International Journal of Information Resource Management (IJIRM)
Volume 1, Number 1 (2024)

DIGITAL CONSCIOUSNESS AS A CORRELATE OF LIBRARY USE AMONG UNDERGRADUATES IN THE FACULTY OF SCIENCE, FEDERAL UNIVERSITY, OYE-EKITI

AJAYI, TAIWO BOSEDE, PhD
OPELE, JACOB KEHINDE PhD
&
LATEEF, ELIZABETH BUKUNOLA

Abstract

This research aims to fill this gap by investigating the relationship between digital consciousness and library use among undergraduate students at Faculty of Science, Federal University Oye-Ekiti. The study employs the descriptive survey design. The main instrument for data collection was a questionnaire which was validated with Cronbach's coefficient of 0.7 and above. Data collected for the study was analyzed with mean, standard deviation, Relative Importance Index, and correlation. Findings from the study revealed an overall moderate extent of library use among undergraduates. In addition, it shows that the most utilized library services by undergraduates were photocopy services, lending services, group study room, reference services, Internet services and Books. Similarly, the study found a high level of digital consciousness among the students. The study also revealed that lack of a library map to guide users, inadequate reading space, library staff's unfriendly attitude, inadequate ventilation, poor internet network, obsolete materials, and Inadequate sitting space as the major factors militating against library use in the Faculty of Science, FUOYE. Overall, the study revealed a statistically significant relationship between digital consciousnesses and library use among undergraduates**.** The paper recommended that faculty members should actively engage with undergraduate students through targeted outreach efforts by organizing workshops, seminars, and information sessions. Emphasize the value of utilizing physical materials, specialized databases, and personalized assistance from librarians to complement digital resources.

Keywords: Digital Consciousness, Library Use, Undergraduates

Introduction

In recent years, the rapid advancement of digital technologies has transformed the way information is accessed, disseminated, and consumed. This digital revolution has significantly impacted various aspects of society, including the field of education. One particular area of interest is understanding the concept of digital consciousness and its implications on library use among undergraduate students (Mian et al., 2020). Digital consciousness refers to individuals'

awareness, understanding, and critical evaluation of digital information sources and their ability to navigate and engage with digital content effectively (Belousov et al., 2023). Digital consciousness refers to individuals' awareness, understanding, and critical evaluation of digital information sources and their ability to navigate and engage with digital content effectively. It encompasses a range of skills and competencies related to the use and interpretation of digital technologies and online information.

Digital consciousness involves being cognizant of the various digital platforms, tools, and resources available for accessing and sharing information. It includes an understanding of the strengths and limitations of digital technologies and the ability to make informed decisions about which digital tools and platforms are most appropriate for specific tasks or information needs. In the context of information literacy, digital consciousness encompasses the skills needed to evaluate the credibility, accuracy, and relevance of digital information sources. It involves the ability to critically assess the quality of online content, identify potential biases or misinformation, and discern trustworthy sources from unreliable ones (Shukla & Ahmad, 2018). Digital consciousness also includes proficiency in navigating digital interfaces, using search engines effectively, and employing advanced search strategies to locate specific information within digital environments. It encompasses the ability to manage and organize digital content, such as bookmarking, saving, and categorizing information for future reference (Arslantas & Gul, 2022). Moreover, digital consciousness involves understanding the ethical considerations associated with digital information, including issues of privacy, intellectual property, and responsible digital citizenship. It includes being mindful of the potential risks and challenges posed by digital technologies, such as cybersecurity threats, digital surveillance, and information overload.

