

---

## Library Online Resource Understanding And Practices By University Students: A Observational Review

**Chandra Chary Sreeramoj, Dr .M. Sadik Batcha**

---

<sup>1</sup>Research Scholar,DLIS, Annamalai Nagar, Annamalai University, Tamil Nadu [chandrachary81@gmail.com](mailto:chandrachary81@gmail.com)

<sup>2</sup>Professor and Head DLIS, Annamalai Nagar, Annamalai University, Tamil Nadu [batchadlis@gmail.com](mailto:batchadlis@gmail.com)

---

**How to cite this article:** Chandra Chary Sreeramoj, M. Sadik Batcha (2024) Library Online Resource Understanding And Practices By University Students: A Observational Review. *Library Progress International*, 44(3), 4223-4232.

---

### Abstract

In the digital age, university students are progressively reliant on internet tools to aid their academic activities. Understanding and exploiting these resources is significant to academic performance and research efficiency. The purpose of this observational study is to evaluate how university students use and comprehend library internet resources. This review sheds light on how students interact with digital library tools and resources by inspective current usage trends, difficulties encountered, and techniques used. The findings are designed to inform educators and librarians about the areas where students may necessity further support and coaching to develop their information literacy and resource use abilities. This study performs a systematic observation and analysis of student interactions with online library technologies such as database searches, e-books, and digital journals. The review uses association of direct observation, user surveys, and data analysis to classify common patterns, obstacles, and opportunities for development in students' engagement with online library resources. The findings identify a variety of activities, from proficient usage to significant knowledge gaps, and provide ideas on how libraries might improve user support and training. This analysis intends to provide actionable recommendations for librarians and educators on how to increase the effectiveness of online library services and students' academic outcomes.

**Keywords:** Online library resources, University students, digital journals, e-books, observational review.

---

### 1. Introduction

University libraries provide a range of services pertaining to information requirements with the goal of promoting education, research, and community service. To improve the learning process, teachers and students require academic works, journals, and other information sources, particularly electronic ones [1]. However, previous surveys indicated that university libraries' electronic resources need to be enhanced. Cognitive and emotional obstacles, such as insufficient support, restricted navigation options, and frequent failures using electronic resources, can cause user anxiety [2]. Although emotions are necessary for problem-solving, this situation is undesirable since it impairs the quality of academic research and effective teaching, thereby lowering university lecturers' professional output and overall university productivity [3]. This review aims to identify the e-resource users' interests and frustrations based on the aforementioned problems. The study's output will take the form of user profiles for electronic resources in university libraries. The e-resource system will then be designed based on these profiles and the preferences of the e-resource users. The persona technique will be used to create the user profiles.

A persona is a technique for communicating distinct aspects of a product, component of software, or system design [4]. Human-computer interaction (HCI) researchers have concluded that personas are beneficial [5-8]. Personas are a technique in user experience that aids in comprehending the viewpoint of users. The final user currently has assumptions about what they desire. However, information on user demographics, product usage motivations, and prospective future changes may lead to conflicts between user segments and real users [9]. End users maintain that data is based on real data and think that discrimination is a mental image of users. Furthermore, there is no user-centeredness in the decision's consequence. In

order to accurately portray reported factual data and address information gaps regarding the user, personas integrate the user's attributes and interests [10].

Since the researchers have not agreed upon a metric, adopting and using personas through qualitative methodologies presents a challenge regarding the correctness of the personas. In persona analysis, accuracy is determined by averaging user characteristics [11]. Personas are a user-centered approach to determining and communicating the goals and demands of diverse user categories. They can be created by qualitative or quantitative means, which include writing persona narratives and descriptions, segmenting and classifying data, and gathering user information. Data collection involves not only surveys, questionnaires, and interviews but also leveraging existing data. Both quantitative and qualitative methods of data analysis are used, such as k-grouping mean, decision trees, and latent semantic analysis. The creation of a narrative occurs once the study has identified the persona's characteristics. The persona now has a name, a set of attributes, an image, a story describing its qualities, and, in certain cases, a brief document. While persona narratives can be used for verification, researchers can attempt additional verification methods (e.g., cross-referencing member data with interview data) to ensure further validation. It's essential to remember that there is flexibility in applying these techniques, and their actual usage can vary [12].

