

Editorial Board Thoughts:

Critical Technology

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Critical librarianship has brought many changes in how libraries have examined their programs and services, created new positions dedicated to equity, inclusion, and diversity, and paved the way to challenge existing assumptions about our work and environment. Technology also exists in a space that is not neutral, as library systems and services reflect specific perspectives in their content and focus as well as how they are made accessible (or not). I would like to briefly examine how we can begin to think about these issues within academic libraries, and offer some additional readings for further reflection for four technology-related areas: spaces, services/programming, systems, and engaging with our users.

TECHNOLOGY SPACES

We might assume that because we are seeing students using our classrooms, makerspaces, and study areas, that we have been successful in meeting the needs of a wide variety of users. To a large extent that may be true, but we should also be asking ourselves who does not feel welcome in such a space and, more importantly, why not? There are two facets to this question. The first involves the degree to which libraries strive to create a welcoming environment. Staff interactions, signage, hours, and institutional values are all part of a complex and broader environment that signals to users how these spaces function and how they are perceived by the organization. These same elements can also serve as deterrents through choices in layout, policy, or other intangible aspects so that they may in fact prevent individuals from entering these spaces in the first place.

The second revolves around the notion that each technology-rich space conveys its level of friendliness and intended purpose through its physical presence. Ensuring that furniture, paint, and layout are compliant with ADA standards, and integrating these features with each other as opposed to setting them apart so that they are not considered “special” or “different,” is one small and vital step in this direction. Maggie Beers and Teggins Summers cover these issues in an EDUCAUSE Review article and discuss asking questions regarding how power structures are reinforced by having a “front” of the room or other configurations can enrich planning and assessment efforts. Similarly, developing a plan so that new technology in areas such as makerspaces rotates as much as possible will help to provide access for those who may not be able to utilize these resources outside of the library context in order to accommodate differing skill levels, interests, and learning styles.

In addition, students may not always be present on campus due to family, job, or other life circumstances and planning with the assumption that everyone who could benefit from using a particular space is in fact taking advantage of that benefit, is problematic. One way around that is to ensure that each space is as flexible as possible and (ideally) can be reconfigured for quiet reflection, collaborative work, or transformed into a sensory space or other type of specialized environment. The reservation process should be available both online and manually (as not

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everyone may have access to a computer and/or the internet), hour limitations should have several counter options, and the space should be available as much of the time as possible when it is not in use for more a more formalized purpose. Any space usage assessments should also purposefully include non-users or perceived non-users and integrate questions about barriers to or about the space in their methodologies. Finally, ensuring that the right level of staffing to support both the intended, as well as perhaps the unintended, uses of the space and the activities that occur within it will help create a sense that not only the space itself is valued, but that the experiences occurring within it are even more important. This is not easy to accomplish, as it is difficult to predict exactly how a space will be used unless there are very strict confines placed around its configuration and accessibility. But assuming that most spaces in libraries are designed to be malleable and keeping in constant communication with users via some of the methods described above should help.

TECHNOLOGY SERVICES AND PROGRAMMING

Similarly, services and programs cannot be built around a one-size-fits-all model. This can prove to be quite challenging given the limited resources libraries face. Engagement and learning lie not only in access to tools, but in the very process of sharing knowledge and experiences — whether for academic growth, social action, or simply personal enjoyment. Matt Ratto, who coined the term “critical making,” defines it as the process “intended to highlight the interwoven material and conceptual work that making involves.” He argues that “critical making is dependent on open design technologies and processes that allow the distribution and sharing of technical work and its results.” Ratto makes the further point that this process also has the capacity of “unpacking the social and technical dimensions of information technologies.” This in turn allows for technology to become more than simply a cool resource, but rather a mechanism for democratizing this creative work of making and designing while dealing with its messy, political, and uncomfortable aspects which do not exist in vacuum outside of the tools themselves. An approach in this instance might involve taking technology outside of library spaces such as on campus or within the community, offering as much for free as possible, and capitalizing on programs such as Girls Who Code (<https://girlswhocode.com/>) and Grow with Google (<https://grow.google/>). Capturing how these resources are used in all of their possible permutations enables stories of individuals to shine through. The impact of these programs takes on a personal element through showcases, speaker events, and hackathons that are designed to bring the community together and engage in sharing of knowledge, perspectives, and conversations. In addition, this will hopefully shrink the barriers for those who don’t see themselves as having a role in these activities.

INTEGRATED LIBRARY SYSTEMS

I do not have a background in systems, but Simon Barron and Andrew Preater have written a great chapter unpacking the inherent power structures which manifest themselves in library systems such as the integrated library system (ILS), discovery interfaces, and the third-party resources we provide access to. They suggest taking action by thinking about user privacy and ensuring that the information libraries are able to view, gather, and store is used ethically and that decisions for derivative services or actions are not made based on assumptions about gender identity, economic status, or other identifiers via access to these types of data. Openness is another area the authors explore, as they discuss how libraries can use open source software whenever possible in order to balance the field against profit-based licensing models. Barron and Preater also raise a concern however that while crowdsourcing is in theory a good way to include the community in

developing ways to help itself, it still does not recognize the limited resources marginalized populations can dedicate to these efforts. Finally, they discuss how it is crucial for libraries to recognize and support the expertise needed in this arena in order to avoid overreliance on vendor systems that can prove alluring with out-of-the-box solutions, but which compromise things like privacy, autonomy, and customization that might otherwise benefit from equity, diversity, and inclusion-centered practices.

EQUITY-DRIVEN DESIGN

Engaging with users in developing shared solutions to challenges is an important aspect of the user experience, and can help pave the way for deeper conversations. Taking a step back and making sure the assessment and design process itself is transparent for everyone is one of the first things that needs to be in place. I would like to harken to the work of Gretchen Rossman and Sharon Rallis who make a crucial distinction between user-centered design, in which the user seldom has a voice in what the final process or product looks like, and what they term as “emancipatory design,” in which participants are “collaboratively producing knowledge to improve their work and their lives.” In addition, emancipatory design is one where “users are in charge; their power, their indigenous knowledge are more powerful and respected than those of the expert designer.” This approach can therefore be a means to promoting equity, diversity, and inclusion into technology work in libraries by focusing on the users’ voice as opposed to our own and working collaboratively to develop shared solutions to address their challenges.

A specific example of how this framework might be applied comes from The Stanford School of Design which is famous for its course in design thinking. Stanford has recently taken that concept even further, and integrated an equity focus into the first steps of the progression, where the designer is not only identifying existing built-in biases but also raises questions such as who the users are, what are the equity challenges that need to be addressed, who has institutional power, and how is it manifested in the decisions that drive the organization. The Stanford model also provides specific methods focusing on human values and developing relational trust as a way to bookend the design thinking process by reflecting on the blind spots that were uncovered as a way to help inform action items and next steps and ensure that the users are actively collaborating to develop these services and programs which in turn affect them. This version of the program is available at <https://dschool.stanford.edu/resources/equity-centered-design-framework>.

As a final thought, one idea to keep at the forefront in all of these areas is that of universal design, which is defined by the Center for Universal Design at NCSU as “the design of products and environments to be useable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” The first principle is that of equitable use and can be applied to many technology-related aspects whether they are physical or virtual:

- Provide the same means of use for all users: identical whenever possible; equivalent when not
- Avoid segregating or stigmatizing any users
- Provisions for privacy, security, and safety should be equally available to all users
- Make the design appealing to all users



FURTHER READINGS:

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