The adoption of digital library resources offers several advantages for undergraduate students. Digital libraries provide instant access to a wide range of academic materials, enabling students to conduct research from anywhere at any time (Barrie et al., 2021). They offer powerful search functionalities, allowing for efficient and targeted information retrieval. Additionally, digital platforms often provide interactive features, such as annotations, collaboration tools, and multimedia content, enhancing the learning experience. However, the shift to digital library use also presents challenges. Furthermore, the reliance on digital resources may lead to issues such as information overload, plagiarism, and a lack of critical engagement with the material (Abrahamson & Goodman-Delahunty, 2014). However, despite the growing prevalence of digital library resources, there is a need for research that explores the relationship between digital consciousness and library use among undergraduate students. Understanding how students perceive and engage with digital content, their level of digital consciousness, and the impact of digital library use on their information literacy skills are important research objectives. Additionally, investigating the challenges and barriers that students face in utilizing digital libraries can inform the development of strategies and interventions to enhance digital consciousness and optimize library use.

Research questions

The following research questions guided the conduct of this study

1. What is the extent of library use among undergraduates in the faculty of science, FUOYE?
2. What is the level of digital consciousness in the faculty of science, FUOYE?
3. What are the factors militating against library use in the faculty of science, FUOYE?

Hypothesis

This study tested the following null hypothesis at a 0.05 level of significance

Ho: There is no significant relationship between digital consciousness and library use among undergraduates in the faculty of science, FUOYE.

Literature Review

The influence of digital consciousness on library use among undergraduate students has become an increasingly important area of research in the digital age (Peiffer-Smadja et al., 2020). As libraries have shifted from traditional repositories to digital environments, understanding how students' digital consciousness affects their engagement with library resources is crucial for optimizing their use of these resources and promoting effective information literacy skills. Digital consciousness is closely linked to information literacy, which encompasses the skills needed to access, evaluate, and utilize information effectively (Alam, 2021), (Dawuda & Ibrahim, 2021). Several studies have highlighted the positive correlation between digital consciousness and information literacy among undergraduate students(Barrie et al., 2021). Researchers have found that higher levels of digital consciousness are associated with better information evaluation skills, including the ability to critically assess the credibility and relevance of digital sources (Zheng et al., 2021).

Literature has shown that digital consciousness influences students' digital skills and their ability to navigate digital library platforms effectively (Бирка et al., 2019). Research has shown that students with higher levels of digital consciousness are more proficient in using search engines, employing advanced search strategies, and navigating complex digital interfaces (Htay et al., 2022), (Kanhabua et al., 2016). These skills contribute to their efficient and targeted retrieval of information from digital library resources. However, despite the benefits of digital library resources, several challenges and barriers hinder undergraduate students' optimal use. Studies have identified issues such as information overload, difficulties in evaluating the

credibility of online sources, and limited awareness of specialized databases within digital libraries (Soroya et al., 2021). Moreover, some students face challenges in managing and organizing digital content, which may affect their ability to locate and revisit information effectively.

Librarians also play a vital role in providing personalized assistance and guidance to students, helping them navigate digital library platforms and locate relevant resources (Adler-Milstein et al., 2020), (Tiwasing, 2021). The literature reviewed highlights the significance of digital consciousness in shaping undergraduate students' engagement with library resources. It underscores the positive relationship between digital consciousness, information literacy, and students' perceptions of digital library resources (Belousov et al., 2023). However, challenges related to information evaluation, navigation, and content management have also been highlighted in the literature.

Conceptual Model

Indices of digital consciousness

- Student Competence
- Develop Educational System.
- Social Interaction
- Personal Initiative
- Learning Skills
- Self-Report
- Observable Behaviour
- Digital Activity
- Motivation
- Deep Processing of Information

Indices of library use

- Lending services
- Photocopy
- References Services
- Internet Access
- Access to Electronic Resources
- Reading of Newspaper Collections
- Library Orientation
- Independent Assignments
- Access to Library News
- View Library Map
- Quick Response
- Chat with a Librarian/Get Research Guide
- Bag Cabinet

Figure 1: Model of the influence of digital consciousness on library use among undergraduates in FUOYE, Ekiti-State

The figure presents the relationship between digital consciousness and library use among undergraduates. Digital consciousness refers to an individual's awareness and understanding of the digital world, including their ability to use and navigate digital technologies, critically evaluate digital information, and engage in digital communication and collaboration. Library use among undergraduates, on the other hand, refers to the extent to which students utilize library resources and services to support their academic pursuits as it relates to the following areas.

