

Annual Report 2005

Usability/Design Team Western Libraries

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Introduction

The Usability/Design Team (UDT) formed in early 2005 in response to the increasing expectations of the Western Libraries web site users. The Libraries' web pages have for some time been "the primary windows through which the world sees and functions with us," in the words of University Librarian Béla Foltin. This reality makes it more crucial than ever that web development at the Western Libraries is driven by the information needs and behavior of Western Washington University's students, faculty, staff, and community members, allowing them to identify and obtain the materials that sustain their scholarly activities.

Training and Development

Once formed, the UDT hit the ground running during spring 2005 by engaging in an aggressive program of training and research on the philosophy and practice of user-centered design.

Key early experiences included:

- An Association of College & Research Libraries teleconference;
- A day of training with usability practitioner Jerilyn Veldof (University of Minnesota);
- The 2005 Usability Professionals Association Annual Meeting in Montreal, attended by Martha Mautino & Jon Dillon; and
- A meeting of the Puget Sound Special Interest Group on Computer-Human Interaction, featuring presentations by usability gurus Ben Schneiderman (University of Maryland) and Jared Spool (User Interface Engineering).

User Analysis

To take measure of a web site's usability one must first take measure of its users. The UDT began its research by gathering information about our users, their mindset, and their expectations.

In early May of 2005 we conducted two surveys: one of Western Libraries staff and faculty, and another aimed at our web site's users. The staff survey was distributed by email, and the user survey was linked from the Western Libraries web site and the MyWestern student web portal. Approximately 250 library users responded. Soon after we distributed the surveys, Stefanie & Martha conducted a user focus group where eight undergraduate students were brought together to offer verbal feedback about the web site.

The user feedback we gathered from the surveys and focus group was very helpful, especially when we prepared the usability tests that followed. Our user analysis revealed that users have a lot of trouble differentiating between the various interfaces that they use to find information; to them, the library catalog and an online database are basically the same thing, and they'll often use one when they should be using another. Users have particular difficulty locating electronic resources from our web site, and also struggle with decoding library terminology such as "database," "index," "catalog," "research guide," etc.

Finally, users expressed a strong desire for more help at every stage of their research.

Testing Other Library Web Sites

Following the May 2005 user studies, the UDT began conducting usability tests on the web sites of other libraries, to evaluate what works and what doesn't on peer institution sites as well as to gain experience in the testing process. Using information gathered from the user web site survey and the focus group, the UDT determined that Western Libraries users' primary goal was to find resources for their research assignments. We developed a list of four specific primary objectives to meet the goal from a user's perspective - find library materials, find articles, find help locating and using resources, and access and use the library patron record. We then created seven tasks to measure these objectives for the test participants to attempt, and selected four peer institutions' library web sites to test.

Testing the library web sites of peer institutions helped us discover what these other sites did well, what worked or what was easy to accomplish. As we evaluated the participants' attempts to complete the tasks, some consistent issues emerged across all the tested academic library test sites. We found an overuse or misuse of the catalog keyword search function; participants had

problems searching for newspapers and trouble distinguishing between journals and magazines. Some terminology was confusing or the information returned did not meet expectations. Participants often made assumptions based on their experience of our site, and they wanted discipline-based research assistance. In addition, we gained valuable experience in the usability testing process itself. We discovered that gaining an understanding of our users' goals and then forming clear objectives for our tests were crucial first steps. How to recruit participants, and schedule and arrange the test sessions were important hurdles. We learned how to conduct the tests themselves, using technology to capture the experiences, and guiding the participants through the tests. Establishing criteria, or metrics, to analyze the quantitative data gained from the tests was an important final aspect of this phase of usability testing. Another valuable lesson concerned the timing during the academic quarter of the tests, which directly affected our participant pool and our recruiting techniques.

Testing the Existing Western Libraries Web Site

Ready to apply the skills honed during its early research, the UDT began conducting usability tests on the existing Western Libraries web site during July 2005. During each test, a respondent attempted to accomplish a series of standard tasks using the web site, such as locating a particular book or article. Using pre-established metrics, the tasks were coded along a continuum between

“success” and “failure” based on how the task was (or was not) performed. The data collected was then analyzed to produce success rates for individual tasks as well as the web site overall.

