

# 16

## User Experience

Courtney McDonald

### Editor's Introduction

*Chapter 16: User Experience focuses on how the library is experienced and perceived by patrons and the importance of ensuring that the information organization's services, programs, and physical and virtual environments are aligned to user needs and expectations. User experience (UX) librarian Courtney McDonald begins this chapter by exploring various definitions and approaches to UX, highlighting the significance behind user-centric experiences and identifying UX principles that can be applied within all areas of information practice.*

*McDonald urges information professionals to design services and products with the user in mind. To accomplish this, information professionals need to identify and evaluate touchpoints and channels, create physical places that are welcoming and comfortable for users, and provide engaging and easy to use remote/virtual services. McDonald connects UX with other design principles, such as design thinking, interaction design, and information architecture, to highlight the various strategies that can be used to implement user-focused changes at the library.*

*If there is one thing the reader should glean from this chapter, it is the concept that "you are not the user." Despite the unique skill sets information professionals possess, if they are not thinking, designing, or serving from the user's perspective, information professionals risk falling short in developing and providing efficient and desirable products and services that meet the needs of their user community. McDonald concludes the chapter by highlighting key competencies for an effective UX mindset, which include curiosity, empathy, observation, communication, and collaboration.*

\* \* \*

Each day, the places someone goes, the people they encounter, and the things they do combine in their perceptions to create an overall "experience." Information organizations are actively creating user experiences every day, intentionally or not. Information professionals are an active and essential part of these user experiences, both in person and through the systems and data that describe the organization's services (e.g., collections, programs, facilities, and policies) and support its constituents (those directly and indirectly served by the organization).

User experience (UX) can be defined in different ways. Jesse James Garrett, in his seminal book *The Elements of User Experience*, defines UX as: "how the product behaves and is used in the real world."<sup>1</sup> Within library and information science (LIS) literature, Steven Bell describes UX as "crafting systemic library experiences designed to deliver totality."<sup>2</sup> This chapter focuses on why these definitions of UX

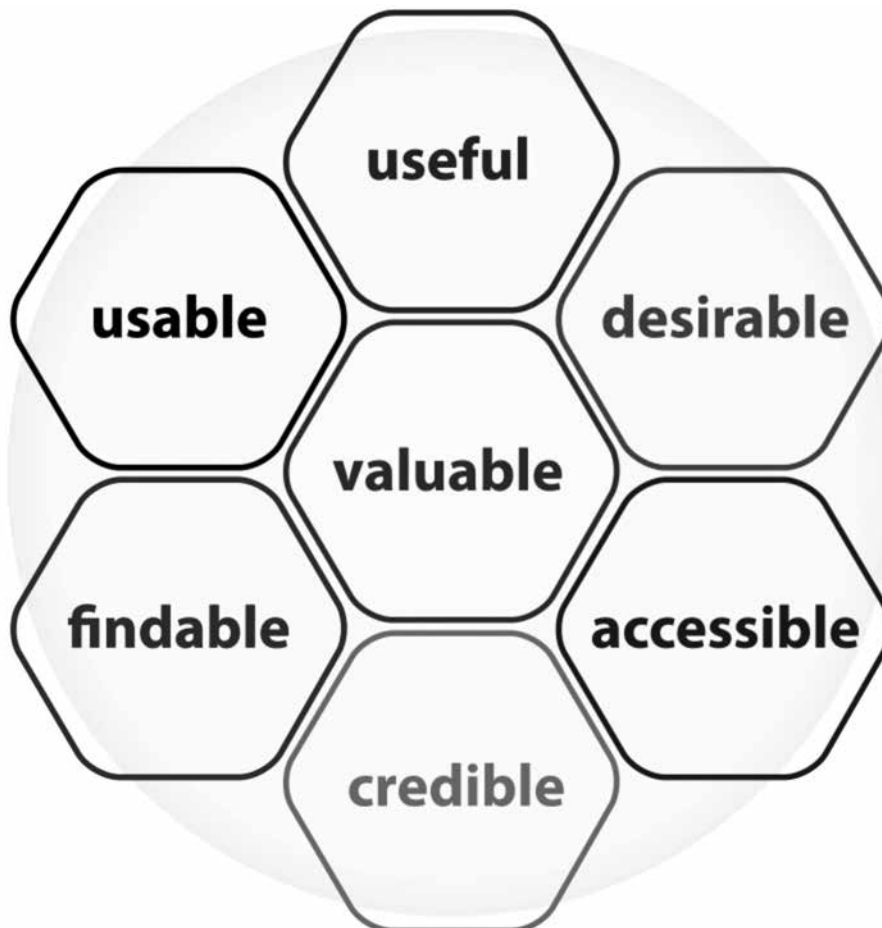
matter when talking about information services and today's information user. After completing this chapter, the reader should have an understanding of:

- what UX encompasses;
- the connections between user-centered design principles and excellence within key areas of information practice; and
- essential techniques for identifying, implementing, and assessing improvements in UX for information organizations, online or in person.

### **Beyond the Web: Defining UX More Broadly**

Usability—how effectively, efficiently, and satisfactorily a user can interact with a user interface—is an important part of UX. Many techniques and research methods exist to assess usability, including some that can be undertaken with limited time and resources, such as heuristic evaluation, in which a “small set of evaluators examine the interface and judge its compliance with recognized usability principles (the ‘heuristics’).”<sup>3</sup>

However, UX encompasses more than only whether an interface is usable. In 2004, information architect Peter Morville visualized the complex relationships between various key factors for UX in the user experience honeycomb (see Figure 16.1).<sup>4</sup>



**Figure 16.1. User Experience Honeycomb**

When designing for a good user experience, each of the facets within the honeycomb must be present. Bell also echoes the call to go beyond usability: “the user experience, from my perspective, is about much more than usability. It’s about designing an intentional, well thought-out experience that ensures the community member has a consistently great library experience at every touchpoint.”<sup>5</sup>

### TEXTBOX 16.1

#### Discussion Question

Debate has arisen in the profession as to what terminology is most appropriate to refer to the individuals served by our information organizations. What advantages or disadvantages do you see to adopting any of the following potential descriptors: user, constituent, customer, member, and patron?

### *Touchpoints, Channels, and More*

A touchpoint is a specific task interaction between a person and an information organization via one of many possible static, virtual, or human agents.<sup>6</sup> These agents are described as channels: “the medium of interaction between a customer and an organization.”<sup>7</sup> Not to be confused with devices, channels facilitate different modes of interaction or communication, even via a single device. To put this into perspective, check out Textbox 16.2 which demonstrates the various modes of interaction via a smartphone.

Many techniques can be applied to help consider, from the patron perspective, the experiences offered by these various touchpoints, channels, and paths. One of these is the journey map, “a graphic or written interpretation of an individual’s perspective of their relationship with a product or service.”<sup>8</sup> It is important to remember that although all the elements of the end user’s experience may not be directly within the information organization’s control, all aspects of the experience can and do have an impact on what feelings, thoughts, and judgments the end user takes away from their encounter.

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### *UX and Physical Spaces*

The physical location(s) through which information organizations provide access to collections and services constitute an essential aspect of the overall UX. The physical environments of an information organization yield more channels for us to consider: static (noninteractive) signage and displays; interactive signage and displays (e.g., a kiosk for wayfinding); or in-person interactions, to name a few. Layered together with the primarily digital channels discussed previously, this is a reminder that patrons routinely encounter an environment of cross-channel experiences, simultaneously interacting with multiple channels; for example, reviewing the online library catalog (a web application) on their mobile phone while viewing digital signage in a physical location (see also Chapter 12: Virtual Resources and Services). Considering the potential complexity of cross-channel experiences underscores the importance of this observation from Adam Richardson: “the more touchpoints you have, the more complicated—but necessary— . . . a [journey] map becomes.”<sup>9</sup> To maintain consistency for

## TEXTBOX 16.2

### Smartphone Channels

A smartphone allows someone to select whether they interact with their information organization via any (or all) of these seven channels:

- mobile app
- website or web application, such as an online catalog
- social media
- email
- text message
- telephone
- instant messaging service

That is a lot of channels!

cross-channel experiences, information professionals must ensure that physical and virtual environments are well integrated and present a compatible vocabulary, tone, and mood.