Digital Transformation: The advent of digital technologies has transformed the way information is accessed and consumed. With the proliferation of online databases, e-books, and digital journals, undergraduates now have a vast number of digital resources at their fingertips. Digital consciousness plays a crucial role in helping students effectively navigate and utilize these resources. Digitally conscious students are more likely to be aware of the digital resources available through their libraries and can take advantage of them for their research and studies.

Access to Information: Digital consciousness can influence undergraduates' library use by shaping their preferences for accessing information. As students become more digitally conscious, they may rely more on online sources and digital libraries rather than traditional print materials. This can lead to a shift in library use patterns, with undergraduates spending more time accessing information through digital platforms and less time physically visiting the library.

Information Evaluation: Digital consciousness also influences how undergraduates evaluate and critically assess information. With the abundance of information available online, students need to develop digital literacy skills to determine the credibility and reliability of sources. Libraries play a crucial role in promoting information literacy among undergraduates by providing access to curated databases and teaching students how to evaluate digital information effectively. Digital consciousness can enhance students' ability to discern quality information, leading to more informed and accurate research.

Collaborative Learning: Digital consciousness can foster collaborative learning among undergraduates, which can impact library use. Digitally conscious students are more likely to engage in online collaborative platforms, such as virtual study groups, discussion forums, or project management tools. Libraries often provide access to digital platforms that facilitate collaborative learning, allowing students to share resources and collaborate on research projects. These digital collaboration tools can supplement traditional library services and encourage undergraduates to utilize library resources in a more interactive and participatory manner.

Changing Preferences and Behaviors: The rise of digital consciousness among undergraduates has also influenced their preferences and behaviors regarding information seeking. With the convenience of online search engines and digital libraries, some students may perceive physical library visits as less necessary. However, it is important to note that while digital resources are abundant, libraries still offer unique benefits like expert librarians, specialized collections, and quiet study spaces. The relationship between digital consciousness and library use can vary

among individuals, with some embracing digital resources while others maintain a preference for traditional library materials.

In summary, digital consciousness and library use among undergraduates are interrelated in various ways. Digital consciousness influences how students access, evaluate, and collaborate with information in the digital era. Libraries play a vital role in supporting undergraduates' digital consciousness by providing access to digital resources, promoting information literacy, and facilitating collaborative learning. However, the impact of digital consciousness on library use can vary among students, depending on individual preferences and the specific resources and services offered by libraries.

Theoretical Review

The theory of digital consciousness and library use posits that individuals' level of digital consciousness directly influences their engagement with library resources in the digital age (Belousov et al., 2023). This theory draws upon concepts from information literacy, cognitive psychology, and technology adoption theories to explain the relationship between individuals' awareness, knowledge, and skills related to digital technologies and their utilization of library resources in digital formats. At the core of this theory is the understanding that digital consciousness encompasses individuals' familiarity with digital tools and platforms, their ability to critically evaluate digital information sources, and their proficiency in navigating and utilizing digital library resources effectively. Individuals with higher levels of digital consciousness are more likely to engage with and make optimal use of library resources in digital formats.

The theory suggests that digital consciousness influences library use in several ways. Firstly, individuals' awareness and knowledge of digital library resources and their functionalities affect their likelihood of accessing and utilizing these resources. Higher levels of

digital consciousness enable individuals to recognize the value and benefits of digital libraries, leading to increased engagement with these resources. Secondly, digital consciousness plays a role in individuals' ability to critically evaluate digital information sources. It encompasses skills such as assessing the credibility, accuracy, and relevance of online information. Individuals with higher levels of digital consciousness are more adept at discerning trustworthy sources from unreliable ones, which positively impacts their utilization of library resources in digital formats. Thirdly, individuals' proficiency in navigating and utilizing digital library platforms directly affects their library use. Higher levels of digital consciousness are associated with better search skills, advanced search strategies, and efficient retrieval of information from digital library resources. This proficiency facilitates individuals' ability to locate and access relevant resources, enhancing their overall library experience.

