Staying True to the Core: Designing the Future Academic Library Experience

Steven J. Bell

abstract: In 2014, the practice of user experience design in academic libraries continues to evolve. It is typically applied in the context of interactions with digital interfaces. Some academic librarians are applying user experience approaches more broadly to design both environments and services with human-centered strategies. As the competition for the time and attention of students and faculty increases, along with expanding options for acquiring scholarly content that more frequently circumvent traditional libraries, academic librarians will seek new methods to understand and engage with the members of their community. This article envisions a future where user experience design moves from the periphery to the core of academic library operations. While it is a future shaped by advanced technology that radically changes user expectations, the author imagines an experience that is futuristic but rooted in the core values of contemporary academic library practice.

Though we may tend to think of user experience (UX) design as an element of the digital age, emerging from the realization that feature creep without the thoughtful application of design degrades use, it is a concept that extends back to the turn of the twentieth century. Consider the evolution of modern photography. Prior to 1888, photography was so complex and uninviting an experience that only determined experts could pursue it. The equipment was cumbersome and costly, and it took approximately nineteen steps to produce a single photograph. In 1888, George Eastman introduced the Kodak camera, which reduced that complexity to the simple push of a button. Both easy to use and affordable, Eastman's camera revolutionized photography. More impressive than Eastman's technical and industrial genius was his vision for the photography experience. It was about more than ease of use and technology. He sought to give people the capacity to capture their lives in a way that could be both remembered and shared. It was about giving people a unique and memorable experience.[1] Even in the age of advanced digital technology, where images may be distributed globally within seconds, photography remains, at its essence, an experience in which humans document and share their lives with others.

Fast-forward to the twenty-first century, and UX, while a more widely accepted practice in business and industry, has yet to achieve much penetration in higher education institutions. There are occasional references in the literature to something termed the "student experience," but there is little understanding of or agreement on what that is or how it is created. There is even less expectation of where and how that experience might manifest itself within the library. In those academic libraries that do have positions or, even less frequently, units described as "user experience," UX activities tend to focus primarily on improving the experience community members have when connected to computer-based systems and interfaces.

For many of those users, the library is largely an online experience. That makes it essential to present the complexity of library systems in as simple a way as possible to eliminate confusion and failure. But UX can and should be about more than interface and system usability. Academic librarians should commit to a total, organization-wide effort to design and implement a systemic UX. This author advocates for shifting the academic library experience from *usability* to *totality,* which should occur over the next fifteen to twenty years. This article discusses the current state of user experience design and contemplates, in the short term, how technology will likely impact UX in academic libraries. As the technology advances, academic librarians must keep the experience focused on the human elements of their relationship with community members while adapting it to a digital world of connected learning, artificial intelligence, and an Internet of Things, a future where everyday physical objects will be connected to the Internet and able to exchange information with other objects.

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Usability and Totality: A Literature Review

The modern age of UX can be traced to Don Norman and his seminal book, *The Design of Everyday Things*.[2] Norman was and remains an advocate for simplicity. The book introduced the phrase "user-centered design" to communicate the importance of designing from the perspective of the individual who uses a product or service. In Norman's view, the designer must take an empathic approach to not only understand but also take the place of the user. Norman influenced a generation of designers, such as John Maeda, author of *Laws of Simplicity,* who in turn identifies ways to help people achieve simplicity in the face of growing societal complexity.[3] Norman's later book *Living with Complexity* is particularly relevant to the design of a library user experience because many library resources and research tasks involve some inherent complexity.[4] In the absence of empathic design, there is a disconnect between what the designer intended and how the user experiences the system; the automated library catalog presents a good example. A better user experience is achieved by doing more than just making everything simple; it involves designing products and services for the elimination of confusion.[5]

The advent of the Internet and Web browsers introduced a new level of interest in usability science. Steve Krug's influential book *Don't Make Me Think* is a classic introduction to designing usable Web sites. Krug's message is much the same as Norman's in that it promotes the importance of giving users a simple and intuitive Web site that

they can easily navigate and to which they will want to return. Works like these sparked a movement in academic libraries to improve the quality of the Web-based user experience. Usability testing became a popular method to determine if the library Web site really worked for the end user. Subsequently, dozens of books and articles in the library literature have advanced the importance of UX as a way to achieve a more user-centered academic library Web site. Many of these cite an early article that discusses usability testing, Brenda Battleson, Austin Booth, and Jane Weintrop's "Usability Testing of an Academic Library Web Site: A Case Study."[6] Despite all the attention paid to the usability of the library Web site and the interfaces of other library research systems, achieving the simplicity and intuitiveness advocated by Norman and Krug has remained elusive. In time, academic librarians began to extend their interest in UX beyond library online interfaces.