Information organizations may or may not directly manage services that are provided within their buildings; thus, the state of facilities—well-maintained, outdated, worn, convenient, awkward—may be outside the direct control of the information professional. In this situation, initiating renovations, coordinating custodial services, or even approving signage might be under the authority of a group external to the information organization.

Jennifer Poggiali and Stephanie Margolin highlight the often-overlooked role of restroom facilities in relation to an information organization's overall UX in their research, noting the importance of these facilities in "promot[ing] the comfort of our [users] and enabl[ing] them to study and learn within our libraries . . . our goal for all the areas in our libraries—even the lowly restroom."<sup>10</sup> In their most recent article, they present a checklist for assessing the condition of library restroom facilities, giving special attention to factors that support the needs of diverse users: transgender and gender nonconforming patrons, patrons with disabilities, commuting patrons, caregivers, or "those who might feel unsafe in multi-user restrooms due to their disability status, sexual orientation, race, or ethnicity."<sup>11</sup>

### Related Areas of Study and Practice

Designing for an excellent UX relates closely to several areas of study and practice, situated across various disciplines and professional specializations. This section highlights a few areas likely to provide insights applicable to the day-to-day work of information organizations and information professionals, specifically information architecture (IA) and interaction design, design thinking, service design and service blueprinting, and content strategy.

### IA and Interaction Design

Interaction design and IA share an emphasis on defining patterns and sequences in which options will be presented to users. IA deals with the options involved in conveying information to a user.<sup>12</sup> IA is often covered as part of an information technology curriculum and is closely related to LIS, among other disciplines.

Related to IA is interaction design, which is "concerned with describing possible user behavior and defining how the system will accommodate and respond to that behavior."<sup>13</sup> In *About Face: The Essentials of Interaction Design*, Cooper et al. clarify what is meant by design in this context: "Interaction design isn't merely a matter of aesthetic choice; rather, it is based on an understanding of users and cognitive principles . . . quite amenable to a repeatable process of analysis and synthesis."<sup>14</sup>

## ***Design Thinking***

In the freely downloadable document “Design Thinking for Libraries: A Toolkit for Patron-Centered Design,” design thinking (see also Chapter 26: The Design Thinking Process) is defined as follows:

Design thinking is a creative approach, or a series of steps that will help you design meaningful solutions for your library . . . a deeply empathic and intuitive process that taps into abilities we inherently all have but often overlook. . . . [it] relies on our ability to be intuitive, to recognize patterns, to construct ideas that resonate emotionally and rationally, and to be expressive through action.<sup>15</sup>

## ***Service Design and Service Blueprinting***

In a 2015 article on service design in libraries, Joe Marquez and Annie Downey define service design as “a holistic, co-creative, and user-centered approach to understanding customer behavior for the creation or refining of services.”<sup>16</sup> By cocreative, Marquez and Downey mean that information professionals work directly with patrons to identify issues, brainstorm solutions, create and test prototypes, and implement changes. Service blueprinting is related to service design and encompasses “understanding how a new or existing service integrates into the complexity of an interconnected library service ecosystem . . . provid[ing] a visual flow of a service operation.”<sup>17</sup>

## ***Content Strategy***

Kristina Halvorson and Melissa Rach define content strategy succinctly: “Content is what the user came to read, learn, see, or experience. . . . Content strategy guides your plans for the creation, delivery, and governance of content.”<sup>18</sup> Information professionals are deeply familiar with the many forms of content in the context of collections—but what about finding a unified voice across content created on behalf of the organization? A robust content strategy is a valuable tool in providing the best service to constituent communities of information organizations.

