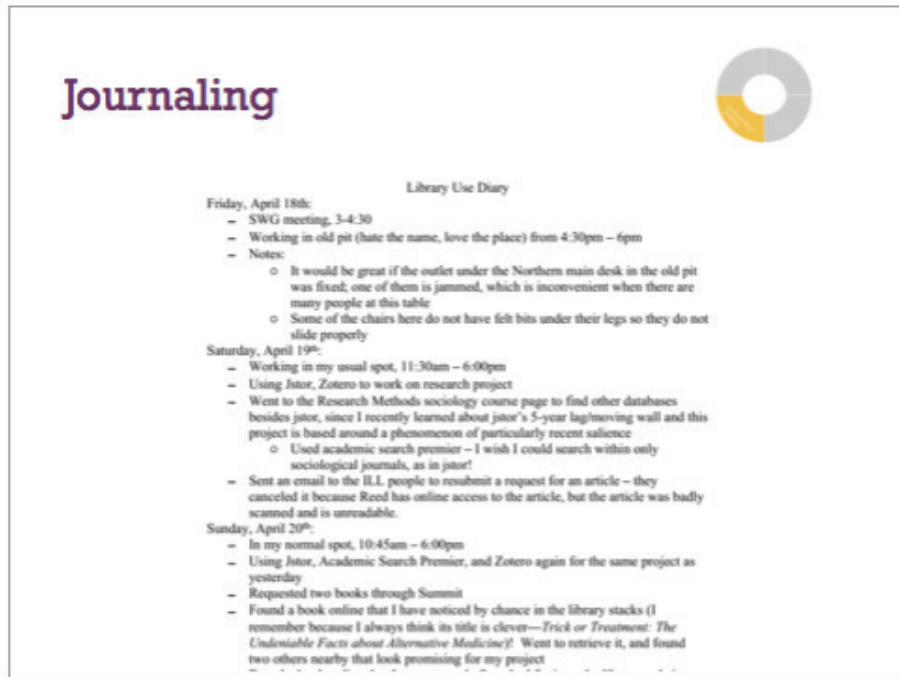
Beyond talking to users in this phase, you may decide to conduct surveys, analyze spaces, and design ethnography to create a more complete picture of user behavior. Surveys can be helpful to obtain a baseline knowledge of your user working group. You may want to send out a survey before the initial meeting to get a sense of where everyone is coming from and not to take time away from the meeting and discussion time.

Conducting a space analysis will help the overall project by understanding just how and when a space is used. Observing how space is used can inform any project on active library users. Combined with design ethnography, which focuses more on interviews with users, the research team can create a broad picture of what life is like in the library. Information about when the space is used, as well as what is done create context for the assessment.

*Understanding/Thinking.* After gathering initial insights and understanding the context in which the library operates, it is time to look toward problem solving. Together, the research team and the UWG should review the initial insights and the additional data gathered through group

exercises, and co-create solutions. During this phase the research team will visualize behavior, prototype solutions, test and refine these solutions, and synthesize the data that has been gathered.

The research team enters this phase with background and contextual data in order to be ready to give the UWG activities around specific tasks that the team wishes to understand better. Tools used in the Understanding/Thinking phase include customer journey mapping, journaling, scenarios, and prototyping. During this phase, other users who are not part of the UWG will test solutions and provide feedback. This is especially important because it allows the research team to determine if what they heard and gathered from the UWG is, in fact, common behavior across users.



## Journaling

Library Use Diary

Friday, April 18th:

- SWG meeting, 3-4:30
- Working in old pit (hate the name, love the place) from 4:30pm – 6pm
- Notes:
  - o It would be great if the outlet under the Northern main desk in the old pit was fixed; one of them is jammed, which is inconvenient when there are many people at this table
  - o Some of the chairs here do not have felt bits under their legs so they do not slide properly

