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Action Research Proposal

LIS 708-02

***Action Research Proposal to Implement User-Testing on***

***Dominican University’s Rebecca Crown Library Website***

1. **Background**

While working at Dominican University’s Rebecca Crown Library as a Graduate Reference Assistant, I helped patrons navigate the combination OPAC (Online Public Access Catalog) and website to locate materials. I noticed that a lot of patrons had the same complaints. For instance, after searching the catalog and finding the item they desired there was often confusion about where the item was actually located. They were unable to quickly determine the item’s floor section. Another frustration I encountered was actually using the search function and receiving a lot of irrelevant results. A lot of time was spent educating patrons on how to better tailor their search to receive better results. Many students felt intimidated by the databases and never wanted to explore beyond the “Quick Search” tool.

I want to see how well patrons can interpret and use the tools provided in the Rebecca Crown Library’s website to pinpoint any potential frustrations and pain points. Additionally, I want to look at common experiences that involve both digital and real-world spaces and if the website is helpful in solving those interactions. For instance, how easily can patrons look up a book in the catalog and know where to look in the library? The library exists both physically and digitally and a good website can help facilitate the transition between the two.

1. **Theoretical Framework**

The average library patron is already familiar with a variety of technologies and encounters many websites daily. They are used to sophisticated websites that are pleasant to look at and use. More than that, they are used to receiving information and services quickly. A good website is intuitive and easy to maneuver. Patrons should not be intimidated while using the website but rather feel confident and empowered. However, library OPACs and websites often fall short of these goals. R. David Lankes discusses in *The Atlas of New Librarianship* (2011) the mismatch of language and skill levels encountered in library catalogs. He states, “When you look at how well people do when they are looking something up in catalogs, members come out doing very poorly, and librarians come out doing very well” (p. 34). As part of his proposed Conversation Theory, he posits that librarians have learned specialized language to interact with the library catalogs while the majority of users do not have the same background, time, or even desire to learn this knowledge.

The idea behind user-based perspectives is essentially “meeting the user where they are” and addressing their needs instead of demanding that the user conform to pre-existing systems. The library is an essential utility for college students and professors. It must attempt to accommodate patrons with a wide variety of backgrounds and skill levels. This is why usability testing is so invaluable. By gaining insight into the user’s mind, libraries can use this data to vastly improve the library experience as well as fulfill their institutional goals. This type of evaluation can determine if the library’s website/OPAC is due for an upgrade/overhaul or if it is serving its function as an accessible reference tool.

1. **Research Objectives**

The ultimate goal is to improve Dominican’s website for increased user accessibility and confidence. Ideally, the library would administer user testing multiple times a year to continually improve their site and adapt to the changing needs of their patrons. With dedicated testing, the testers would develop an established model to better compare results from different testing sessions. Immediate results expected from the first round of testing would be to gain valuable information and attitudes on the current system from patrons. This includes identifying pain points as well as parts of the website that are already successful.

Long term goals of embracing user testing of the website are increasing positive attitudes and confidence among patrons using the site. Increased efficiency will also save the user’s time which makes them more likely to return to the website and recommend it to others. A positive website experience increases the perceived value of the library in the mind of patrons and outside users. Libraries are often asked to demonstrate their worth and viability in an increasingly technology saturated world and a beautiful, intuitive website can do a lot to demonstrate the library’s relevance and ability to adapt. The library’s aspiration should be to exceed user expectations rather than just meet them and ultimately change opinions that libraries are outdated institutions with outdated technology.

1. **Previous Models**

UX (User Experience) is of growing interest in the Library and Information Science field. The specific role of UX Librarian is becoming more popular, especially in academic libraries. However, many smaller libraries or public libraries often feel intimidated by Library UX and Human-Centered Design. Furthermore, UX is often seen as being relegated to tech or marketing companies because libraries have different goals and different funding from traditional business models. Yet, as Daniel Pshock (2017) writes in UXPA Magazine that “It is only logical that these organizations invest in UX. Naturally user-centered, committed to public service, and full of brilliant, inspiring people, libraries deserve special attention from the design community.” UX is a natural fit for libraries due to their desire to serve and ease the lives of their patrons.