## **In Practice: Information Organizations and UX Design**

Although there are challenges and circumstances specific to the context of information organizations, the overarching principles and best practices for planning, creating, assessing, and maintaining an excellent UX are the same as they would be for any other organization. In their 2014 book, *Useful, Usable, Desirable: Applying User Experience Design to Your Library*, Aaron Schmidt and Amanda Etches outlined eight “Principles of Library User Experience Design” (see Textbox 16.3).<sup>19</sup>

### **TEXTBOX 16.3**

#### **Principles of Library UX Design**

1. You are not your user.
2. The user is not broken.
3. A good UX requires research.
4. Building a good UX requires empathy.
5. A good UX must be easy before it can be interesting.
6. Good UX design is universal.
7. Good UX design is intentional.
8. Good UX design is holistic.

Several of these concepts have already been touched upon in this chapter, such as the importance of intentional, holistic design and the value in conducting research about and with users to develop effective, useful, desirable products, and services.

### ***Expertise and UX Work: You Are Not Your User, and the User Is Not Broken***

Organizing, finding, preserving, retrieving, managing, and evaluating information in a variety of formats through numerous and varied systems is an expertise cultivated and developed by information professionals. In other words, information professionals have developed a body of knowledge and experience that causes them to perceive and interact with information and information systems differently than end users. There is a great deal of research outside the scope of this chapter that describes how differently experts and novices (in any subject domain, from information science to athletics) perceive questions, solve problems, and approach tasks. Although information professionals may use some of the same systems, collections, or techniques, “you are not your user.”

Bearing in mind the differences between information professionals’ and end users’ experience, knowledge, and approach to information retrieval helps in taking a broader, more holistic view of the journey of the end user and forms the foundation of the principle “The User Is Not Broken.” Ben Daigle stated in a 2013 article in *Public Services Quarterly*: “To develop services that are truly user-centered and, by extension, more compelling, useful, and valuable we need to validate our assumptions about how users discover information, how they manage what they do find, and how they use it by allowing them to show and tell us.”<sup>20</sup>

#### **Check This Out**

One approach for incorporating user-centric services is journey mapping. Check out Appendix 16:1 Journey Mapping Exercise in Part IV: Chapter 16 of the Online Supplement.

### ***Connections to Established Areas of Expertise in Information Practice***

UX design is, explicitly or implicitly, connected to all areas of expertise in information services including:

- *Access services*: direct patron contact through a variety of venues, policies, signage, and stacks management (see also Chapter 17: Accessing Information Anywhere and Anytime: Access Services).
- *Cataloging and metadata creation*: impact on patrons, mediated through catalog or discovery interfaces; findability is a key UX issue (see also Chapter 14: Metadata, Cataloging, Linked Data, and the Evolving ILS).
- *Collection development and management*: direct patron contact through a variety of venues; selection of materials (see also Chapter 27: Managing Collections).
- *Information and technology literacy instruction*: direct patron contact through a variety of venues (see also Chapter 18: Teaching Users: Information and Technology Literacy Instruction).
- *Reference and research support services*: direct patron contact through a variety of venues, reader’s advisory, policies, signage, and so forth (see also Chapter 13: Information Intermediation and Reference Services).

### **Key Skills: Potential Tools and Techniques**

Although there are technical skills and specialized knowledge that can be helpful to the practice of user-centered design, several key competencies are not technical in nature. These include curiosity, empathy, clear communication, and effective collaboration. With attention and practice, these skills

can be developed by any information professional in any role. The remainder of this chapter touches on each and presents potential tools and techniques related to each competency.

