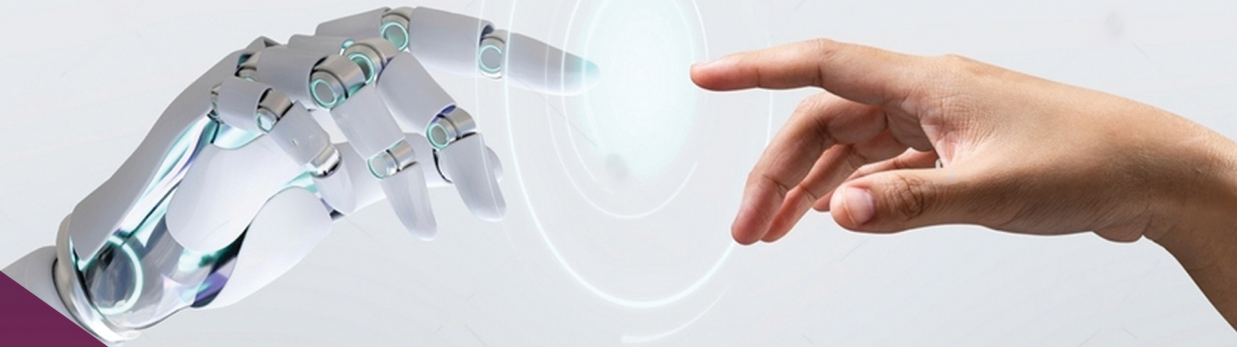




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Exploring Digital Literacy among Indigenous Medicine University Academics in Sri Lanka: A Case Study Based on The Gampaha Wickramarachchi University of Indigenous Medicine in Sri Lanka

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Abstract

Digital Information Literacy (DIL) is a very important aspect in any field. This paper aims to evaluate digital information literacy among the Indigenous Medicine University academics in Sri Lanka. The study involved 68 Indigenous University academics at the Gampaha Wickramarachchi University of Indigenous Medicine. Analysis and presentation were done using Microsoft Excel software. The results show that 38.5% of academics prefer using the library's online catalog to find information, and electronic resources are commonly used for learning activities. A majority of 89.7% of academics are aware of digital information resources for their academic work, while 10.3% are not. Academics mostly use Google and Google Scholar (64%), e-journals (61%), e-books (61%), and online databases (56%) respectively to fulfill their academic requirements. Challenges associated with information access include unstable internet connection (56%) and unavailability of sufficient digital information in the related field of study (56%). Furthermore, a substantial majority (52%) of respondents claimed that they do not encounter difficulty in identifying relevant information to meet their information needs.

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Accordingly, some recommendations can be implemented, such as increasing awareness by the library to enhance their digital information literacy. Furthermore, more online resources should be subscribed by the institute, and additional databases relevant to indigenous medicine should be acquired.

Keywords: *Digital information literacy, Digital resources, Indigenous medicine academics, Information literacy*

Introduction

Information literacy is an essential skill that everyone should practice to improve. Information literacy supports individuals to adapt to the new world which is full of knowledge and information. Baidoo et al. (2021) also supported this idea by defining “Information literacy as a crucial skill in the pursuit of knowledge”. Moreover, they claimed that information literacy involves recognizing when information is needed and being able to efficiently locate, accurately evaluate, effectively use and communicate information in various formats (Baidoo et al., 2021).

As we are living in a digitalized era that is overflowing with more digital information, just having information literacy skills is inadequate. Having the skill to find and filter those digital resources according to the need and accuracy is vital. Thus, mastering digital information literacy skills is also essential. Accordingly, Mishra and Maharana, (2007) have described digital information literacy as “A major component of information literacy which helps users cope with information from a variety of electronic formats and provides techniques and methods of collecting digital resources”. Further, they have explained that digital information literacy creates awareness of issues like copyright and intellectual property rights in an electronic environment (Mishra and Maharana, 2007).

Digital Information Literacy (DIL) can be described as the ability to identify the need for accessing, and evaluating electronic information. Mastering digital information literacy skills includes using, managing, creating, citing, and sharing digital information sources effectively. Digitally literate individuals showcase openness, adopt problem-solving, critical thinking, technical expertise, and a readiness to collaborate and stay informed as information contexts evolve (Hegarty et al., 2010).

Several studies have demonstrated DIL and identified the specific challenges faced in accessing, evaluating, and utilizing digital information for research and academic pursuits. For example, Ranaweera et al., (2014) have discussed the Socio-cultural approach to digital information literacy of postgraduate students in Sri Lanka. They have highlighted digital information literacy level of the postgraduate students is extensive and that there is a rapid growth towards using digital information under new technological developments.

This seriously impacts university libraries to take measures such as procuring more digital collections and conducting systematic information literacy courses, to enable the new generation to ascend the digital information ladder towards the digital era. As per their study suggestions, developing infrastructure facilities at the university level, and facilitating more digital information literacy programs aimed postgraduate students, to enhance their digital information literacy skills is essential. Further, Kumar (2020) indicated that a considerable number of university students fail to properly locate, evaluate, and use internet-based information due to lack of understanding of technology and the structure of internet-based information.

Also Kumar (2020) mentioned that due to complexities of information in electronic form, the users are unable to access and retrieve it. Hence in this crucial condition, it is the need of the era to empower the users to provide the right and effective

direction to access digital information which can be effectively practiced by the promotion of information literacy in the digital era.

