



# User Experience in the Library Science Perspective

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**Abstract.** The understanding of the concept of user experience is different depending on the scientific point of view to study it. User experience design implies a commitment to a user-focused approach to the development of systems, products or services. This article aims to find the state of user experience in the field of library science. The method used is semi-systematic or narrative review approaches. User experience in library perspective is broadly defined to encompass the entire user experience with a library. This domain is closely related to the concept of human-computer interaction and the methods used in user experience refer to the field of anthropology. User experience researchers do this through a combination of quantitative and qualitative techniques with ethnographic and qualitative methodologies.

**Keywords:** User Experience; Human-Computer Interaction; Anthropology; Library.

## 1 Introduction

User experience is used in various scientific fields, including in anthropology, human-computer interaction and also in the library field [1]. User experience design is the process of improving user satisfaction by increasing the usability, ease of use and enjoyment provided in the interaction between the user and the product [2].

A handful of user experience practitioners in libraries have begun to promote a deeper study of individual activities and needs [3]. Basically, user experience in libraries remains a theoretically weak practice, set to solve complex problems with practical solutions. User experience would benefit from a deeper engagement with user-centered theories emerging from the perspectives of library and information science and human-computer interaction.

Based on the work of several library user experience practitioners who began to question the assumptions and value of library user experience, as well as literature from anthropology, human-computer interaction, and library science, this article unpacks and questions the origins and value of user experience with the aim of describing the implications for the library. This article considers how the concept of user experience, derived from anthropology, and human-computer interaction, has been adapted in library research, and then focuses on the basic concept of user experience. This article also examines the methods that have been used to develop and implement user design tools.

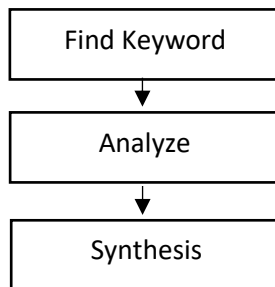
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The development of user experience studies comes from the social science discipline, then adopted by cognitive science, engineering, human-computer interaction, anthropology, psychology, and sociology [4]. User experience is often closely related to the concept of usability [5]. Now, user experience also used in library science, so the aim of this research is to find the state of user experience in the field of library science.

## 2 Methods

Semi-systematic or narrative review approaches are designed for topics that have been differently conceptualized and studied by different groups of researchers in different disciplines and that hinder a full systematic review process [6]. This means that it is impossible to review every article relevant to the topic, so different strategies must be developed. There are several examples of articles using this approach published in business journals. While aiming to review a topic, semi-systematic reviews often look at how research in a particular field has progressed over time or how a topic has developed within a research tradition. In general, this review seeks to identify and understand all research traditions that are potentially relevant and have implications for the topic under study and to synthesize them using meta-narratives rather than measuring effect sizes. It provides an understanding of a complex field. However, despite covering a wide range of topics and different types of research, this approach argues that the research process should be transparent and should have a research strategy developed that allows readers to assess whether the arguments for the judgments made are sound, both for the chosen topic and for the research from a methodological point of view.



**Fig 1.** Research process

A number of methods can be used to analyze and synthesize findings from semi-systematic reviews. This method is similar to the approach used in qualitative research in general. Thematic or content analysis is used to identify, analyze, and report patterns in the form of themes in a text.

This analysis can be useful for detecting themes, theoretical perspectives, or common issues within a particular discipline or research methodology or for identifying components of a theoretical concept. The potential contribution of this research to mapping a field of research, synthesizing knowledge, creating an agenda for further research, or providing a historical overview or timeline of a particular topic.

### **3 Result and Discussion**

#### **3.1 Definition**

User experience is the concept of how users interact with products or services used by users [7]. This experience reveals the user's feelings in using the product. Important aspects considered in user experience focus on user experience in terms of reactions, emotions and perceptions of systems, products or services [4]. User experience in library perspective is broadly defined to encompass the entire user experience with a library [2].

User experience design includes human-computer interaction design, and extends it by addressing all aspects of the product or service as experienced by the user. This includes the construction and use of specific design tools such as personas, scenarios and usage models, which synthesize and contextualize the goals, needs, wants and behaviors of the users of the system, product or service in a memorable and empathetic way [8] [9].