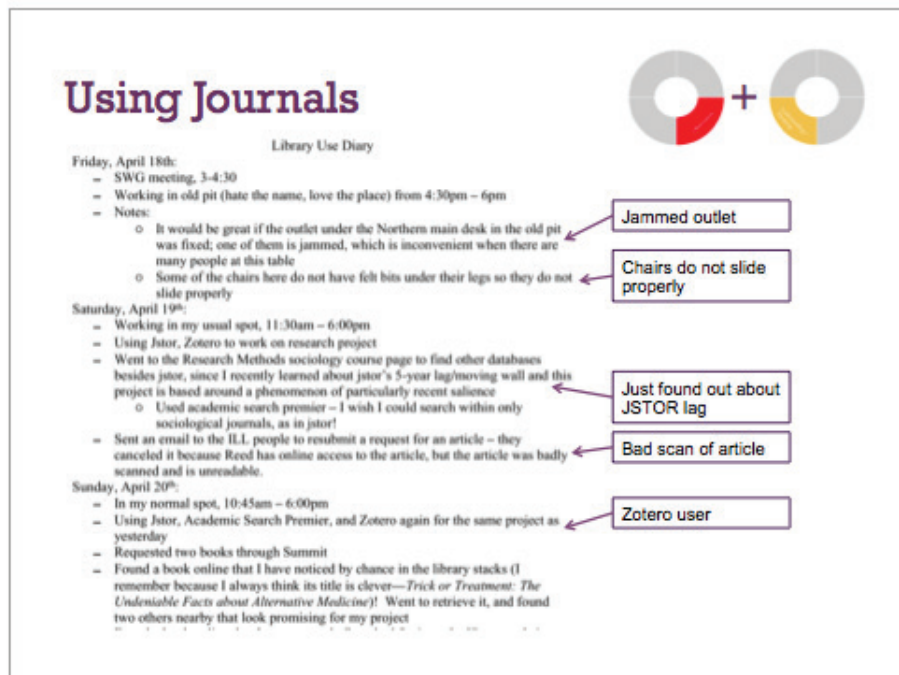
Saturday, April 19th:

- Working in my usual spot, 11:30am – 6:00pm
- Using Jstor, Zotero to work on research project
- Went to the Research Methods sociology course page to find other databases besides jstor, since I recently learned about jstor's 5-year lag/moving wall and this project is based around a phenomenon of particularly recent salience
  - o Used academic search premier – I wish I could search within only sociological journals, as in jstor!
- Sent an email to the ILL people to resubmit a request for an article – they canceled it because Reed has online access to the article, but the article was badly scanned and is unreadable.

Sunday, April 20th:

- In my normal spot, 10:45am – 6:00pm
- Using Jstor, Academic Search Premier, and Zotero again for the same project as yesterday
- Requested two books through Summit
- Found a book online that I have noticed by chance in the library stacks (I remember because I always think its title is clever—*Trick or Treatment: The Undeniable Facts about Alternative Medicine!*) Went to retrieve it, and found two others nearby that look promising for my project