Methodology

The research design employed for this study is the descriptive survey design. The population for the study consists of undergraduates in the Faculty of Science at the Federal University Oye-Ekiti. A preliminary finding indicated that the faculty had a population of 5,621 undergraduate enrollment. Subsequently, a total of 380 among this population were randomly selected using the appropriate formula for calculating the sample. The random sampling technique was chosen. The data collection instrument was a structured questionnaire. The questionnaire was divided into three (3) sections based on the formulated objectives and research questions. The questionnaire has a total of 31 items focusing on the undergraduate demographic details, extent of library use, level of digital awareness, and factors militating against library use. The analysis of data was done using appropriate statistics such as mean and standard deviation as

well as the Relative Importance Index (RII) and correlation analysis. The relative importance index helps to rank the criteria according to their relative importance.

Results

Research question one: What is the extent of library use among undergraduates in the faculty of science, FUOYE?

Table 1: Extent of library use among undergraduates in the faculty of science, FUOYE

Library materials	Mean(X)	SD	RII	Rank
Photocopy	3.20	0.268	0.6	1st
Lending services	3.09	1.148	0.6	1st
Group study room	3.01	1.228	0.6	1st
Reference services	2.86	1.309	0.6	1st
Internet services	2.76	1.216	0.6	1st
Books	2.59	1.245	0.6	1st
Online Catalogue	3.10	1.553	0.5	7th
Library map	2.55	1.185	0.5	7th
Book computer map	2.53	1.037	0.5	7th
Newspapers	2.43	1.258	0.5	7th
Catalog box	2.32	1.465	0.5	7th
Magazines	2.15	1.045	0.4	12th
Grand mean	2.7			

Note: H – High, M – moderate, L-Low. (Criterion mean = 3.0)

Mean of 0.1-2.0 = low, 2.1-30 = moderate, > 3.0= high

Table 1 shows an overall moderate extent of library use among undergraduates at Federal University Oye-Ekiti with a grand mean of 2.7 on a scale of 4 points. In addition, it shows that the most utilized library materials by undergraduates were photocopy services (RII = 0.6), lending services (RII = 0.6), group study room (RII = 0.6), reference services (RII = 6), Internet services and Books (RII = 0.6). Others include online catalogs (RII = 0.5), library maps (RII = 0.5), and book computer maps (RII = 0.5). closely followed by the use of newspapers (RII = 0.5), and catalog boxes (RII = 0.5), while the use of Magazines (RII = 0.4) has the lowest score in terms of ranking.

Since the criterion mean was lower than the grand mean, these results imply that although the undergraduates generally use the library, however, not all visit the library to consult its collection but the majority often go there during examinations for reading.

Research question two: What is the level of digital consciousness in the faculty of science, FUOYE?

Table 2. Respondent's level of digital consciousness

Digital awareness	Mean (X)	SD	RII	Ranking
Owning a mobile/smartphone that supports access to the internet	3.76	0.428	0.49	1st
The Internet is a major tool for skill acquisition	3.65	0.782	0.48	2nd
Relying on the Internet to get prompt information updates	3.49	0.501	0.46	3rd
Can perform basic tasks on mobile/smartphone using the internet such as Facebook, WhatsApp, Instagram	3.47	0.609	0.46	3rd
Relying on mobile/smartphone to support academic pursuit	3.40	0.851	0.45	4th
I can find answers to assignments on my own via the internet	3.31	0.829	0.44	5th
The internet is a major part of my social life/experience	3.08	0.987	0.40	6th
Having access to information on my phone is better than and faster than hard-copied information	2.96	0.971	0.39	7th
Grand mean	3.39			