A digital library can be thought of as a collection of enormous amounts of excellent digital content stored on several servers and devices in formats that allow access over various electronic networks in a dispersed setting. The digital library's objective is:

- To collect, organize, and arrange knowledge and information in digital format.
- To encourage economical and effective information delivery.
- To maximize the significant expenditure on computer and communication infrastructure.
- To improve cooperation and communication between the sectors of education, business, government, and research.
- To provide a lifetime of opportunities.

The optimal functioning of a digital library occurs when it is an essential component of a library that gives users access to content that has been assessed, arranged, and conserved in the most practical ways. Figure 2 shows the basic structure of a digital library. Web 2.0 tools have created new ways of learning, teaching, and information sharing among information users. Digital libraries gained popularity as Web 2.0 technologies such as wikis, blogs, audio blogging, podcasting, tagging, social bookmarking, multimedia sharing, RSS feeds, syndication, mashups, and social networking sites become more commonplace. Libraries are social institutions that have always kept up with the latest technological advancements. They are also places where people can freely access information and exercise their right to free speech. Other cultural institutions and associations have responded to the challenge posed by social networks by creating and launching pages and profiles on various social networks.

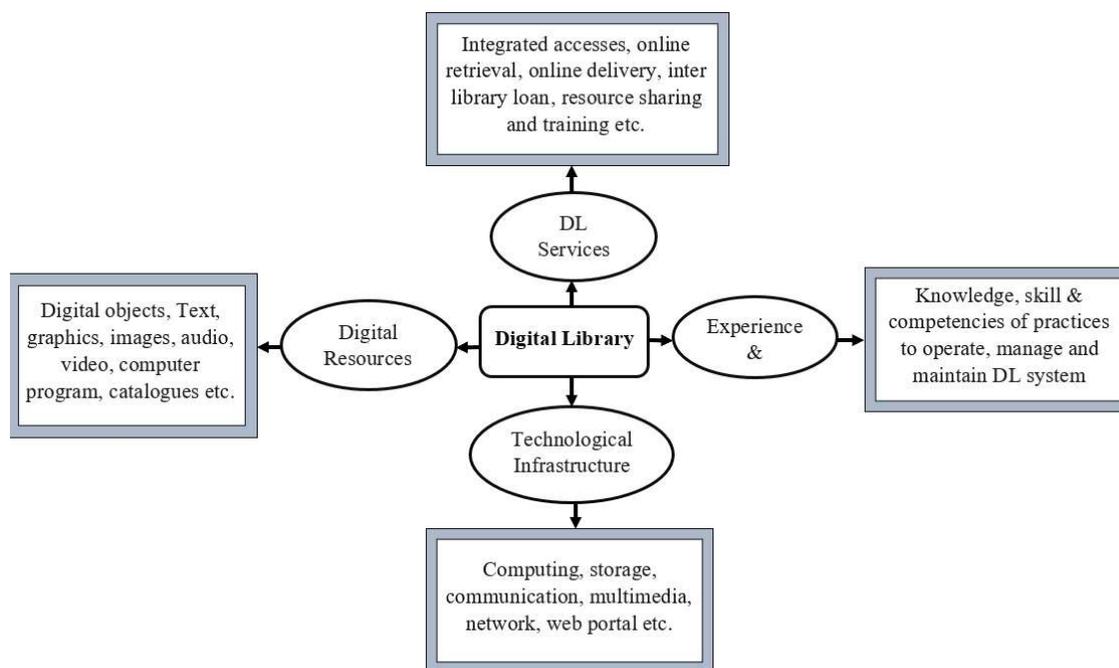


Figure 2: A Basic Structure of Digital Library

The major contribution of this research

- To improve and provide a thorough examination of the ways in which college students already make use of online library resources. This entails determining the resource categories that are most commonly accessed, their intended uses, and how frequently they are used.
- The study identifies limitations in students' knowledge and effective use of online library resources. It identifies areas where students lack knowledge or abilities, which can help shape future educational programs and support services.
- Finally, based on the results, the study provides practical recommendations for enhancing the usability, accessibility, and availability of online library resources. These suggestions may assist university libraries in improving their services to better meet the needs of students.