This change can be traced to a seismic shift in our thinking about UX, sparked by the publication of B. Joseph Pine and James H. Gilmore's book *The Experience Economy* in 1999.[7] In the midst of the first Internet business expansion, Pine and Gilmore advanced the idea that businesses needed to compete on more than price or features. Successful businesses would elevate their products and services with a new focus on the delivery of an experience. That meant introducing new methods aimed at creating loyal users who would bypass lower-priced competitors for a higher quality experience offering engagement that was meaningful and memorable. The design of an experience would compel consumers to both repeat it and recount it to their friends. Companies such as Starbucks and Apple successfully built communities of loyal users willing to pay a premium for a unique, systemic experience. Achieving such an experience required differentiating their products from more mundane competitors in the same industry. This type of experience, as opposed to those focused purely on low price or technological features, advocated the importance of totality. The total experience is effectively and consistently delivered at all touch points, meaning it must extend beyond the Web site to all those points where a customer could potentially connect with the organization's products or services.

The business world's growing interest in UX was accompanied by a desire to understand the design process behind the user experience. Those revelations were made in 2001 when Tom Kelley and Jon Littman's book *The Art of Innovation* shared the methods that IDEO, a global design firm, used to create user-centered products and services.[8] Kelley described the IDEO process as "design thinking." At the core of this user-centered process was an intent to discover the true problem in need of a solution. A true solution could emerge only when the real problem was successfully identified. This process involved a series of steps beginning with an empathic understanding of the users and their frustrations with existing products or services.

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Designers employed ethnographic research methods to connect with users, studying them in their native surroundings while using products or services. Brainstorming, prototyping, and evaluation completed the design thinking process. Kelley's work led to a better understanding of the connection between design thinking and UX by showing that a good user experience is the result of a thoughtful, intentional design process.

In the years following the promotion of UX as a method that extended beyond human interface design, the world of academic librarianship maintained a more narrow view of UX where Web and search usability was of primary interest. Eventually, through the anthropological research performed at the University of Rochester in New York, academic librarians began to notice the importance of designing user-centered library experiences. Librarians applied ethnographic methods to understand the research behaviors of college students as they went through their routines. Instead of making assumptions about what services students needed from an academic library, the resulting book, *Studying Students,* provided unique insights into how academic libraries could better design their physical environments and service offerings to meet student expectations.[9] In doing so, academic librarians could elevate the quality of the library experience. Since then, many academic librarians have employed similar ethnographic methods at their own libraries in an effort to improve the user experience.

New staff positions and organizational units dedicated to studying and improving the library experience are evidence of a broadening perspective on the value of total UX, but academic librarians still primarily connect UX to Web and search usability. The interest in totality received a boost when the Online Computer Library Center (OCLC) invited Joseph Michelli, a UX consultant to industry and author of several books about unique customer experiences, to speak at a symposium at the American Library Association Conference in 2009.[10] Michelli explained how an organization could create a unique experience using an experiential brand statement. This statement is an internal document that a staff develops to identify the nature of the experience it seeks to design and deliver. Ritz Carlton Hotel's brand statement, for example, is "the home of a loving parent."

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Most of what is written about the design and development of the total user experience in academic libraries is found on blogs. There is a dearth of research that explores how user experience design is being applied in libraries or whether it achieves desired outcomes. In 2011, Steven Bell delivered a paper at the Association of College and Research Libraries (ACRL) conference that shared research about student perceptions of the library user experience.[11] University students completed a survey that asked them to compare their library experience to a favorite retail experience. The quality of the experience was judged using the nine attributes of a "wow" experience defined by *Discovering "WOW"—A Study of Great Retail Shopping Experiences in North America.* It included such things as treatment by staff and availability of desired items for purchase.[12] Academic librarians were surveyed on their perception of whether students would rate the library experience as better than, equal to, or worse than a favorite shopping experience. Although the librarians believed students would rate their library experience worse, students actually rated it either equal to or better than but never worse than their favorite retail experience. The research also identified what elements of a total user experience are meaningful to students. For example, easily located items are important,

but knowledgeable librarians are somewhat less essential to a great library experience for students, according to the study.