Note: H – High, M – moderate, L-Low. (Criterion mean = 3.0)

Mean of 0.1-2.0 = low, 2.1-30 = moderate, > 3.0= high

Table 2 reveals a high level of digital consciousness among the students with a grand mean of 3.39 on the scale of a 4-point Likert scale since the criterion mean was greater than the grand mean. With regards to the ranking of items of measurement, ranked first was owning a mobile/smartphone that supports access to the internet (RII = 0.49), followed by the internet being a major tool for skill acquisition (RII =0.48). others include relying on the internet to get prompt information updates (RII =0.46), performing basic tasks on mobile smartphone using the internet such as Facebook, WhatsApp, and Instagram (RII =0.46), relying on mobile/smartphone to support academic pursuit (RII =0.45), finding answers to assignments on an individual via the

internet (RII =0.44), the internet is a major part of my social life/experience (RII =0.40), Having access to information on phone is better than and faster than hard-copied information (RII =0.39). These results indicate that the students could undertake a vast number of digital services and activities for themselves in pursuit of their academic career while still in the university vis-à-vis the use of library resources and services.

Research question three: What are the factors militating against library use in the faculty of science, FUOYE?

Table 3: factors militating against library use in the Faculty of Science, FUOYE

Factors	Mean(X)	SD	RII	Rank
Lack of library map to guide users	2.76	1.123	0.7	1st
Inadequate reading space	2.57	1.015	0.6	2nd
Library staff's unfriendly attitude	2.56	0.889	0.6	2nd
Inadequate ventilation	2.54	0.756	0.6	2nd
Poor internet network	2.32	0.855	0.6	2nd
Obsolete materials	2.24	1.043	0.6	2nd
Inadequate sitting space	1.9	0.847	0.5	7th

Table 3 revealed that ranked first was the lack of a library map to guide users (RII =0.7). Others include inadequate reading space (RII =0.6), library staff's unfriendly attitude (RII =0.6), inadequate ventilation (RII =0.6), poor internet network (RII =0.6), obsolete materials (RII =0.6), and Inadequate sitting space (RII =0.5) respectively. These factors remain germane to the use of the library among undergraduates and failure to make provision for them will limit the extent to which undergraduates visit and make use of the library and its materials.

Hypothesis testing:

Ho: There is no significant relationship between digital consciousness and library use among undergraduates in the faculty of science, FUOYE.

Table 4: Correlation analysis showing the relationship between digital consciousness and library use among undergraduates in the faculty of science, FUOYE

	Mean	Std. Deviation	r	P value	remark
Digital awareness Library use	27.11 32.57	3.051 10.763	- 0.282	0.001	Significant

Table 4 revealed statistically significant relationship between digital consciousnesses and library use among undergraduates**.** The coefficient of determination (r = - 0.282) implies a partial negative significant correlation between digital consciousness and library use among undergraduates. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted and restated as there is a negative significant relationship between digital consciousness and library use among undergraduates in the faculty of science FUOYE. This finding implies an inverse relationship. Although the study indicated a high level of digital consciousness and a moderate level of library use, however, this does not statistically translate into a positive correlation between their digital consciousness and library use.