## 2. Review of Existing Library Online Resource Understanding and Practices by University Students

The literature on university students' knowledge and use of online library resources identifies several main elements. According to studies, while students understand the relevance of these tools for academic performance, their ability to navigate and use them effectively differs greatly. Factors impacting this include the degree of training provided, the usability of library interfaces, and students' past experience with digital research tools. Research also indicates that personalized teaching sessions and continuing support can considerably improve students' skill and confidence in using online library resources. Additionally, including these materials in the curriculum has been standard to progress engagement and academic performance. However, issues such as digital literacy gaps and disparities in access to technology persist, demanding continual efforts to bridge these divisions and ensure equitable utilization of resources.

Six spatial variables that have been studied and found to affect student users' learning experiences are detailed by Peng et al. [13]. In order to assess user satisfaction with the most recent spatial renovations at three university libraries located in Wuhan, China, they developed a theoretically and practically grounded conceptual analytical method. Using the statistical program SPSS, multiple linear regression was used to analyze spatial satisfaction. The results demonstrate that the availability of service facilities, the standard of interior design, the physical components of the environment, spatial diversity, and the controllability of the learning space are the five spatial characteristics that have the most impact on students' happiness with library space. The primary determinant of spatial satisfaction is the accessibility of service facilities

A service quality model for university libraries is presented by Ho et al. [14] and is based on the Parasuraman, Zeithaml, and Berry (PZB) framework. The study used the Analytic Hierarchy Process (AHP) alongside with an expert questionnaire to ascertain the expectations of students regarding the quality of library services. Despite its concentration on postgraduate student-oriented university libraries, this survey, which included 44 graduate institutions, might not accurately represent the situation of other kinds of libraries. This study identified responsiveness, tangibility, reliability, assurance, and empathy as aspects of service quality in order of significance. "Staff members are unwilling to assist students. The facilities of the library are appropriate for the services provided, but staff members are unable to serve students promptly. Of the twenty-two assessment criteria, these are the first three.

In their study, Scoulas et al. [15] examined how faculty views have changed over time, with a particular emphasis on how these views differ based on whether the library's resources are used for teaching, research, or clinical practice. According to the study, the most important resources for faculty members' research activity were databases, online journals, and Interlibrary Loan (ILL). Another significant study showed that academics in the social sciences valued subject-matter librarian assistance more highly than those in the physical sciences.

The University of Jammu library's resources and services are used by students in a way that is thoroughly described and shown by Singh et al. [16]. Google Forms was utilized to develop the questionnaire, and MS Excel software was employed for additional data analysis. A total of 310 students answered the survey's questions and provided comprehensive information. The majority of respondents, 33.17%, used the OPAC search to locate documents in the library. Moreover, 31.01% of the respondents reported using internet resources to find the information they necessary, as these resources frequently contain the most recent and targeted information.

A second study by Mani et al. [17] looked at how students used electronic resources in relation to ICT competency and library infrastructure. The study discovered that the presence of a strong library infrastructure and students' ICT skills affected how they used e-resources. The study also found that most students believe accessing e-resources creates it simpler for them to access a wide range of information sources and obtain the knowledge they necessity.

Using an encoder-decoder technique, Firdaus et al. [18], Holt et al. [19] created a persona-aware attention framework for conversational automated systems. The framework seeks to incorporate desired emotions Saidatulet al. [20] into replies, thereby increasing their engagement, human-like quality, and interactivity. This suggested framework performs better than the baseline model in experiments conducted with the PersonaChat dataset, which may encourage more engaged and emotionally charged responses.

Zaugg [21] successfully discovered and built the undergraduate patron persona as well as produced a notion of the library patron persona through collaboration with communications students. Survey, interview, observation, and anthropological methods were all used to achieve this. The study identified ten personas, or user focus groups, that utilize different library services.

While such a delineation of the information specialist's position is undoubtedly feasible, it presents two important problems. Firstly, rather of being only a specialized job, Beverley et al. [22] proved that the role of the information specialist is a fundamental requirement for all scientists. In addition to the previously listed characteristics, this position could also call for other traits unique to certain professional domains. The role of an information expert is thus very similar to the concept of information literacy, or scientific literacy as described by the American Library Association. The study in question is limited to a single discourse, specifically the medical discourse, which presents a challenge to expanding the function of information specialists. This brings us to our second concern. However, Beverley et al.'s approach fails to recognize technology's function as a driving force behind industry improvements and changes.