Although UX was initially considered the domain of retail business, it is now regularly practiced in many service companies and nonprofit organizations. It is not uncommon to find the phrase "student experience" used in the higher education literature to refer to the combination of amenities, services, and engagement that are more than just good customer service. Museums and other cultural institutions are particularly notable for designing user experiences that emphasize engagement so that users are more than mere observers, but are exposed to a learning experience that is memorable and unique. As UX matures as a specialization, its practitioners seek to conduct additional research to better understand how to design and deliver consistently good experiences. Librarians can continue to learn from this accumulated knowledge, but looking ahead to the future, there is uncertainty about what constitutes good UX and how to design for it.

Current Trends in UX

Still a fairly new field of practice, UX is the subject of much discussion as practitioners and academics continue to define what it means to design and deliver an experience. It is commonplace for humans to articulate the quality of their experiences, and reactions of all types exist for virtually every experience. Two individuals may have completely different reactions to the same stimulus. One person may find a reference librarian a joy to work with, while another person may intensely dislike that same librarian, even though the actual experience shared multiple commonalities. While people can reach some consensus about experiences that "wow" them and others that are incredibly bad, experience designers debate whether a particular experience can truly be designed for users. If each human experiences his or her world in a unique way that is shaped by the sum total of that person's existence, then how can the design of any product or service consistently deliver a great experience to meet all users' expectations? Helge Fredheim explains, "It's because UX depends not only on the product itself, but on the user and the situation in which they use the product."[13]

Rather than create a specific type of experience, the current thinking in UX is to design for an environment that will instead make it possible for any user to derive satisfaction from his or her personal experience. The design of the experience must almost be situational, accounting for any number of possible ways in which users will interact with the product or service. Take, for example, the design of a particular model of automobile where the goal is to deliver a unique driving experience. A menu of available options that fit into a customizable environment makes it possible for each individual driver to

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shape the experience to his or her preferences. Academic librarians do this when they design for different user groups. Undergraduate and graduate students have different expectations of their library work spaces. Each group may prefer more or less noise,

socialization, or collaboration in their work space. It is up to librarians, perhaps working with a designer, to enable each user, within reason, to shape the work environment to deliver the best possible library experience.

This may explain the growing popularity of responsive user experience design. Rather than expecting the user to conform to a specific design environment, this approach reverses the relationship by enabling the system or site to respond to the user's technology. Academic libraries are moving from mobilized Web sites that require additional programming and maintenance to a main Web site designed to accommodate whatever browser, tablet, or smartphone is in use. The design responds to the needs of the user. Applying a responsive design approach to the physical library environment requires significant flexibility so that users can adapt the space to their needs. On a visit to the James B. Hunt Jr. Library at North Carolina State University's Centennial Campus in Raleigh, this author observed an extensive array of different chair and table configurations, many of them movable, so that community members can find some combination of seating and work space that best responds to their needs.[14]

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Academic librarians sometimes look to trends in retail for inspiration in creating a better library service experience. This has led to more experimentation with public service models in recent years. For example, at the Hunt Library, the main entrance borrows from the Apple Store model where community members can immediately obtain assistance in a space where there are no barriers between users and library personnel. The main service point provides multiple options, from circulation to reference to technology support. The user is freed from the burden of figuring out where and when to seek assistance. An outcome of a well-designed UX is keeping things simple for the user. Whether it is wayfinding within the facility, navigating to the correct touch point, or getting support, the experience is designed with the user in mind and planned to eliminate confusion. The Hunt Library also reflects a responsive design theme by introducing mobile communications technology for staff. To further simplify the experience, users can obtain help wherever they are in the building. They do so by flagging down roving staff or by contacting the main service point via instant message, text message, or phone. The main "Ask Us" service point will then dispatch a staff member, using handheld transceivers, to the user's location in the library.[15]

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Users' expectations for experiences are significantly shaped by what they encounter in their daily service interactions, by the ways technology supports both their work and leisure, and to some extent by their constant connection to social networks and media. Few barriers exist to keep students and faculty from discovering the type of library resources and services their friends and colleagues receive at other institutions. This exposure raises their expectations and leads them to question why their library provides

a lesser experience or, we hope, enables them to recognize their library as a superior one. In the future, the academic library user experience should reflect these current trends but will likely morph into something different as user expectations for learning, research, and information search and retrieval change dramatically. Some of this change we might anticipate, but much of it we can only imagine.