*Journaling before synthesis.*



## Using Journals

Library Use Diary

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Jammed outlet

Chairs do not slide properly

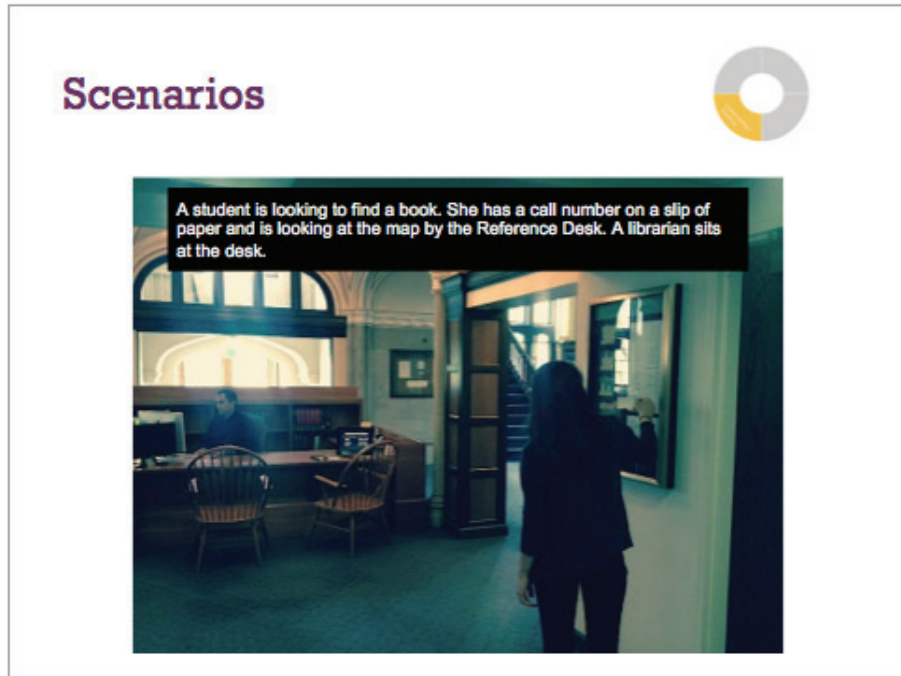
Just found out about JSTOR lag

Bad scan of article

Zotero user

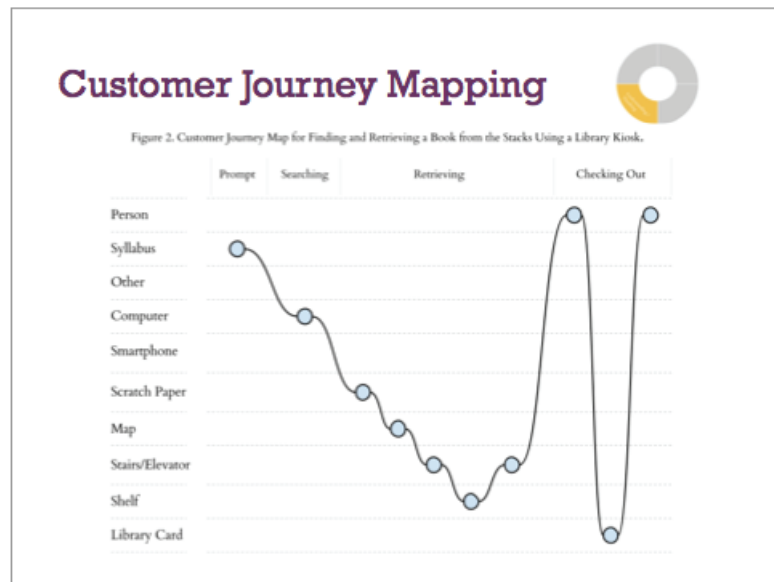
*Journaling after synthesis.*

*Journaling.* Journaling or using diaries is a tool commonly employed in qualitative research. The journaling method focuses the user's attention on their own behavior and can be used to spark discussions around usage (Zimmerman & Wieder, 1977). The above example shows a student's journal about working in the library. By reading closely, the research team can synthesize the data and find out more about their experience. Things like ill-fitting chairs and jammed outlets add up to the user's overall experience. No piece of information is ever too small, and something like this is valuable to understand how the user sees, understands, and experiences the library.