Information specialists are a kind of "meta-scientist," and Miller et al. [23] has stuck to this theory, emphasizing that their job in libraries is to advance scientific inquiry. She argues that they should get involved in teaching and develop alliances between specialized scientists and information specialists. The author views the library in this particular context as a service provided by information workers to academic institutions.

Three distinct discourses have been identified by Engineereret al. [24] iHumanists, librarians supporting research, and information professionals. Individuals in the final group are regarded as autonomous scientists and full members of the scientific community. The authors pointed out that although the first two discourses are conventional, they do not accurately represent the demands of the world as it is at the moment. Information humanists, or iHumanists, are

knowledgeable in three primary areas: the first is the capacity to analyze intricately interwoven systems from a comprehensive perspective; the second is methodological expertise; and the third is technology.

The study "Evaluation of Library Services and Facilities by the Students of BLDE (DU) during the COVID-19 Pandemic," conducted by Acharya and Kumara et al. [25], reports that 35% of survey respondents were men and 65% were women. Remarkably, most of the 35 respondents only sometimes went to the library. Furthermore, the majority of participants (58%) stated that they spent four to five hours a day in the library, mostly conducting research. Eighty-three percent of respondents used the library to check for plagiarism, compared to ninety-nine percent who used it for book circulation. Eighty-two percent of the respondents connected to the central library's online resources through remote access. Most of the respondents (78.8%) utilized the PubMed databases to cater to their information needs, followed by 68.2% of respondents who used the institutional repository, while OPAC was used by 50% of respondents. According to the authors, the central library's services were considered satisfactory by 98% of the respondents. 99% of respondents said they were satisfied with the efforts and labor of the library staff.

Postgraduate students at management colleges connected to Karnatak University, Dharwad, were polled by Farooqui et al. [26]. The authors chose six management colleges for their investigation. They used a survey-based approach to gather respondents' comments. To obtain the necessary information, the majority of respondents (36.36%) went to the library twice a week. The authors' findings indicate that the main reasons respondents went to the library were to borrow books (79.09%) and to read (68.18%). The assortment of books and other items at the library met the requirements of at least 53.64% of the respondents. According to the study's results, 71.36% of participants indicated they preferred to use the library's circulation services to get the shows they required to fulfill their information needs. Of those surveyed, 53.41% expressed satisfaction with the library's offerings. The greatest percentage of respondents (59.31%) used the internet, while 50.45% used email.

Amarsekara et al. [27] carried out a survey to gauge how satisfied patrons and students were with the resources and offerings of the Open University of Sri Lanka's main library. The poll sought to assess respondents' satisfaction with the range of services and resources provided by the library. A total of 357 respondents, including both university staff and students, were included in the sample size. Eighty percent of the respondents were taking numerous undergraduate courses. The uppermost number of responses came from the Faculty of Natural Sciences, making up 41.45% of the faculty responses. The age range of 26 to 35 years old comprised the common of study participants, accounting for 80%. Attending the library was how 71.4% of the respondents used its resources. Between the respondents, 111 (36.9%) designated that they used the computer most frequently when obtainable multiple options. The total user satisfaction at the university had a mean of 3.79 and a median of 4.00.

Rao et al. [28] described this study, researcher has studied in keeping view of objectives to extent awareness about the availability of e-books, preference to format, perception regarding e-resources in future etc. For getting the trueness by the parents from (JNU) Javaharlal Nehru University, Delhi, study is conducted and applied the survey method for collecting the opinion data through questionnaire. In this study, Likert's five scale of five points and Kendalla tau-c test statistical technique is used to analyze data. Study identified that majority students with rate of thirty two are still strongly agreed with print materials whereas least numbers are positively with e-books. Further, it is found that 77.7 % respondents preferred e-books and used laptop as reading instrument. In this way, Users' perception about the usage of electronic resources especially e-books is found interesting.