### ***Curiosity and the Five Whys***

A genuine interest in people is invaluable in any UX-focused work and indeed is crucial to success in any customer-service-oriented profession. This section presents a technique that relies on asking questions to reveal valuable data about user preferences and habits, called the “Five Whys.”

As the name suggests, this technique focuses on asking a series of “why” questions five times, the answer to one leading to the next question, as a method of enabling deeper understanding. The answer to each question forms the content of the next. For example:

1. Why was the patron angry? Because she did not expect the library to be closed when she arrived.
2. Why did she not expect the library to be closed when she arrived? Because the holiday hours were not clearly posted online.
3. Why were the special holiday hours not clearly posted online? Because no information about hours is visible on the home page.
4. Why are the hours not visible on the library home page? Because the information organization does not have permission to edit their home page.
5. Why can the information organization not edit their own home page? Because it is hosted and managed by the local municipality and can only be edited by the municipality information technology team.

For the preceding scenario, there are other lines of inquiry that could have been followed that might identify additional areas for improvement (e.g., Does the information organization have a social media presence where information related to special closures could also be shared?).

Marquez and Downey point out: “The ‘five whys’ technique also allows the team to differentiate between actual problems and symptoms. . . . Understanding the difference between problems and symptoms can help the research team decide where to focus their questions and how to address symptoms.”<sup>21</sup> In the preceding example, the symptom is a patron complaint about access to a building, but the underlying problem relates to information technology support. The Five Whys technique requires no funding and, in some cases, can be conducted without the direct involvement of patrons (if the answers can be determined by information professionals from data already available such as emails or via knowledge of processes).

### ***Empathy and Observation***

In her excellent book, *Practical Empathy*, Indi Young defines empathy as “an understanding you develop about another person . . . built through the willingness to take time to discover the deep-down thoughts and reactions that make another person tick. It is purposely setting out to comprehend another person’s cognitive and emotional states.”<sup>22</sup> This section describes a related technique called “observation,” which may be practiced by anyone, in any location, planned or undertaken spontaneously, and requires only some method of note-taking and few or no incidental costs (e.g., entry fees to a space, the price of a beverage).

Observation involves passively inhabiting a space for a period, actively studying what takes place in the space and recording those actions without reference to one’s own judgments or evaluations. How do people move through the space? How are the furnishings arranged? Is the space staffed, and do staff interact with the people visiting? Consistent observation in the same space will reveal varying daily, weekly, and seasonal patterns of usage and unexpected uses of space or furnishings that can give insights into unmet needs.

If observation is merely paying close attention to what is going on, why is that a special technique? The more familiar a person is with a space or process, the less their active attention is given to that space or process. The effect of familiarity compounds in shared spaces. This could explain why an unsightly, jumbled display of boxes and materials arranged on shelves behind a checkout counter is noticeable to customers but not to staff. Reasons could include: the staff are facing in the opposite direction; the shelves have ceased to become an object of attention; or it may be unclear who is responsible for maintenance of that area.

“ Being able to actively observe and record details without reference to one’s own assessments, judgments, or feelings about a situation is a valuable skill that must be consciously cultivated. ”

Secondly, being able to actively observe and record details *without reference to one’s own assessments, judgments, or feelings about a situation* is a valuable skill that must be consciously cultivated. Assessments by any individual are subject to that person’s experiences, biases, and preferences; if acted on prematurely, these individualized assessments of a space or process can lead to unnecessary, even costly, changes.

### ***Clear Communication and Writing with Your Audience in Mind***

Communication carries within its meaning both the act of sharing or transmitting information and the process by which the shared information is internalized by its intended audience.