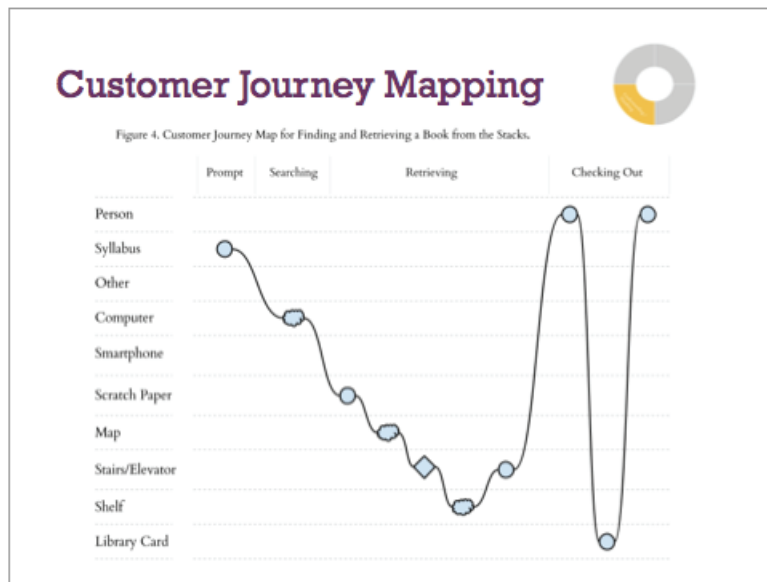


*Typical Scenario used in service design study.*

*Scenarios.* Scenarios focus on the user's experience through visualization without the awkwardness that might surround that setting in reality. Photos are staged to replicate familiar scenes and then shown in a group with an open discussion or in a group setting with each UWG participant writing notes individually. Regardless of the method used, eventually holding a group discussion is important so that you can gather the overall opinion on the scenario presented.



*Customer Journey Map before synthesis.*



*Customer Journey Map after synthesis.*

**Customer Journey Maps.** Customer journey maps (CJM) visualize the user’s route to complete a task. In the above figures, we see a user checking out a book. Every step along the way is depicted by a circle. The touchpoints and prompts are along the left vertical column. The top horizontal bar represents stages in the process and duration. In this example, the user was prompted by the syllabus or an instructor to retrieve a book. The user went to a library kiosk to look for the book in the catalog, found the book, wrote the call number on a piece of paper, consulted a map, and proceeded to the appropriate floor. In order to get to the other floor, she had to decide whether to take the stairs or the elevator. After reaching the correct floor, she had to navigate the stacks, find the correct shelf and then the correct book, and then retrace her steps to eventually check out the book. Checking out the book required talking with a circulation desk staff, handing over her library card, and walking out of the library with the book. This is a routine task done many times a day in libraries around the world and requires all of the library’s divisions to work together for this simple task to be successful.

In the second figure, the problem points are marked by different symbols. Clouds represent possible points of confusion and diamonds are decision-making points. The first cloud is located at searching the OPAC, which presents several possible issues: Does the interface make sense? Can the user figure out the necessary information she needs to retrieve a book? Is the call number hidden from view behind a click? Next we move to the library map. Does the map make sense? Can she find a map and then can she find where she is in the library in relation to where her destination is? The next point is whether to take the stairs or the elevator. Not a major decision, but depending on the size of your library, this could require decision making. The next point of confusion is being able to find the correct shelf. By looking at the journey through this visualization, we can see how complex a routine task is to complete and how, at any stage, the user can possibly have a poor experience as a result of being confused or missing a cue.



*A prototype can be as simple as a wardrobe box.*



*When you place the box on its side (and on dollies), it becomes a moveable desk prototype.*

*Prototypes.* Prototypes are used to test a new service or a change in layout and can come in all shapes and sizes. The research team does not need to hire an artist and should not let a lack of perceived artistic skill get in the way of creating a prototype. "Prototypes should command only as much time, effort, and investment as are needed to generate useful feedback and evolve an idea" (Brown, 2008, p. 87).

*Implementing.* The final phase of service design is implementation. It is time to get the new service off the ground and begin measuring its usage. As the research team and managing division begin to fine tune this newly created service, the team should blueprint the process to ensure consistency.

*Blueprinting.* The blueprint is a general overview of all steps required for a service to be provided. It is used to show the part of the service visible to the user as well as the offstage and behind the scenes components where a service touches various other parts of the organization. For example, an OPAC is managed and populated by the cataloger and the systems librarian and displayed to the user by the web services librarian via the content management system and the library website. If a book is on reserve, librarians and reserves staff - which may or may not include student workers - are also involved.

The purpose of the tool is to demonstrate the various steps required for a service to be performed. Not only are the steps in the process visually displayed, but the research team can also determine possible pinch points along the way. While the above model displays the steps required for a student getting a book off course reserves, it is possible to create a blueprint for smaller tasks to ensure consistency of the delivery of service.