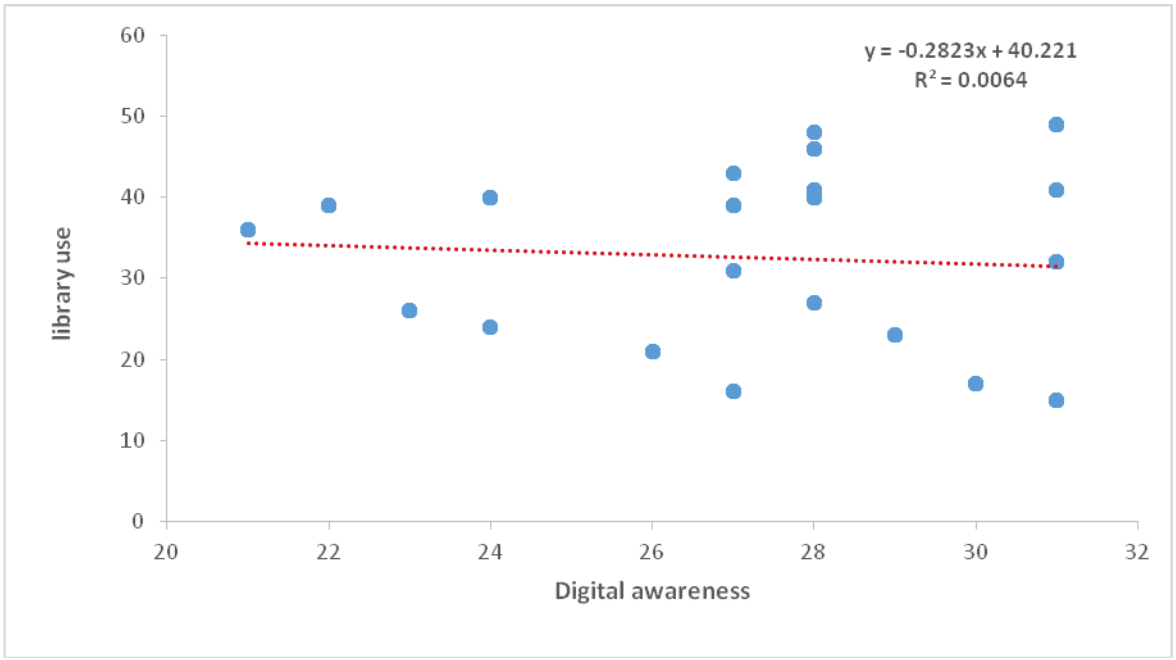

Figure 2 shows *the relationship between digital awareness and library use*

Figure 2 further buttressed the results in Table 4 which revealed a partial negative significant correlation between digital consciousness and library use among undergraduates.

Discussion

Findings from the current study show an overall moderate extent of library use among undergraduates at Federal University Oye-Ekiti. These findings though agreed with several previous studies (Gunasekera, 2010), (Onuoha et al., 2020), (Oladokun & Adeoye, 2022), these results are however, in sharp contrast with the study of (Opele et al., 2021); (Oladokun & Adeoye, 2022). Similarly, the study revealed a high level of digital consciousness among the students in the selected university. This tallies with the findings of (Belousov et al., 2023), (Velasco, 2021). Lastly, the findings revealed a partially negative significant correlation between digital consciousness and library use among undergraduates in the study area. This also agrees with the findings of (Vachhani, 2023). Overall, the outcome of the study revealed that the digital revolution has significantly transformed the landscape of libraries and information access for undergraduate students. Overall, exploring the concept of digital consciousness about library use is crucial for understanding how students engage with digital resources, develop information literacy skills, and overcome challenges in the digital environment. The study indicated that the majority of the respondents can perform basic tasks with their mobile/smartphone using the internet and other ICTs in the library.

Conclusion and Recommendations

The outcome of this study indicated that although the undergraduates in the selected faculty demonstrated a high level of digital consciousness, however, such did not translate into a positive relationship with library use. The following recommendations are therefore suggested based on the findings:

The university should develop and implement digital literacy programs aimed at enhancing students' skills and awareness of the digital landscape. By providing students with the necessary knowledge and competencies to navigate the digital realm effectively, you can help them understand the limitations and potential pitfalls associated with relying solely on digital resources.

The faculty members should actively engage with undergraduate students through targeted outreach efforts by organize workshops, seminars, and information sessions that highlight the unique benefits and resources available in the library. Emphasize the value of utilizing physical materials, specialized databases, and personalized assistance from librarians to complement digital resources.