Kato et al. [29] have to define success criteria and pinpoint the essential technological elements of digital library resources in order to build and execute a successful electronic library resource system. This article describes the many kinds of IT used in electronic libraries and how user happiness is affected by them. These comprise the following: easy and free access to information; an intuitive user interface; efficient communication; quick Internet speed; a performance-guaranteed service; ease of communication through social networks; and acquisitions driven by customers. In view of these essential components of DL services, the importance of the DL utilities' usability and the availability of online information has increased. In order to ascertain the usability of DL services, a number of research studies were reviewed and evaluated. Blacklight, an open-source tool, was then used to create the DL discovery system.

The study by Kumara et al.[30] delves into the ways in which academics have utilized reading lists, namely the notes function. As a first step in our mixed-methods investigation, we surveyed professors and researchers about their use of reading lists. We found that the reading list setup process could be more streamlined, that the interfaces could be more user-friendly, and that there needed to be more integration with other systems that assist with instruction. The next step

was a year-long log analysis of note-taking activity. Our log analysis revealed that faculty members seldom make use of the note function. To make the systems more user-friendly, we suggest re-engineering the user processes and finding better ways to include the notes function into classroom instruction.

**Table 1** Comparative study of different security based solutions for multcloud environment

References	Year	Objective	Models used	Title
Peng, et al.[13]	2022	To compare and evaluate student experience and satisfaction with academic library services across three universities in Wuhan.	Statistical software program (SPSS)	A comparative analysis of three Wuhan universities' experiences and satisfaction with academic libraries
Ho et al.[14]	2023	The goal of this pilot study is to identify and implement effective service quality approaches and practices to improve library administration.	Analytic Hierarchy Process (AHP)	A Pilot Study on Service Quality Techniques and Approaches to Improve Library Administration.
Scoulas et al.[15]	2023	At a public research university, the goal is to evaluate faculty views, use, and needs related to library resources and services.	-	At a public research university, the needs, views, and usage of library resources and services by faculty members
Singh et al.[16]	2022	The goal of this study is to assess the degree and effectiveness with which students at the University of Jammu use library resources and services.	OPAC search	Usage of the Library Resources and Services by students of University of Jammu: An Evaluation
Man et al.[17]	2019	To investigate the relationship between students' familiarity with ICT and the facilities offered by libraries as an infrastructure and their use of electronic resources.	Confirmatory factor analysis (CFA)	An Empirical Investigation on the Effect of Library Infrastructure and ICT Proficiency on Students' E-Resource Utilization
Kumara et al.[25]	2022	BLDE (DU) library services and facilities during the COVID-19 epidemic were evaluated for their use and satisfaction by students.	BLDE (DU)	Evaluating the Impact of Students' ICT Proficiency and Library Infrastructure on Their Utilization of Electronic Resources: An Empirical Study
Farooqui et al.[26]	2022	To analyze the usage patterns and satisfaction levels of post-graduate management students with the library services at colleges affiliated with Karnatak University, Dharwad.	-	Using Library Services as Postgraduate Students at Management Colleges Affiliated with Karnatak University, Dharwad
Amarasekara et al.[27]	2022	Through an extensive survey, determine how	-	A study was carried out at the main library of the Open

		satisfied users are with the materials and services offered by the Open University of Sri Lanka's main library and work to make improvements.		University of Sri Lanka to assess user satisfaction with library resources and services.
--	--	---	--	--

### 3. Discussions and future directions

The main conclusions of the study conducted by Kumara et al. [27], which evaluated the library resources and services used by postgraduate students at BLDE (DU), will be covered in this talk. A self-made survey distributed via Google Forms was completed by 66 of the 100 postgraduate students who were chosen at random. The results showed that almost all of the respondents were aware of the central library's different resources and characteristics. The most popular service among postgraduate students was circulation, followed by plagiarism detection and material search services. Based on the study's findings, the survey suggests encouraging customer satisfaction ratings. Moreover, training sessions on the proper utilization of library services must be regularly held by library management. By investigating how library resources and services are used during pandemics like COVID-19, our research adds to the body of knowledge, practice, and policy.

Table 1: Satisfaction with Library Services and Facilities during the Pandemic.

