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Better Together: Diversity and Inclusion in UX Design

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Designing a library website that tailors to the needs of different user populations is a challenge. On the one hand we have a racially and ethnically diverse population with different experience, language, and ability levels. On the other hand the small real estate of a homepage presents design challenges. As a result, websites are sometimes designed for the majority at the sacrifice of the minority. Website design discussion can become political and divisive. However, designing an inclusive website is possible if we are willing to find a healthy common ground. In 2017 University of California San Diego Library redesigned its website with diversity and inclusion in mind. Working with a diverse group of librarians, we designed an inclusive website by utilizing the “Middle Way” and the progressive enhancement principle. In this article we will share our experience with enhancing minority media representation, and developing audience priority by highlighting inclusion of everyone while prioritizing for specific audience group.

The Middle Way is a Chinese philosophy that strikes to avoid extremes and seek balance and harmony in all situations and dealings. Based on Confucian’s teaching, this philosophy is deeply ingrained in the Chinese culture and society, impacting how people behave, run business, manage companies and handle interpersonal relationships.

Diverse Research Experience and Primary Audience

In 2016 we conducted a user study to prepare for a website redesign. Ten users including students and faculty were recruited to participate in this study, which included three components:

- Description of their current research process and approach to finding information, with questions specifically about how/whether they use the library website.
- “XO” exercise of all of the top navigational menus and menu items: Participants circled (O) items they used and crossed out (X) items they do not use.
- Sketch exercise where participants were asked to draw their ideal library home page.

Based on the study, we grouped users’ research experience into three levels: senior scholars, junior scholars, and novice users.

Senior scholars:

Senior scholars know key researchers in their field and routinely follow their research by going to conferences and reading their articles. Some set up alerts to follow these authors or set up alerts for keeping current within their field. A common practice is using the bibliography in the articles and books they read as a tool to identifying new material to read. Some faculty (2 out of the 3) have custom research portals developed by themselves and other researchers within their discipline. For frequently used resources, they have bookmarked them for easy access. When they come to the website, they most often search for known items within the catalog, access a selected few known databases for articles, or browse e-journals for articles.

Junior scholars:

Junior scholars know a few key databases and are willing to explore to find more. However, many want to see something specific to their specific discipline within our subject categories.

Novice users

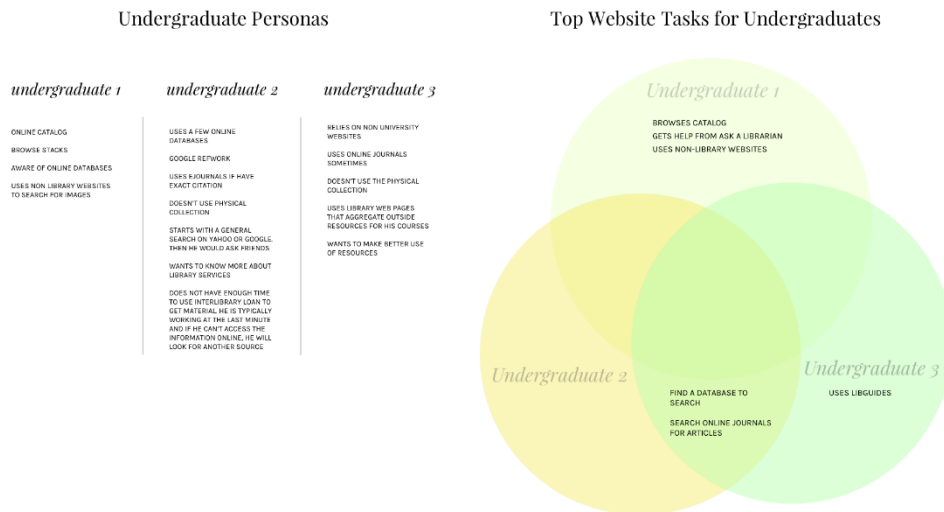
Many students start with recommendations and assigned reading from faculty so they are looking for a very specific book or sometimes, article. The library's catalog, Roger, is their most highly used resource for that.