There is a need for continuous improvement in the library's physical and digital infrastructure to create a welcoming and user-friendly environment. Provide comfortable spaces for studying, collaborative work, and access to technology. Optimize the library's website and online catalog to facilitate ease of use and efficient retrieval of information.

There is a need for a close relationship with faculty members to integrate library usage into course curricula. Encourage faculty to assign research projects that require students to utilize a variety of resources, including both digital and physical materials. Provide faculty training and support to help them incorporate library resources effectively.

The university should offer information literacy workshops that specifically address the challenges associated with digital consciousness. This involves teaching students critical evaluation skills to assess the reliability, credibility, and relevance of digital sources. Emphasize the importance of using a combination of digital and library resources to conduct comprehensive research.

References

Abrahamson, D. E., & Goodman-Delahunty, J. (2014). Impediments to information and knowledge sharing within policing: A study of three Canadian policing organizations. *SAGE Open*, *4*(1). https://doi.org/10.1177/2158244013519363

Adler-Milstein, J., Adelman, J. S., Tai-Seale, M., Patel, V. L., & Dymek, C. (2020). EHR audit logs: A new goldmine for health services research? *Journal of Biomedical Informatics*, *101*(December 2019), 103343. https://doi.org/10.1016/j.jbi.2019.103343

Alam, T. (2021). Cloud-based IoT applications and their roles in smart cities. *Smart Cities*, *4*(3), 1196–1219. https://doi.org/10.3390/smartcities4030064

Arslantas, T. K., & Gul, A. (2022). Digital literacy skills of university students with visual impairment: A mixed-methods analysis. *Education and Information Technologies*, *27*(4), 5605–5625. https://doi.org/10.1007/s10639-021-10860-1

Barrie, H., La Rose, T., Detlor, B., Julien, H., & Serenko, A. (2021). "Because I'm Old": The Role of Ageism in Older Adults' Experiences of Digital Literacy Training in Public Libraries. *Journal of Technology in Human Services*, *39*(4), 379–404. https://doi.org/10.1080/15228835.2021.1962477

Bauder, J. (2019). HathiTrust as a data source for researching early nineteenth-century library collections: Identification, coverage, and methods. *Information Technology and Libraries*, *38*(4), 14–24. https://doi.org/10.6017/ital.v38i4.11251

Belousov, A., Ojell-Järventausta, T., Bujić, M., MacEy, J., & Hamari, J. (2023). Digitally-Induced Altered States of Consciousness and Playful HCI: Future Research Agenda of a Novel Perspective. *CHI PLAY 2023 - Companion Proceedings of the Annual Symposium on Computer-Human Interaction in Play*, 127–134. https://doi.org/10.1145/3573382.3616100

Bhati, P., & Kumar, I. (2020). Role of library professionals in a pandemic situation like COVID-19. *International Journal of Library and Information Studies*, *10*(2), 33–48. https://www.researchgate.net/profile/Pankaj_Bhati3/publication/342697905_Role_of_Library_Professionals_in_a_Pandemic_Situation_Like_COVID-19_Pankaj_Bhati/links/5f01809045851550508d897d/Role-of-Library-Professionals-in-a-Pandemic-Situation-Like-COVID-19-Pa

Boté, J. J., & Térmens, M. (2019). Reusing data: Technical and ethical challenges. *DESIDOC Journal of Library and Information Technology*, *39*(6), 329–337. https://doi.org/10.14429/djlit.39.6.14807

Dawuda, I., & Ibrahim, A. K. (2021). The Adoption of ICT by Libraries of Teacher Colleges of Education in Northern Ghana: challenges and prospects. *Library Philosophy and Practice*, *2021*.