Library Services & Facilities	Excellent	Very Good	Satisfactory	Average
Library environment	15	40	10	1
Library timing hours	10	35	12	9
Library Staff cooperation	15	44	6	1
Library Facilities	13	40	11	2
Library Services	26	33	6	1

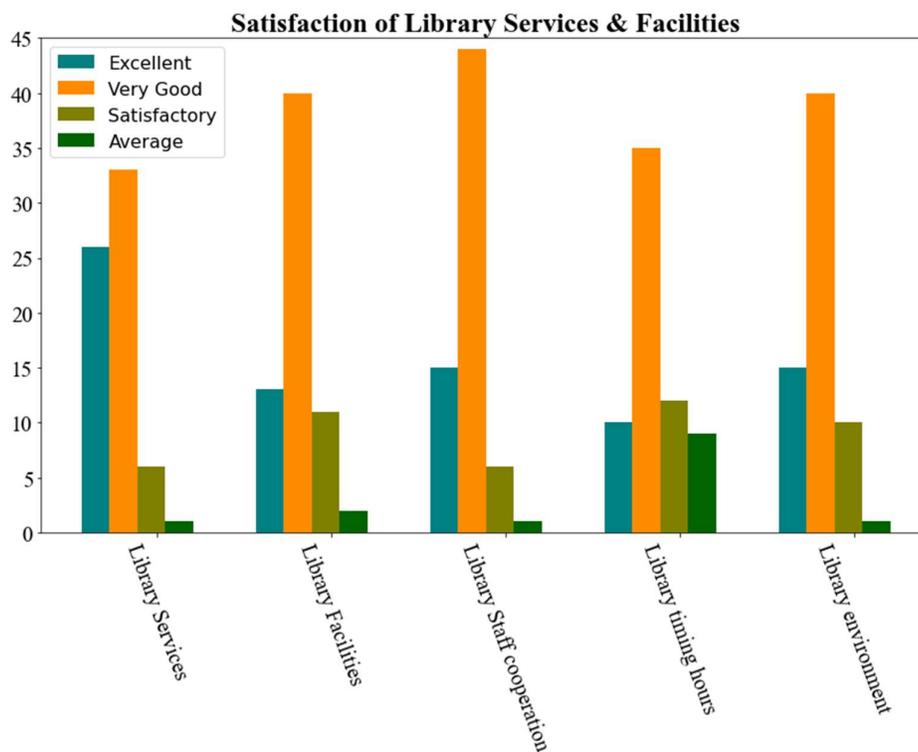


Figure 1: Satisfaction with Library Services and Facilities during the Pandemic.

With only 2% expressing discontent to the extent that they thought the services were merely ordinary, Table 1 and Figure 1 clearly show that, during the outbreak, 98% of respondents were satisfied with the services provided by the Central Library. Furthermore, 97% of respondents (64) expressed varied degrees of enjoyment with the amenities given by the Central Library, compared to just 3% of respondents (two) who expressed some degree of dissatisfaction with them. Self reports that during the pandemic, 99% (65%) of respondents expressed satisfaction with the Central Library staff's cooperation. In contrast, a solitary participant reported that the Central Library staff's cooperation was just mediocre during the pandemic. Throughout the epidemic, the central library remained open thirteen hours a day, from eight in the morning until nine in the evening. Just nine respondents (14%) expressed dissatisfaction with the library's opening hours, compared to 86% who expressed varying degrees of satisfaction.

The survey found that postgraduate students are aware of a wide range of library services. Borrowing library resources is the most loathed service, and customers make efficient use of similarity checks. Clients struggle to use library services due to a shortage of current books and publications. In addition, an unstable force supply is identified. The following proposals are based on the examination results. Library administrators should purchase current books and magazines. Offer an alternative power source, such as solar energy. Furthermore, the library environment should encourage service utilization. An air conditioner setup should be acceptable. Conduct a comprehensive client satisfaction survey to identify service estimates and areas for improvement. The library authorities should conduct initiatives to raise customer awareness of the various services provided. This will help to enhance the library's image. The benefits of using the resources and services offered by libraries will be revealed to patrons. Because of its initial phase, the study included a small number of participants. The results might not be broadly relevant because the study is limited to postgraduate students at BLDE (Deemed University).