*Example 1*

The University of Tennessee at Chattanooga began User Testing their patron-facing website in Fall 2017 and have continued their tests twice a year, focusing on more specific areas of the website to improve as they have continued (Haber, 2018). UTC has tried a variety of user testing strategies such as gathering data from website analytics, card sorting, focus groups, surveys, and task-based testing. From these tests and research, they recommend employing obvious design, distilling your message, making links obviously clickable, and using plain language.

A screenshot of a UTC Library's homepage

Description automatically generatedThis screenshot from the UTC Library homepage in 2020 shows that they have made efforts to clear the page of unnecessary text. Limited text makes it easier for the user to quickly ascertain the different components and choose what they need. The links in this screenshot are also highlighted or underlined and often in a different color from the rest of the text to stand out as a hyper-link. These are simple changes but can make a big difference to the user (likely a busy student). Through focus groups, they received feedback that students struggled finding where to make appointments or access the calendar. Adding a calendar widget to the homepage rectified this issue and increased attendance at events.

*Example 2*

From Fall 2016 to 2018, Penn State University (PSU) Libraries set up an unannounced stand in their main lobby and dubbed it the UX Café. Testers offered participants “a cup of coffee and a granola bar in exchange for 5-10 minutes of their time participating in usability tasks, short interviews, design feedback, and other UX research” (Chao, 2019). The ultimate goal was to implement small, iterative changes to the website over time. Researchers noted concerns about finding a long-term framework for testing that was both low-budget and time-efficient.

A screenshot of a cell phone

Description automatically generatedA screenshot of a social media post

Description automatically generatedLibrarian Zoe Chao looked at “guerilla” testing methods utilized by other libraries and added more structure to those methods by having a dedicated area for weekly testing. She recorded the computer screen and participant’s voice for later review. Chao opted not to ask participants to use “think-aloud” protocol due to the likeliness of making users feel uncomfortable or interrupted and already having access to the screen recording. She developed tasks that looked at specific website elements such as SEO or discoverability and framed them as common scenarios that students might encounter. Empathy is a key element in user-centered design and Chao noted the importance of approaching the entire testing experience with the student’s perspective in mind. Even keeping the testing sessions short is part of being mindful of the user’s time.

Comparing Penn State’s library homepage with UTC’s we can see that they utilize similar design elements such as reducing excessive text and emphasizing clickable links. I think that the inclusion of library staff on the website is a nice touch that makes it feel more welcoming. It could also have the added benefit of familiarizing students with some of the librarians and this could make them more likely to approach them in real life. This would require future testing website to confirm, however.

1. **Data Collection**

I was intrigued by the idea of Penn State’s UX Café and felt that it’s quick, inexpensive set-up would be compatible with Dominican University’s student population and goal of beginning basic user-testing. Both Penn State’s and UTC’s studies referenced task-based testing as an effective data collection method. According to UTC’s report: “Task-based testing is exactly what it sounds like; it’s a test where you ask your patrons to complete a set of tasks in order to see how they choose to complete them and to find issues in functionality of the site” (Haber, 2018). There are quite a few benefits to this method as opposed to more traditional methods such as focus groups or surveys. First, this method is time-efficient and cost-efficient because tasks can be designed to be quite short and a lot of information can be gathered from a small number of participants. Second, if the researcher utilizes screen-recording software, it becomes very easy to map the journey of the user. When one journey map is compared to another, it shows valuable user interaction patterns.

Task-based testing can produce quantitative results but both studies used it to gather qualitative data. I think this is because the researchers were hoping to observe how the users responded to the tasks. Empathy is an important part of considering the user’s experience. Emotions, such as frustration at slow loading times, are often subjective but are important to consider when designing a website. We are, after all, designing for humans and not machines. The long-term goals of a website should be to increase user’s satisfaction and confidence when interacting with it. I think task-based testing is the best option for the Rebecca Crown Library because it is relatively simple to achieve but can yield quality results.