Htay, M. N. N., Parial, L. L., Tolabing, M. C., Dadaczynski, K., Okan, O., Leung, A. Y. M., &

Su, T. T. (2022). Digital health literacy, online information-seeking behavior, and satisfaction with COVID-19 information among the university students of East and Southeast Asia. *Plos One*, *17*(4), e0266276. https://doi.org/10.1371/journal.pone.0266276

Kanhabua, N., Kemkes, P., Nejdl, W., Nguyen, T. N., Reis, F., & Tran, N. K. (2016). How to search the internet archive without indexing It. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, *9819 LNCS*, 147–160. https://doi.org/10.1007/978-3-319-43997-6_12

Mian, S. H., Salah, B., Ameen, W., Moiduddin, K., & Alkhalefah, H. (2020). Adapting universities for sustainability education in industry 4.0: Channel of challenges and opportunities. *Sustainability (Switzerland)*, *12*(15). https://doi.org/10.3390/su12156100

Oladokun, T. A., & Adeoye, A. A. (2022). Utilization of Digital Information Resources by Undergraduates at Lead City University, Ibadan Nigeria. *Library Philosophy & Practice*, *March*, 1–13. https://search.ebscohost.com/login.aspx?direct=true&db=lxh&AN=161168606&site=ehost-live&scope=site

Onuoha, J. C., Ifeanyi, L. U., & Yunisa, A. Y. (2020). Availability And Utilization Of E-Resources In University Libraries For Effective Research Output By Undergraduates Of Social Studies In South East Nigeria. *Library Philosophy and Practice*, *2020*.

Opele, J. K., Awwal, N. T., & Science, I. (2021). *Undergraduates' perception of the influence of book mutilation and defacing on library use in the Federal University Library, Oye-Ekiti*. *3*(2), 101–111.

Peiffer-Smadja, N., Dellière, S., Rodriguez, C., Birgand, G., Lescure, F. X., Fourati, S., & Ruppé, E. (2020). Machine learning in the clinical microbiology laboratory: has the time come for routine practice? *Clinical Microbiology and Infection*, *26*(10), 1300–1309. https://doi.org/10.1016/j.cmi.2020.02.006

Satija, M. P., Bagchi, M., & Martinez-Avila, D. (2020). Metadata management and application. *Library Herald*, *58*(4), 84–107. https://doi.org/10.5958/0976-2469.2020.00030.2

Shukla, P., & Ahmad, N. (2018). Impact of Institutional Repositories on scholarly practices of scientists. *Library Philosophy and Practice*, *2018*(February).

Soroya, S. H., Farooq, A., Mahmood, K., Isoaho, J., & Zara, S. E. (2021). From information seeking to information avoidance: Understanding the health information behavior during a global health crisis. *Information Processing and Management*, *58*(2), 102440. https://doi.org/10.1016/j.ipm.2020.102440

Tiwasing, P. (2021). Social media business networks and SME performance: A rural–urban comparative analysis. *Growth and Change*, *52*(3), 1892–1913. https://doi.org/10.1111/grow.12501

Vachhani, S. J. (2023). Networked feminism in a digital age—mobilizing vulnerability and reconfiguring feminist politics in digital activism. *Gender, Work and Organization*, *November*, 1–18. https://doi.org/10.1111/gwao.13097

Velasco, J. C. (2021). You have canceled: Virtual collective consciousness and the emergence of cancel culture as ideological purging. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, *12*(5), 1–7. https://doi.org/10.21659/RUPKATHA.V12N5.RIOC1S21N2

Zheng, W., Ma, Y. Y., & Lin, H. L. (2021). Research on Blended Learning in Physical Education During the COVID-19 Pandemic: A Case Study of Chinese Students. *SAGE Open*, *11*(4). https://doi.org/10.1177/21582440211058196

Бирка, М. Ф., Сущенко, А. В., & Лукашів, Т. О. (2019). Components of ICT Competence of Teachers of Mathematics and Informatics. *Information Technologies and Learning Tools*, *74*(6), 225–237. https://doi.org/10.33407/itlt.v74i6.3258