Future Thinking About UX

At its core, UX is about understanding people and their needs and developing good experiences that meet and potentially exceed those needs. Ideally those experiences are unique and can be differentiated as superior to similar products and services. It is an intentional process, rather than a random possibility, utilizing design to make the complex clear, not confusing. Imagining the future academic library UX is simple. Everything works as intended, and the need to explain how it works is largely diminished. Today's academic library user experience can be fraught with confusion and uncertainty. How do I find books on my subject? What do the numbers on the books mean? Why do books about finance have the code letters HG instead of F? Which database do I use to find articles about buddy themes in 1950s American film? The current academic library experience is confusing to nearly all but the most experienced researchers. Few truly understand the overall scope of library operations, and the novice is often intimidated and overwhelmed. What is the chance in fifteen or twenty years that we will eradicate this confusion and create a heightened understanding of how the academic library works?

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Although this confusion helps keep today's reference and instruction librarians busy, an imagined future academic library UX would be one where our community members can answer many of these questions on their own because the design facilitates an utmost intuitive experience. Getting there will require change in how we organize our resources and services and how we make them publicly accessible. The academic library experience must transform into a systemic experience—meaning all parts of the community member's library journey, from start to finish, must fit together in a well-meshed totality. A future library UX will need to leverage the available technology to make the system run well, to connect with users in their spaces and work flows, and to fix what does not work or is not possible today.

None of this is to suggest that in the future academic library UX eliminates the need for reference and instruction librarians. Rather than repetitively answering recurring questions and teaching routine content, their work will shift to the design and sustainability of the total library experience. Instead of responding to confusion, they will advance complex research and facilitate the conversation and knowledge creation that drives the

scholarly communications infrastructure. We should begin to think now about the new skills academic librarians will need to make this transition. Adopting a design orientation is a starting point. If asked if they were designers, many librarians would respond in the affirmative, most likely citing the design of instruction activity, signage, or even physical elements of the library. The new work of crafting systemic library experiences designed to deliver totality will require more significant design education. Graduate business education is a good model for library and information science educators because many programs have integrated design thinking and philosophy into the curriculum. To excel in a future characterized by greater uncertainty and rapidly shifting user needs, academic librarians must be skilled at identifying problems and then creating elegant solutions. That is the essence of design work.

Whatever shape future academic library UX takes, emerging technologies will exert a major influence. As technology shifts personal expectations, we are challenged to determine how to best integrate it into the user experience. Owing to their potential impact on the library user experience, three technologies emerge as worthy of the attention of our profession: wearable computers, the Internet of Things, and artificial intelligence agents. While other technologies might be considered, for example, analytics software that crunches data to identify learning performance trends or geo-location tagging that could guide users directly to physical materials, these three offer the most potential for changing how people will interact with learning and research content.

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These three interconnected technologies, as they integrate and blend into our daily lives, will change the nature of search from people seeking out the information they need to the information seeking them out when they need it without having to think much about it in advance. The future of information retrieval and research may be facilitated by our wearable computers, powered by artificial intelligence that processes information much like a person thinks, which can deliver what is needed with little effort on our part. Should these technologies integrate into our lives as predicted, the challenge for academic librarians would be to design an experience that leverages the library's unique elements that are impossible to obtain elsewhere.

The Library That Learns You

When we think about wearable computers, the Internet of Things, and artificial intelligence, we conjure up images of Google glasses, coffeepots, and thermostats that run themselves and adapt to our schedules, other intelligent devices that communicate with one another, and Siri-like assistants that answer our questions. As we are in the dawn of this new age, the technologies fail us more often than they succeed. Imagining how these technologies will interact with one another and us fifteen years in the future, capturing and sharing data to help us manage our lives, offers a powerful vision of a world in which they are part of a programmed existence. Combined, these technologies have the capacity to reverse the library experience from one in which we expect the user to

learn the library—how to navigate it both physically and virtually—to one in which the library "learns" the user and adapts itself to the user's needs. Academic librarians are there to help shape the experience and then serve in the Sherpa role, guiding others. This author imagines a future UX in which the library learns the users, by connecting with their personal technology network to personalize service and content delivery.

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In its June 2013 and January 2014 issues, *Wired* magazine featured cover stories on intelligent devices and wearable technology.[16] Both articles laid out a vision of a world in which we experience things in a truly transformed way. Consider today's college students and their connectedness to smartphones. Imagine ten years forward when their head- and body-mounted devices, advanced versions of current smart glasses and watches, give them instant access to a universe of data that replaces today's awkward reaching for smartphones more than a hundred times a day. What wearable technology does is reduce the "friction" between computing and communication experiences. This means that the amount of time needed to access information tools will decrease exponentially. We think our current students exhibit short attention spans and expectations for instant gratification, but we may only be at the threshold of a world ruled by instantaneous data retrieval and response times that cater to personal information needs.