### **Maintenance and Continuing Feedback Loop.**

So far, we've discussed four main phases, but there is a fifth that is equally important, Maintenance. Maintenance is what happens after we release a service into the wild and the division that is best suited to manage the new service takes over. While no longer the purview of the research team, a method for measuring the new service should be in place prior to going live. Metrics should be kept and an idea of what "success" looks like for the new service should be established and shared so that the service can be refined as needed. While not a formal phase of service design, maintenance is nonetheless important in understanding the impact and success of any new or revised service.

### **Service Design, in Action**

The Reed College Library User Experience (LUX) group set out to, "understand how students use the physical library and library services/resources." The LUX was formed in October 2013 and



began working on a plan to study the library. We began with a space analysis using the SUMA<sup>2</sup> software in order to unobtrusively see where and when students preferred to study<sup>3</sup> in the library. For instance, during our SUMA “walks” we noticed more student-owned laptops as well as students using shelf space as standing desks. This might point to a need to reduce public computers and add standing desks, but we’ll need to do additional research to determine if these are actual changes in behaviors or just quirky trends.

In April 2014 the LUX held four meetings with a UWG composed of seven students: one senior, two juniors, two sophomores, and two first years. The UWG students were run through activities in some meetings, and at other times were given “homework” such as keeping a journal.

The following April 2015, we turned the tables a bit and added the UWG members to the LUX. The UWG had been helpful in providing insights, but at this point they were too familiar with the process to provide user insights. Rather than disbanding the group, we decided to have the UWG create an outline for focus groups that the UWG would run. The UWG students created the overall outline and questions for the focus groups. The aim of the focus groups would be to introduce solutions to known issues in the library. Who better to introduce potential changes than other students? For those meetings, a member of the LUX group was present, but sat in the back of the room allowing the students to discuss the ideas. All meetings were recorded and anonymized during transcription.

## Findings

We learned a lot from and about our students during the two-year process. We discovered that many of our students are creatures of habit who prefer routines and like the familiar. Most have self-selected spots in the library where they prefer to do their work. In many cases, they even have multiple spots for different activities, such as reading and writing. Reading is often done in a more comfortable chair, while writing is performed at a harder seat and a table.

*Wayfinding.* We discovered that students feel there is a lack of signage that makes for a confusing library experience to the uninitiated. Along with additional signage, they requested that all naming conventions be consistent on the website, on library wall maps, and what was verbally stated by library workers.

Many Reed students see library spaces as consecrated spaces. The library plays a big role in the life of a Reed College student, and any changes to the environment are not always welcomed with open arms. However, the suggestion of subtle changes is typically more successful. When the idea of moving the reference desk came up, the LUX received emotional responses about the reference desk being sacred. We used the wardrobe box prototype to demonstrate a possible location for the new reference desk. This was met with approval from the UWG students, but only after additional discussion on the look and the presence of the desk was discussed.

The UWG students often mentioned smaller changes as being more essential. Things such as broken and clogged electrical outlets and chairs sticking under tables add to the experience of a space. But they are also issues that the LUX would never have thought to look for had they not been mentioned by the students. Finding out that these were the kinds of things that were bothering our students offered us opportunities to more fully explore the small details of our library building. Learning that some chairs in the library get stuck when under certain tables left

<sup>2</sup> SUMA (<https://www.lib.ncsu.edu/reports/suma>) is a open-source software tool, created by the North Carolina State University Libraries, for measuring space usage. We do two space measurements per semester. While our library is not large, the ongoing space usage analysis has given us the opportunity to observe how the space is being use and notice trends by the students. The most recent trend we have seen is working on laptops while standing up.

<sup>3</sup> Study in this case refers to students working on laptops, writing papers, reading books, or doing something related to their academic studies.

the members of the LUX a bit incredulous. How could this be? The chairs are all the same. Upon digging deeper, we learned that they are not all the same because when chairs are broken, they are rebuilt using bits and pieces from other broken chairs. What we get back are “franken-chairs” that are not measured, so they have a tendency to get stuck even though they look like the same chair as all the others. We also learned that another department in the library has been working for years to slowly fix the broken outlets. Our findings reinforced the necessity of the outlet repair project.