We determined it is important to set some priorities and boundaries around audiences, simply because of the limitations of a screen-based interface. There can be only one "home" page and primary navigation system. We selected "students who are not experts in library research" as the primary audience of the website and developed a persona "Kevin." This is based not only on the size of this group and the degree to which they use our services, but also the university and the Library's organization goals. In its strategic plan, UC San Diego states its vision as student-centered. The persona helped us adopt a tone of voice that speaks to that audience, both in terms of writing style and graphics.

Common Ground

Selecting a primary audience does not imply that some groups are more – or less – important. Rather, it enables us to tailor the voice and tone of messaging for each group, and to provide a cohesive website experience with relevant and easier to access content for each different audience segment. A well-designed website can address the needs of different users. The "Middle Way," a belief in middle ground, proved to be useful in guiding UX design.

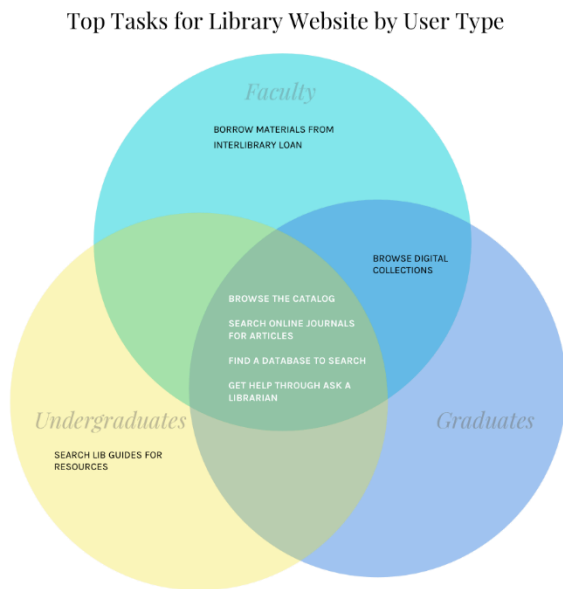
To find commonalities across user groups, we decided to use persona diagrams. Our previous research and the persona research¹ of Cornell University Library provided a rich set of data. We plotted the data of 9 personas onto Boolean diagrams using Sketch, focusing on users' website activities. For example, we created a *Top Website Tasks for Undergraduates* infographic, listing the characteristics of three undergraduate personas, and mapping their key website tasks in a Boolean diagram. We created similar diagrams for 3 graduate student personas and 3 faculty personas.



¹Larose, K. a. (n.d.). Retrieved from HOW WHITE IS YOUR UX PRACTICE?: INCLUSION AND DIVERSITY IN CRITICAL UX RESEARCH: <https://undaimonia.wordpress.com/2017/06/02/uxlibs3/>

Library, C. U. (n.d.). Retrieved from https://ecommons.cornell.edu/bitstream/handle/1813/8302/cul_personas_final2.pdf;jsessionid=492B7CD0706B57013BF9395EB9826AA7?sequence=2

We then combined the data of 9 personas to create a diagram *Top Tasks for Library Website by User Type*.



This diagram communicated visually to library administration and the website redesign team the differences and similarities among the three main user groups. To balance the needs of different user groups while still providing quick access to the things they have in common, we recommended:

- Quick access to the catalog, e-journals, and a select number of limited high-use databases.
- Deploy a more powerful search/discovery tool that facilitates searching multiple resources at once – catalog, databases, guides, and library pages (eg Multi-tabbed Single-Search Box).
- Adequately represent our user categories and their disciplines so that it invites further targeted exploration (browsing) of the Library’s information and resources.

Based on the recommendations, we came up with the following solutions:

- We put searching for and finding library resources front and center with a multi-tabbed search box. This box allows users to search for known items, explore for databases and link users directly to LibGuides. To help users understand the different information system, we put explanation in the search box.
- The home page and primary navigation will provide shortcut paths for experienced users, as well as links for visitors, job-seekers, donors and other libraries.

The following image is our redesigned homepage. A heatmap of 50,000 visitor clicks confirmed our assumptions. The tabs in the search box were heavily used because they address the needs common to all of the major user groups.