The initial series of tests were performed using the existing site design to establish a benchmark measurement of the site’s successes and failures. The overall success rate for the site was about 60%, which is considered above-average by many usability practitioners. (“[M]ost websites score less than 50%,” writes Jakob Nielsen, recently heralded as “the world’s leading expert on Web usability by *U.S. News & World Report*.) Also encouraging were the results of a brief satisfaction survey completed by all test respondents, scoring the web site 4.7 for “ease of use” and 5.4 for “usefulness,” both out of 7 possible points.

This positive feedback indicated that the existing site structure was good, and didn’t require a complete overhaul. However, the test data also identified many areas where major improvement was needed, particularly with regard to finding journals and articles. Users also had consistent difficulty finding assistance, locating subject-based research guides, and deciphering the library-related terminology on the site.

Redesigning the Western Libraries Web Site

On the basis of these findings from the first series of tests, a redesigned web site prototype was created. This prototype featured some significant changes to the areas and functions of the site that scored the lowest usability ratings during the first series of tests, including the catalog's Journal Title search and those pages that offer access to online research databases (such as ProQuest or JSTOR) and subject-based research guides created by Western Libraries faculty and staff. The Western Libraries home page was also updated with graphics, simplified menus, and more user-friendly terminology.

Testing the Redesigned Western Libraries Web Site

The UDT then applied the same test to this new prototype and found that the user success rate had climbed to 73% -- a 21.6% improvement over the original web site! Users had dramatically higher success with finding subject-based research guides, as well as locating journal articles, both of which were significant problems with the existing site. User satisfaction had also improved, and users rated the prototype 5.3 and 5.6 for "ease of use" and "usefulness," respectively, both on a 7-point scale. The original web site had scored lower on both criteria at 4.7 and 5.4.

The data provided by users clearly demonstrated that the prototype was far superior to the existing Western Libraries site, and should be put in place as a redesigned web site.

Implementing the Redesigned Western Libraries Web Site

On Monday, August 29th, 2005, an email was sent to grp.LIB.Personnel announcing that a new and improved library homepage would be released on September 9th, 2005. Much effort went towards ensuring the new page would be released early enough to allow for comments and to give library staff enough time to become familiar with changes before the start of fall quarter. A link to the new site was provided.

The email served as a summary of all UDT activities leading up to the changes, with an emphasis placed on the results of usability testing. The email also provided access to a document that explained in detail all the changes that were made to the website:


http://www.library.wvu.edu/udt/restricted/website_changes_05.pdf

The UDT encouraged feedback from library staff and a “topic” was created on the discussion board to facilitate the process. Although the discussion board was not utilized, some very helpful comments came from library staff in various other

ways. In addition, a future lunchtime discussion was offered and also a link to the UDT website.

The UDT also wanted to give general library users an opportunity to comment as early as possible so a link to the new site was provided for a number of days before going live.



On September 2nd the following image -  - was placed on the homepage to encourage users to try out the new site. The existing comments system was also used as a way to solicit feedback about the changes. The following message appeared in the comments section of the existing site:



The "New Library Website" title above took users to a press release (http://www.library.wvu.edu/udt/newsite_pr.pdf) about the overall process and the "tell us what you think" link went to our existing comment submission form. Although the group did not receive much feedback during this phase, comments received were generally positive.

After confirming that the new site was ready, and after anticipating that the changes would be well-received, the transition to the new site occurred on September 13th. This culminated many months of effort and warranted much celebration. The break was short-lived, since the UDT immediately starting planning for the lunchtime meeting presented on October 6th, 2005.

Communications

The UDT has and will continue to take every opportunity to encourage discussion among and solicit feedback from the Western Libraries staff, including:

- Issuing regular reports on UDT research activities;
- Creating an internet discussion board dedicated to discussion of web development and usability issues;
- Establishing a UDT web site that includes an anonymous online feedback form as well as posted reports, meeting notes, and other information
- Offering regular library-wide presentations concerning UDT activities for all who are interested;
- Reporting on UDT activities to individual departments; and
- Holding meetings with Western Libraries administrators and department heads.

We even printed Usability/Design Team T-shirts (or "UsabiliTees") and made them available library-wide!