One of the most prominent definitions of user experience is presented by the Nielsen Norman group. Nielsen determined that user experience happens through meeting the real needs of the user and through products that are fun to use. The Nielsen Norman Group definition equates user experience with satisfaction, the degree to which user expectations of a product, service or system are met [4]. User experience is thus distinguished from usability through a focus on holistic interactions rather than interactions uniquely mediated by interfaces. User experience is seen to have emerged from a growing awareness of the limitations of usability frameworks, which focus primarily on user cognition and user performance in human-technology interactions.

This idea positions the user experience as an individual phenomenon rather than a shared experience as an individual who can have feelings and experiences. Meanwhile, the International Organization for Standardization (International Organization for Standardization) brings a more pragmatic focus to understand the user experience by emphasizing brand image, presentation, functionality, system performance, interactive behavior and assistance capabilities of the system, product or service as well as user internal and physical conditions [4]. By combining marketing principles and industry practices with the non-utilitarian aspects of user experience, this definition provides the first indication of some of the tensions and contradictions that compose the narrative of user experience.

### **3.2 Domain**

The user experience domain focuses on how to design technology-related products, systems and services. This domain is closely related to the concept of Human-Computer Interaction [8]. User experience work in libraries includes usability testing but not design [2]. The methods used in user experience refer to the field of anthropology.

Most user librarians might be better classified as user researchers than user designers because they share a user-centered mindset and many shared responsibilities that include user research, usability testing and space/service evaluation [2]. However, each user experience librarian is also somewhat unique in how they approach and describe their work, perhaps stemming from differences in their academic and professional backgrounds, their ability to balance user experience work with other library responsibilities, their level of authority within their organization, and their path to learning user experience and becoming user experience librarians.

### **3.3 Measurements**

As libraries continue to strive to continuously improve the user experience, libraries must develop measures that are more meaningful than the traditionally selected and reported measures. There are several prominent examples and strategies that have been used by libraries for this purpose [10]. Most libraries focus on the user approach to study how to learn, the use of digital and print collections, to their interaction with the design elements of the library space, to the interface with library programs and services [5][11]. All of them fall under an umbrella that touches the core of human behavior itself; including anthropology, psychology, information science, and library science. User experience is now emerging in the library field as well with interesting cross-sector adoption. By looking at problems and challenges in libraries through the filter of user experience, libraries can apply new techniques and approaches to old problems, thereby developing new strategies [1].

Librarian experience in various contexts User experience studies use a user experience approach to study academic reference librarians [2] and library interfaces [12]. The measurement of this study uses semi-structured interviews to gain a richer understanding.

The measurement of user experience generally uses questionnaires that measure pure usability aspects, for example, the system usability scale and software usability measurement inventory. Questionnaires that include broader aspects of user experience, for example, the visual aesthetics of website inventory, user experience questionnaire, and standardized user experience percentile position questionnaire (rank questionnaire). In principle, user experience questionnaires with total scores can be divided into two different categories: those that have only one overall result and those that calculate the overall result as the average of the subscales [13].

Below is an example of a user experience questionnaire that only provides a total score. Some questionnaires contain only one item, so the answer given to this item is the same as the overall result [13].

- 1) Brooke [14]: system usability scale with ten items
- 2) Sauro et al. [15]: subjective mental effort questionnaire
- 3) Sauro et al. [15]: single ease question with one item

User experience researchers do this through a combination of quantitative and qualitative techniques. With ethnographic and qualitative methodologies (such as participant observation, interviews or focus groups) being the most popular [10] [5].

## 4 Conclusion

This article examines and challenges the origins and value of user experience with the goal of outlining the implications for libraries. It is based on the work of several library user experience practitioners who started to question the assumptions and value of library user experience, as well as literature from anthropology, Human-Computer Interaction, and library science. After discussing how the idea of user experience—which originated in anthropology and human-computer interaction—has been used to library research, this article concentrates on the idea at its core. The techniques used to create and use user design tools are also covered in this article.

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