#### *What did we learn about the process?*

We learned to be open-minded. A lot of librarians will say they know their users, but do they really know them? We feel that service design answered some questions for us and gave us a platform for better understanding who we are serving. While this was conducted in a small liberal arts college setting, service design has the ability to scale to any environment such as a public library or a larger research university.

We also learned more about the power of communication. As mentioned earlier, it is not only about communicating what you are working on, it is also communicating what you are not working on. This alleviates some concern from staff members who are not part of the research team.

Finally, service design encourages us to ask questions, have discussions, and engage with our users. How better to get to know them than through discussion and observation? The more we ask, the more we know, and the better prepared we are to serve.

#### **Conclusion**

The process was an eye-opening experience. There are many study design options when using ethnography and other user-centered approaches to assess users and their behavior. We believe service design is the most advantageous, since it offers the ability to not only see the library through the eyes of the user, but to understand everything as a service. This is not just limited to physical touchpoints like the reference or circulation desks, but also includes looking closely at how the space, infrastructure, and resources are actually being used. By knowing how resources are being used and treating everything as a service, we can work toward meeting or exceeding user expectations. Trying to provide the optimal user experience takes a lot of work, but as one of the oldest service professions in existence, it is what we work for and strive to provide for our users. And quite frankly, they’re worth it.

#### **Bibliography**

Bell, G. (2002). Making sense of museums: The museum as ‘cultural ecology’. *Intel Labs*, 1.

Bell, G., & Kaye, J. (2002). Designing Technology for Domestic Spaces: A Kitchen Manifesto. *Gastronomica: The Journal of Food and Culture*, 2(2), 46–62. <http://doi.org/10.1525/gfc.2002.2.2.46>

Brown, T. (2008). Design Thinking. *Harvard Business Review*, 86(6), 84–92.

Christensen, C. M., & Raynor, M. E. (2013). “The innovator’s solution: creating and sustaining successful growth”. Boston, Massachusetts: Harvard Business Review Press.

Dreyfuss, H. (1950). The Industrial Designer and the Businessman. *Harvard Business Review*, 28(6), 77–85.

Kelley, T. (2005). *The ten faces of innovation: IDEO’s strategies for beating the devil’s advocate & driving creativity throughout your organization*. New York: Currency/Doubleday.

Marquez, J., & Downey, A. (2015). Service Design: An Introduction to a Holistic Assessment Methodology of Library Services. *Weave: Journal of Library User Experience*, 1(2). <http://dx.doi.org/10.3998/weave.12535642.0001.201>

Meadows, D. H. (2008). *Thinking in systems : a primer*. White River Junction, Vt: Chelsea Green Pub.

Morville, P. (2014). *Intertwined: information changes everything*. Ann Arbor, Michigan: Semantic Studios.

Norman, D. A. (2009). THE WAY I SEE IT: Systems Thinking: A Product is More Than the Product. *Interactions*, 16(5), 52–54. <http://doi.org/10.1145/1572626.1572637>

Patnaik, D. (2009). *Wired to care : how companies prosper when they create widespread empathy*. Upper Saddle River, NJ: FT Press.

Pine, B. J., & Gilmore, J. H. (2011). *The experience economy* (Updated ed). Boston, Mass: Harvard Business Review Press.

Polaine, A. (2013). Designing for Services Beyond the Screen. Retrieved March 7, 2015, from <http://alistapart.com/article/designing-for-services-beyond-the-screen>

Salvador, T., Bell, G., & Anderson, K. (1999). Design Ethnography. *Design Management Journal* (Former Series), 10(4), 35–41. <http://doi.org/10.1111/j.1948-7169.1999.tb00274.x>

Shostack, G. L. (1982). How to design a service. *European Journal of Marketing*, 16(1), 49–63.

Shostack, G. L. (1984). Designing services that deliver. *Harvard Business Review*, 62(1), 133–139.

Tripp, C. (2013). No Empathy–No Service. *Design Management Review*, 24(3), 58–64.

Zimmerman, D. H., & Wieder, D. L. (1977). The Diary: "Diary-Interview Method." *Urban Life*, 5(4), 479.

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