#### 4. Conclusion

In conclusion, this observational review underscores the critical role of online library resources in the academic journey of university students. Through a comprehensive analysis of current practices and understanding among students, several key insights have emerged. Firstly, the integration of digital platforms within library services is pivotal in catering to diverse learning styles and preferences. Secondly, while students demonstrate varying degrees of familiarity and utilization of online resources, there remains a need for targeted educational initiatives to enhance digital literacy skills. Furthermore, the findings highlight the importance of ongoing assessment and adaptation of library resources to meet

evolving academic needs effectively. Ultimately, this review advocates for continued research and collaborative efforts to optimize the usability and accessibility of online resources, thereby enriching the scholarly experience for university students in the digital age.

## References

- 1) Rohmiyati, Y., Wook, T. S. M. T., & Sahari, N. (2021, October). The Usage of Electronic Resources in Libraries. In *2021 International Conference on Electrical Engineering and Informatics (ICEEI)* (pp. 1-5). IEEE. <https://doi.org/10.1109/ICEEI52609.2021.9611098>
- 2) Giachanou, A., Rosso, P., & Crestani, F. (2021). The impact of emotional signals on credibility assessment. *Journal of the Association for Information Science and Technology*, 72(9), 1117-1132. <https://doi.org/10.1002/asi.24480>
- 3) Rafi, M., JianMing, Z., & Ahmad, K. (2019). Evaluating the impact of digital library database resources on the productivity of academic research. *Information discovery and delivery*, 47(1), 42-52. <https://doi.org/10.1108/IDD-07-2018-0025>
- 4) Barton, H. J., Pflaster, E., Loganathar, S., Werner, A., Tarfa, A., Wilkins, D., ...& Werner, N. E. (2023). What makes a home? Designing home personas to represent the homes of families caring for children with medical complexity. *Applied ergonomics*, 106, 103900. <https://doi.org/10.1016/j.apergo.2022.103900>
- 5) Salminen, J., Santos, J. M., Kwak, H., An, J., Jung, S. G., & Jansen, B. J. (2020). Persona perception scale: development and exploratory validation of an instrument for evaluating individuals' perceptions of personas. *International Journal of Human-Computer Studies*, 141, 102437. <https://doi.org/10.1016/j.ijhcs.2020.102437>
- 6) Alsaadi, B., & Alahmadi, D. (2021, November). The use of persona towards human-centered design in health field: review of types and technologies. In *2021 International Conference on e-Health and Bioengineering (EHB)* (pp. 1-4). IEEE. <https://doi.org/10.1109/EHB52898.2021.9657744>
- 7) Lopes, M. R., & Vogel, C. (2021, July). The influence of personas' gender in design. In *Proceedings of the 14th Biannual Conference of the Italian SIGCHI Chapter* (pp. 1-8). <https://doi.org/10.1145/3464385.3464736>
- 8) Salminen, J., Jung, S. G., Chowdhury, S., Robillos, D. R., & Jansen, B. (2021). The ability of personas: An empirical evaluation of altering incorrect preconceptions about users. *International Journal of Human-Computer Studies*, 153, 102645. <https://doi.org/10.1016/j.ijhcs.2021.102645>
- 9) Rohmiyati, Y., TengkuWook, T. S. M., Sahari, N., Hanawi, S. A., & Qamar, F. (2023). Designing Personas for E-Resources Users in the University Libraries. *Computers*, 12(3), 48. <https://doi.org/10.3390/computers12030048>
- 10) Salminen, J., Guan, K., Jung, S. G., Chowdhury, S. A., & Jansen, B. J. (2020, April). A literature review of quantitative persona creation. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-14). <https://doi.org/10.1145/3313831.3376502>
- 11) Zhu, H., Wang, H., & Carroll, J. M. (2019, June). Creating Persona Skeletons from Imbalanced Datasets-A Case Study using US Older Adults' Health Data. In *Proceedings of the 2019 on designing interactive systems conference* (pp. 61-70). <https://doi.org/10.1145/3322276.3322285>
- 12) Jansen, B. J., Jung, S. G., & Salminen, J. (2019). Capturing the change in topical interests of personas over time. *Proceedings of the Association for Information Science and Technology*, 56(1), 127-136. <https://doi.org/10.1002/pra2.11>
- 13) Peng, L., Wei, W., Fan, W., Jin, S., & Liu, Y. (2022). Student experience and satisfaction in academic libraries: A comparative study among three universities in Wuhan. *Buildings*, 12(5), 682. <https://doi.org/10.3390/buildings12050682>
- 14) Ho, C. C., Lai, Y. H., & Chen, M. S. (2023). Service Quality Methods and Practices to Improve Library Administration: A Pilot Study. *Standards*, 3(2), 187-197. <https://doi.org/10.3390/standards3020015>
- 15) Scoulas, J. M., & De Groote, S. L. (2023). Faculty perceptions, use, and needs of library resource and services in a public research university. *The Journal of Academic Librarianship*, 49(1), 102630. <https://doi.org/10.1016/j.acalib.2022.102630>
- 16) Singh, M., & Charak, A. S. (2022). Usage of the Library Resources and Services by students of University of Jammu: An Evaluation. *Library Waves*, 8(2), 117-128.