Professor George Gopen of Duke University transformed his expertise in rhetoric into a practical approach to clear, understandable writing for highly technical disciplines in the sciences and law through focusing on one essential UX question: How does *the reader* experience the writing? Ensuring that sent communications clearly convey the intent of the communicator to the receiver is a matter of real concern at every level: “It does not matter how pleased an author might be to have converted all the right data into sentences and paragraphs; it matters only whether a large majority of the reading audience accurately perceives what the author had in mind.”<sup>23</sup>

In *Writing Effectively in Print and on the Web*, Rebecca Blakiston suggests that personas, the creation of fictional characters that represent your audience (a tool often used in other aspects of UX work), can also be useful when writing copy directed at end users: “When implemented well, you can bring personas into conversations and decision making to ensure you are always keeping the user in mind.”<sup>24</sup>

Best practices before beginning a piece of writing of any size or complexity include asking the following three questions:

- *Consumer*: for whom is the message intended?
- *Context*: what level of familiarity does the reader have with the information being conveyed?
- *Channel*: what are the expectations for the method of transmission (e.g., email, newsletter, report) chosen to communicate the message?

### ***Effective Collaboration and Agile Development Methodology***

UX work is commonly project based, even when ongoing, and frequently involves multiple stakeholders from within and outside the organization (colleagues and patrons). Skills, such as strategic planning (see also Chapter 21: Strategic Planning), data analysis (see also Chapter 29: Data Management, Analysis, and Visualization), and change management (see also Chapter 22: Change Management) are essential to managing projects successfully. Successful projects require effective collaboration. Familiarity with project management techniques can establish a productive structure in which a project can move forward with fewer obstacles. One project management technique is called Agile.<sup>25</sup> Agile development



#### TEXTBOX 16.4

##### Key Components of Agile Methodology

- User stories, or discrete descriptions of tasks or features from the end user's point of view.
- A set, repeating period in which work hours available to be used for the project are defined and in which work on user stories is scheduled accordingly.
- Well-defined process and participant roles to facilitate clear communication and open collaboration.

methodology is a structured, collaborative, and iterative process in which a product or service is developed incrementally with continuous feedback from the intended users (see Textbox 16.4).

Although often associated with information technology projects, Agile methodologies (e.g., "scrum," "Kanban") can be adapted widely; and while there are limitations, the Agile framework has been successfully employed in information organizations across a range of areas, including collections work and electronic resources management,<sup>26</sup> digital collections and technical services,<sup>27</sup> and strategic planning.<sup>28</sup>

#### TEXTBOX 16.5

##### Discussion Question

Many factors that could contribute to a potentially unpleasant UX are outside of the control of any organization and its staff. For example, a crowded store on a wet, blustery day around rush hour might have several inherent disadvantages to overcome. With this in mind, what actions might we take to mitigate external factors and increase the likelihood that our visitors, online or in person, have an excellent experience with our information organizations even in potentially difficult circumstances?

## Conclusion

From the front door to the seating, lighting, and restrooms, to how the books or films are shelved or where someone clicks to find them, each aspect of the building and the environment and every interaction with an information professional is part of every patron's UX. A user-centered approach enables information professionals to consider the spaces, materials, and services provided by information organizations from an outside perspective—the perspective of constituents—and to consciously work to construct experiences that effectively and productively engage with users wherever they are and whatever their level of expertise in information retrieval.

Hallmarks of the user-centered information organization include a willingness to evaluate and reevaluate the content, scope, method, and extent of resources and services offered to patrons and an openness to inviting patrons to participate in cocreation of services. These qualities are also essential to the sustainability of information organizations in the future and therefore become essential competencies of today's information professional.

An information organization exists for the benefit of a specific, situated community, and so any service, resource, or system must center their experiences and expectations: "We must remember always to question ourselves and our definitions of what makes a more usable system in order to hope to be trustworthy arbiters of what constitutes a great user experience."<sup>29</sup> In the long term, the relative

success of the information organization must be in reference to its responsiveness to the needs of its own unique constituency—to developing an excellent UX.

## Appendix

Check out the following appendix in Part IV: Chapter 16 of the Online Supplement.

- Appendix 16.1 Journey Mapping Exercise

## Notes

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