The transition from Boolean-driven search interfaces to the "single search box" discovery engine is a good example to frame how the Internet of Things, wearable technology, and artificial intelligence will drive the shift in the library user experience. As community members became more accustomed to Internet search engines that featured single search boxes, their tolerance for long response times and thinking through search methods underwent radical change. The experience shifted from one of contemplation and patience to a desire for convenience, speed, and ease of use. This change in user expectations changed the game for academic librarians; and for the vast majority of undergraduate students, it became important to develop technologies that responded to those expectations. Academic libraries looked to library technology

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vendors for Google-ized search interfaces that were easier to use and delivered results much faster. This is a perfect example of the consumerization of technology, where it is the user's technology experience and expectations that drive progress rather than those of librarians and their information technology partners.

It is possible to imagine a tremendously different library and research experience in a programmed future where consumerization influences library technology adoption. It is a future in which library experience design anticipates the needs of students, faculty, and researchers. Librarians learn about and from the user and adapt the experience to

the user's personal learning and research environment. Negativity and fear from the past centering around the academic librarian's loss of control over users' access to content and services, driven by consumerization's transformation of the experience, is eradicated in the future library experience. Looking forward, the library is deeply embedded as a node within the user's information network, and this enables the librarian to build a relationship experience that is systemic in nature.

Consider the following scenario:

> Within a futuristic student learning nervous system consisting of an advanced course management system that seamlessly links dozens of different types of information, such as course assignments, learning materials, and performance assessment and support technologies to networked intelligent devices, the student is always connected to the classroom. As the student dons a smart headset, an above-the-eye screen displays upcoming deadlines along with messages from social network partners sharing information for multiple projects. Hand motions may be used to sort out messages into a desired order or by degree of urgency. As the student selects an assignment to work on, the intelligent agent in her metawatch begins mining vast literature and image databases for relevant research content. If the student needs more explanation or the search needs further refinement, a question may be verbally submitted to the metawatch, because it understands human voice communication. Retrieved articles are automatically transferred to the artificial intelligent agent that resides on the student's digital writing surface. Documents are rank ordered by relevance, and citations are formatted in multiple ways so they are ready for insertion. All that is left is for the student to organize the content for analysis and discussion. Throughout the process, intelligent agents continue to communicate with devices that provide support for research and writing, offering updated information as it becomes available. Analytical agents constantly monitor and measure the student's performance as part of a network of support to ensure that students, particularly those at risk, receive academic assistance at the point of need to ensure persistence to graduation. In the case of a student struggling to conduct research, an academic librarian is alerted and can quickly reach out to the student to provide real-time help—without the student even needing to make the request. It is an interactive experience that puts the student at the center of a focused effort to acquire and deliver the best information and support across a far-reaching network of intelligent resources.

What makes this possible is a library experience designed as a system that engages with community members as they first connect with the university and remains connected to their personal learning network as they move beyond academia into the workplace. Similar systems are designed to engage with faculty and researchers, but instead of focusing on academic success, they support pedagogical advancement and scholarship. The design concept is the same, based on integrating with students, faculty, and researchers as they first enter the institution's network. Upon entering the university's network, the library connects with the individual's personal system of intelligent devices. This allows the institution and its support services to literally learn how the community mem-

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bers function, from their courses and research projects to personal preferences related to information-seeking behavior. What are their favored research resources? What are the times they most frequently research and write? Who are their collaborators? As with other systemic experiences, the future library experience is not static but is a long-term relationship in which information gathered from users consistently contributes to the enhancement of the experience. The foundation of the future academic library experience is based on connecting with the user's personal information environment and on extensive learning about the user that anticipates and delivers a personal learning or research experience.

Perhaps this vision of a future research experience for a highly connected student, faculty member, or researcher is too conservative. In such a scenario, perhaps too small a stretch of the imagination given the current state of technology integration, academic librarians might understandably question where they fit in. They might also question if the design of the systemic library experience, while it achieves totality, is too invasive and draws too much on personal information. While a legitimate concern from today's perspective, it is likely that technology consumerization will radically shift how individuals will allow intelligent devices to use and share their information as they engage with global networks. How the academic librarian designs an experience that integrates into the user's personal technology bubble requires us to move to more user-centered designs that provide a much more seamless integration of library service offerings into user work flows.