- 17) Mani, M., Hameed, S. S., & Thirumagal, A. (2019). Impact of Ict Knowledge, Library Infrastructure Facilities on Students' usage of E-Resources-An Empirical Study. *Library Philosophy and Practice (e-journal)*, 2225.
- 18) Firdaus, M., Thangavelu, N., Ekba, A., & Bhattacharyya, P. (2020, July). Persona aware response generation with emotions. In *2020 International joint conference on neural networks (IJCNN)* (pp. 1-8). IEEE. <https://doi.org/10.1109/IJCNN48605.2020.9207529>
- 19) Zaugg, H., & Rackham, S. (2016). Identification and development of patron personas for an academic library. *Performance measurement and metrics*, 17(2), 124-133. <https://doi.org/10.1108/PMM-04-2016-0011>
- 20) Shukri, S. A. I. A., Arshad, H., & Abidin, R. Z. (2017). Mobile augmented reality system design guidelines based on tourist's emotional state. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, 9(2-12), 75-79.
- 21) Zaugg, H., & Rackham, S. (2016). Identification and development of patron personas for an academic library. *Performance measurement and metrics*, 17(2), 124-133. <https://doi.org/10.1108/PMM-04-2016-0011>
- 22) Beverley, C. A., Booth, A., & Bath, P. A. (2003). The role of the information specialist in the systematic review process: a health information case study. *Health Information & Libraries Journal*, 20(2), 65-74. <https://doi.org/10.1046/j.1471-1842.2003.00411.x>
- 23) Miller, F. Q. (2019). Encountering relatable information in experiential learning spaces: A partnership framework for research information specialists and early career researchers. *Journal of Documentation*, 75(3), 517-529. <https://doi.org/10.1108/JD-05-2018-0069>
- 24) Engerer, V. P., & Sabir, F. (2020). Information professionals meet Arthur Prior. *Journal of Librarianship and Information Science*, 52(1), 288-305. <https://doi.org/10.1177/0961000618799527>
- 25) Kumara, P., & Acharya, S. (2022). Evaluation of Library Services and Facilities by the Students of BLDE (DU) during the Pandemic COVID-19: A Study. *Evaluation*.
- 26) Farooqui, A., & Hadagali, G. S. (2022). Use of library services by the post-graduate students of management colleges affiliated to Karnatak University, Dharwad. *Journal of Indian Library Association Now Available at <https://journal.ilaindia.net/>*, 57(3), 72-83.
- 27) Amarasekara, K. M. R. K., & Marasinghe, M. M. I. K. (2020). User Satisfaction on library resources and services: survey conducted in main library of the Open University of Sri Lanka. *Journal of the University Librarians Association of Sri Lanka*, 23(2), 27-46. <https://doi.org/10.4038/jula.v23i2.8007>
- 28) Kondamudi, N. R., Kumar, S., & Tripathi, M. (2018). Users' perceptions of e-books at Jawaharlal Nehru University, New Delhi: a case study. *DESIDOC Journal of Library & Information Technology*, 38(4), 231. <https://doi.org/10.14429/djlit.38.4.12993>
- 29) Kato, A., Kisangiri, M., & Kaijage, S. (2021). A review development of digital library resources at university level. *Education Research International*, 2021(1), 8883483. <https://doi.org/10.1155/2021/8883483>
- 30) Kumara, P. P. N. V., Hinze, A., Vanderschantz, N., & Timpany, C. (2024). Academics' experience of online reading lists and the use of reading list notes. *International Journal on Digital Libraries*, 1-26. <https://doi.org/10.1007/s00799-023-00387-w>