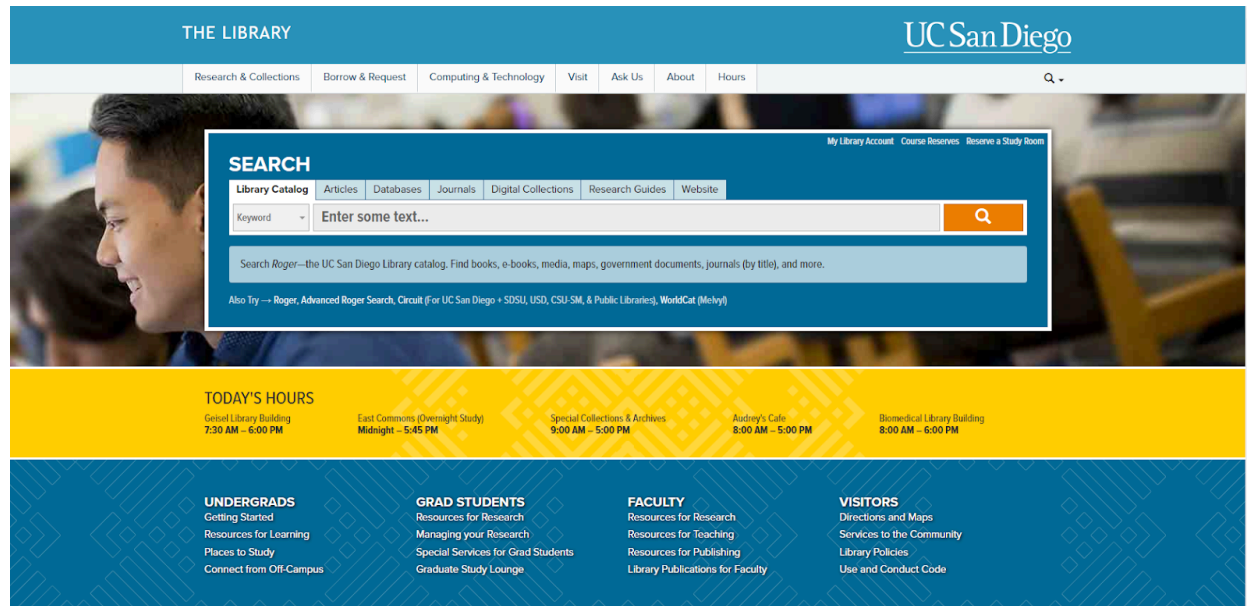
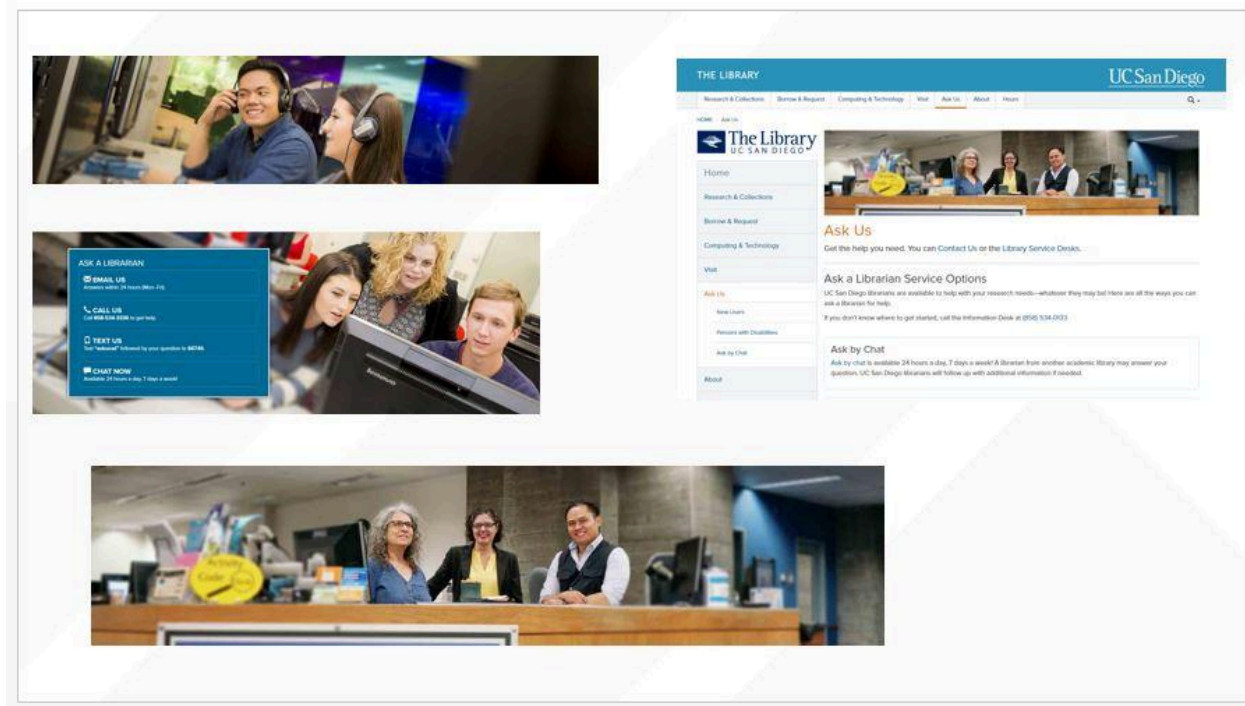