Lead from the Core of UX

Just as they always have, academic librarians will be savvy in identifying ways to integrate and embed themselves into the intelligent systems of the future. We have much work to do. Even with the technological advances gained in the past several years, researchers at all levels are still challenged by many elements of the library service environment. Reports from the Project Information Literacy study point to plentiful work for academic librarians across the spectrum of student engagement with research, from formulating research questions, to evaluating and selecting content, to expanding students' skills as they advance in their chosen discipline.[17] Looking ahead, academic librarians must continue to seek out opportunities to leverage both the technology and the power of relationships to design a library experience that supports student and faculty success.

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That experience should be more futuristic in several ways. Just as they now embed themselves in courseware, other learning spaces, and social networks, academic librarians could also connect into the intelligent systems that will enhance student learning and engagement. Along the path to that level of integration, this author believes that more academic librarians will develop a broader understanding of UX and its potential beyond the current emphasis on usability analysis. This would suggest a need for greater

organizational investment in achieving totality, a consistently great library experience at all those points where a community member connects with the library. In growing this investment, academic librarians will come to understand that no matter how technology evolves and advances, at the core of any interaction with the library is the quality of the community member's experience. The differentiating capacity of the future academic library, what no other source in the information universe offers, is personal relationships with academic librarians. What is truly

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unique about the future library experience is something that is hardly futuristic at all. If the rate at which online and hybrid learning options expand continues into the future, academic librarians will need to be as adept at building and maintaining relationships online as they are in person.

The irony of the future academic library user experience is that it might look reasonably similar to today's. We know that the technology will advance. We know that user expectations will change. What remains constant is the essence of design and creation of environments, physical or virtual, that facilitate the user experience we want community members to have when they engage with librarians, our libraries, and our resources. Practitioners of user experience design are continually exploring innovations that leverage new discoveries to push the boundaries of our ability to produce desired experience outcomes. Academic librarians can take advantage of this knowledge to improve their own understanding of what works in UX design. This is best done with robust participation in the design process by staff from across the organization. As long as academic librarians are able to focus on identifying the nature of the experience they want their community members to have, designing and delivering it at the appropriate touch points, and assessing if users experience the library in the way that meets or exceeds their expectations—in the context of how we desire them to experience it—then academic librarians will be able to adapt the library experience to whatever changes the future brings. What will matter most is staying true to core UX principles.

Conclusion

At the ACRL conference in 2007, the author attended a presentation on an experimental effort to implement video reference. Using kiosks equipped with webcams and monitors, along with a software precursor to Skype, this library attempted to support video reference with students in remote areas of their building. Understanding that remote reference is a critical component of the "be where the user is" experience, academic librarians began, as early as 1997, to explore real-time chat reference. While adding convenience for the user, chat—and more recently text reference—often lacks the personal touch of face-to-face service interactions. Video chat, as this library was attempting it, seemed an ideal mix of convenience and personalization. This author confidently predicted that within two years every library would implement a live video chat reference service.

This author was wrong. Such an experience may call into question any prognosticator's credentials for predicting the future.

However, this incident did result in a better understanding of how user expectations for the library experience can drive decision-making and technology implementation. In 2014, even with the advent of technologies that could easily support video chat reference (much improved hardware, Skype, FaceTime for the iPhone, and the like), there is little desire among community members or librarians to push for such services. A likely reason for the lack of interest is related to UX principles. It is about listening to and observing members of the academic community, studying their behaviors, asking them what matters to them, and adapting accordingly. While there is opportunity for experimentation in this area to determine the level of interest and the viability of the technology, until it becomes more ubiquitous and consumer-accepted, video chat will only be a potential component of the future library experience.

When we imagine the future, as this author did in 2007, we often believe that our enthusiasm for new technology will be shared by the masses and that it has the power to change everything. While the technologies considered in this article are a part of our future and have the power to dramatically change our lifestyles, academic librarians must be savvy about understanding the needs of their users in determining the design of any future UX. Whatever the future holds for academic librarians, they should always aspire to deliver a uniquely designed and memorable library experience. As long as there are academic libraries, users will experience them—for better or worse. Our goal in designing the library UX of the future should be much as it is today: to create better library experiences for community members. How we do that, how we learn about user expectations, and how we implement change will no doubt evolve. As is always the case with the future, we will want to work to create the one we prefer.

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Notes

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