We made this efforts because the user-centered imperative ultimately requires a long-term, library-wide commitment to improving the user experience. UDT members are ambassadors and advocates for library users, soliciting their

feedback concerning library services and sharing that information with the Western Libraries staff and faculty.

What's Next

After being immersed for months in training, focus groups, surveys, usability tests, and a site redesign, the UDT decided to step back and evaluate the past year's activities. There were several reasons for this: to examine how well the group was functioning; to refocus team energies; and to determine next steps, projects and activities. For example, the Cycle 1 report of the team's first-year usability efforts became a more comprehensive Annual Report of all UDT activities, as we realized that a usability testing cycle is only one aspect of the entire user-centered model.

Thinking beyond usability led us towards trying to determine exactly what we were charged to accomplish for the library. This began as an effort to document the group charge but soon evolved into a larger project that included defining the goals of the Western Libraries' website, creating the UDT charge, identifying UDT responsibilities, and setting the criteria for group membership.

In essence, we asked the question, "Beyond usability, what is our group about?" -- and the answer we came up with is that we are in a very good situation to become a more functional "Web Group" with a focus on the entire website and

not just on usability. Many departments are represented within the UDT, several of the members are key web authors, and the group is highly motivated to make improvements. The final version of the "Goals/Charge" document is available from the UDT website:

<http://www.library.wvu.edu/udt/restricted/udtcharge.pdf>

The UDT felt that defining our role was an important first step to take before we embark on any other major projects. Now that the above document is complete, the group has started to prioritize a long list of potential projects.

At the top of the list are the following projects:

- **Conduct a major site evaluation** to determine design and content problems.
- **Create a style guide** to assist web authors in making the library website more standardized, consistent, identifiable, and useful.
- Design a new round of usability tests with the purpose of **improving the Library Catalog**.

Other potential projects include:

- Improve the "Library Information" and "Help" pages and other "lower-level" pages. [Some testing has already begun.]
- Work with web authors to design usability tests for the newly revised ILL pages.
- Conduct additional focus groups and surveys. For example, connect with the Psychology Department for help with focus groups and expand our gathering of data to campus faculty.
- Provide more training opportunities, for example, in good web design.
- Create a "usability lab" based on what we learned during Cycle 1.
- And more!

The UDT is currently evaluating the website looking for issues such as duplication of content, use of confusing jargon, inconsistent terminology, and navigational problems. In addition to making immediate improvements, this exercise is intended to help us create a style guide that will ensure future development is done in a standardized and more effective way. Once this is complete, we plan to tackle the Library Catalog.

There are many things we learned from Cycle 1 that will help us move forward in these endeavors. For example, we learned how time consuming user-centered design can be and we learned that timing is everything. It seemed we were constantly chasing after students to participate in our various activities throughout the spring and summer quarters of 2005.

For the upcoming catalog project and other activities, we look forward to applying some of what we have learned to improve in areas such as recruiting participants, conducting better surveys and focus groups, and most importantly experimenting and testing different design prototypes. We will also benefit from further examination of some issues identified during usability testing in Cycle 1 that were not really resolved in our redesign.

Some of these unresolved issues pertain to the catalog, such as:

- Users have difficulty **reading catalog records**, especially relating to journals.
- Users do not understand **what** they are **searching** (e.g. catalog, web site, subscription database).
- Users still have problems **finding articles** – there has been slight improvement but testing more prototypes is a must.
- Users do not make the **distinction** between searching for “**known articles**” and articles “**by topic**”.

Although there seems to be an insurmountable amount of work, the group continually operates under the guidance of this quote from the 2005 Usability Professionals Association conference:

“Providing a good user experience is an ongoing process”

Conclusion

The Western Libraries Usability/Design Team’s inaugural year was certainly a very productive one, marked by many proud achievements, but there is still much work ahead. Embracing user-centered design requires a significant paradigm shift, both in theory and practice, and this transition remains in progress at the Western Libraries. Ultimately, designing for the user will always be an iterative process, requiring a constant renewal of one’s commitment to listen to and learn from the user.

There is ultimately no other choice. Libraries today face an increasingly competitive information environment that requires them adapt to their users' evolving needs and expectations. Rather than a threat, however, the UDT sees the user-centered imperative as an opportunity to demonstrate the superiority and endurance of the Western Libraries and their services.