Image Inclusion for Racial & Ethnic Diversity

The lack of minority representation is a hot topic in Hollywood, for good reasons. For many years there were few minorities, esp. Asians, in TV shows, movies, and news. When they were, they were seldom the main characters and often portrayed a stereotype; for Asians, they are Kong Fu fighters and for Latinos, they are gangsters. This media stereotype or lack of representation is mirrored in physical and digital spaces.

UC San Diego has a diverse racial and ethnic student population. According to its website, the makeup of its undergraduate student body in 2016 is: Asian 46%, Caucasian 20%, Mexican American and Latino 16%, African American 2%. The demographic is not represented in its images in public spaces. The university has picture banners around campus showcasing the achievements of its alumni. 90% or more of those showcased are Caucasians. Minority alumni were seldom showcased and Asians were showcased around 2%. The online newsletter, *ThisWeek@UCSanDiego*, has the same problem. The feature stories typically showcased accomplishment of a white faculty member or student, with their images prominent on the page. Images of Caucasians dominated other stories as well while minorities often appeared in group pictures. This practice not only contributes to the stereotypes, casting Asians as the foreigners and outsiders, but also alienates its alumni, and defeats one of its own goals, which is to attract alumni donors.

A picture is worth a thousand words. To address the problem of lack of minority representation, we decided to create inclusion using images. First we used an Asian student picture as the image for our primary audience persona. Secondly for our first level pages, we used images that represent the makeup of our university community by including images of minorities and older workers.



Diversity and Inclusion in UX Design

What is inclusion? It is not an “either, or,” but an “and.” It is not to serve the majority at the sacrifice of the minority, nor is it to serve the minority at the sacrifice of the majority. In website design, we utilize features such as pull-down menus to make web space less cluttered. These features can sometimes pose a challenge to users who rely on a keyboard to access web elements. However if we don’t use these space-management tools, web pages can become cluttered and content-dense, which will increase the cognitive load for other users. This discussion was one of those that we had recently to understand and balance the needs of accessibility and web design. After further investigation we found that pull-down menus, when programmed correctly, are accessible.

Inclusive UX design is possible if we are sensitive and willing to have honest conversations. We will also need to have the courage to challenge the status quo. As Larose stated, we need “...**the desire to create positive change** following critical reflection requires a **willingness** to make a conscious efforts, a **readiness to challenge**, and the **courage** to stand your ground when encountering resistance.” (Larose, n.d.) As UX professionals, we have the moral obligation to be inclusive. We might not be able to change the divisive political and culture climate, but we can act within our power to make our designs inclusive, balanced and harmonious. The Middle Way is after all, a world view of win-win.