There are other data collection methods that could be considered or added to task-based testing such as email-based surveys or A/B testing. However, I think such email-based surveys require a higher participant rate to be effective and A/B testing is more useful after user feedback has already been gathered. Also, Dominican’s library is quite small compared to some universities so it’s important to maximize the study’s reach. The study can be conducted with very few testers but can also benefit from additional help. This is especially useful since many librarians already have multiple responsibilities and might not want to volunteer for another committee. Finally, students often pass through the library or use the library to study or meet-up with others. The library has a few classrooms and the researchers could contact students who are waiting for class to start. There are multiple entrances to the library, however, and so door counts would have to be conducted to determine the best location for a booth to conduct the test.

Some possible variables I can see coming up could include the tech-literacy of the participants and previous familiarity with the website. I think it would also be important to consider the biases of the testing committee and address those if/when they appear. Furthermore, the library website might be limited by certain authorizations or built-in barriers from the developers or software companies.

My hypothesis is that RCL will find many areas in their website for improvement. Just from first glance and comparison to the websites observed earlier in this proposal, Dominican’s library website is quite text heavy. Additionally, the other websites had the “Ask Us” button on the side and follow the user as they scrolled instead of being pinned to the top. Not all university library websites have to be the same but there are benefits to comparing strategies in addition to conducting user testing.

A screenshot of a social media post

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1. **Plan Implementation**

The following table is a proposed outline to enact user-testing at Dominican University’s Rebecca Crown Library website.

*Action Research Question -*

*How does the layout of RCL’s website impact the ability of users to find what they need?*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Action | Steps | Responsibility | Resources | Time | Desired Outcome(s) |
| Form testing committee | -Identify stakeholders  -Identify staff interested/available in participating | Lead Researcher | Email | Less than 1 week | Form committee of at least 2-4 dedicated members |
| Educate committee | Gather educational resources | Lead Researcher | In-person/ virtual meetings, presentation tool such as PowerPoint | 1 hr. meeting | Familiarity with UX protocols & goals  Assign roles |
| Create scenarios for task-based testing | -Brainstorm common tasks performed on website  -Refer to examples from previous models | Testing committee | In-person/virtual meeting | 1 hr. | Creation of empathetic task-based survey for later administration |
| Determine effective location for test administration | -Observe potential locations by counting foot traffic at different times | To be assigned | Transaction log | At least 2x daily over a week | Most effective location to engage most participants |
| Gather/prep materials | -Obtain computer with screen recording software & voice recording  -Obtain table  -Create/purchase signage to attract/explain  -Secure funding  -Purchase incentives  -Prepare consent forms | To be assigned | -$ for incentives  -Computer  -$ for signage  -Table  -Appropriate software  -Printed forms  -Notebooks/ pens | 1-2 weeks | Obtain & prepare necessary materials for study |
| Administer test/gather data  (Repeat this twice at different times with different participants) | -Set up table, signage, incentives  -Gather participants & receive consent  -Administer test verbally while recording screen and voice  -Take notes of any other actions | To be assigned- at least 2 people on table at a time | See above | 2 hours, 4 hours in total | Attempt to test at least 5 participants per 2 hours |
| Analyze data | -Transcribe voice recordings  -Identify patterns  -Define problems experienced by users | To be assigned | -Word-processing software  -Access to screen/voice recordings | 1-2 weeks | Identify patterns and pain points among users |
| Present findings/ Ideate | -Share data with committee  -Brainstorm fixes | Committee | -Presentation software  -Post-it notes  -Pens | 1-2 hrs | Identify actionable change |
| Prototype | -Make actionable changes | TBD | TBD | TBD | Implement changes |

Works Cited

Chao, Z. (2019). Rethinking user experience studies in libraries: the story of UX café. *Weave: Journal of Library User Experience*, *2*(2). https://doi.org/http://dx.doi.org/10.3998/weave.12535642.0002.203

Haber, N., Shelton, S., & Chassaing, W. (2018). UX and Your Library: A Scalable Model. *Journal of Library & Information Services in Distance Learning*, *12*(3-4), 237–249. https://doi.org/10.1080/1533290X.2018.1498636

Lankes, R.D. (2011). *The Atlas of New Librarianship*. Cambridge: The MIT Press.

Pshock, D. (2017, April). *The user experience of libraries: Serving the common good user experience magazine*. User Experience: The Magazine of the User Experience Professionals Association. http://uxpamagazine.org/the-user-experience-of-libraries/