Cordell (2013) revealed the relationship between information literacy and digital literacy in higher education. According to this study, these two concepts are not in competition but rather complementary, offering essential skills and knowledge to students. This approach is particularly relevant to the context of our study, as it underscores the importance of employing both digital and information literacy to enhance the educational experiences of the academic community in the higher education sector. Jeffrey et al. (2011) delved into the slow progress in the development of digital information literacy, which is crucial for full participation in today's society and workforce. In this study, findings revealed that obstacles such as low self-efficacy, low confidence, and negative attitudes towards technology were significantly affected for the level of digital information literacy among individuals. However, Jeffrey et al. (2011) further suggested the importance of addressing these barriers to enhance DIL.

The DIL does not improve parallelly with the rapid changes in information communication technologies. This delay in the timely development of DIL can be highlighted as a matter in any field, especially in the higher education sector.

Kinengyere (2007) examined the extent of information literacy and its impact on the utilization of electronic resources in Uganda. This study highlighted that just ensuring the availability of information resources does not guarantee their effective utilization. They have pointed out that users lack awareness of resource availability, sources of resources, and also the correct methods of resource accessibility. This highlights the importance of continuous information literacy programs and the role of information professionals in imparting these skills. The attitudes and perceptions of users were identified as crucial factors influencing the level of resource

utilization. This insight may resonate with the challenges faced by Indigenous Medicine University academics in Sri Lanka as they navigate the digital landscape.

DIL is critical in any field today. Especially in the academic field in the higher education sector, where electronic information and digitalized resources are highly used for academic and research needs. Although there are research related to DIL among Sri Lankan academics in the university sector, there has been no research that specifically examines the level of DIL among academics who also serve as scientists in indigenous medicine universities in Sri Lanka.

Insufficient understanding of their DIL levels impedes the identification of areas requiring support or training, hindering the development of tailored interventions. An in-depth exploration through a comprehensive case study is necessary to assess their DIL levels, identify challenges, and inform targeted interventions and resources.

In this regard, the Gampaha Wickramarachchi University of Indigenous Medicine was purposively selected to assess the digital information literacy levels, identify challenges, and inform targeted interventions and resources. It previously served as the Gampaha Wickramarachchi Ayurveda Institute under the University of Kelaniya and was upgraded later as the 16th National University in Sri Lanka in 2021. The Faculty of Indigenous Medicine was established under the university to offer courses emphasizing learning, teaching, and research in the fields of Ayurveda medicine. (<https://gwu.ac.lk/>)

Objectives

This study aimed to explore digital information literacy among Indigenous Medicine University Academics in Sri Lanka.

The primary objectives of this research are as follows:

1. To assess the level of preferences and awareness regarding digital resources.
2. To identify the types of digital resources used and their purpose.
3. To identify the specific challenges faced in accessing, evaluating, and utilizing digital information for research and academic pursuits.

Methodology

The goal of this study was to examine DIL among Indigenous Medicine University academics in Sri Lanka: The research employed a quantitative approach, with quantitative surveys to gather data. A self-administered semi-structured questionnaire was administered to the whole academic group comprising 68 individuals representing indigenous medicine university academics to gauge their digital information literacy skills, preferences, and challenges. Out of the study sample, 48 of the participants responded to the questionnaire with a 70.6% response rate. The questionnaire was distributed among the study participants through email and responses were also collected through online platforms from the respondents. A Likert scale was used to measure the perception and attitudes of respondents in which they agree or disagree with particular questions proposed by this study. Microsoft Excel software was used to analyze the data.

Results

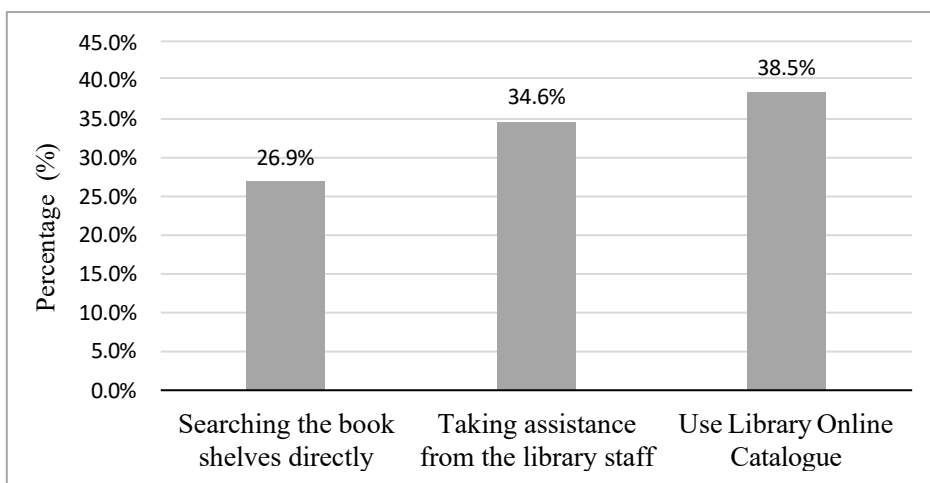
Level of Preference on Methods Used to Find Information Sources at The Library

According to Figure 1, the most preferred method to find information at the library is using the library online catalog (38.5%). But other remaining 61.5 % of participants still use traditional methods to find information at the library such as

searching the bookshelves directly (26.9%) and taking assistance from the library staff (34.6%).

Figure 1

Level of Preference on Methods Used to Find Information Sources at the Library



Level of Awareness of Digital Information Resources

A proportion of 89.7% of participants have claimed that they are aware of the digital information resources that they can use for their academic endeavors and research projects. Only 10.3% are not aware of digital information resources.

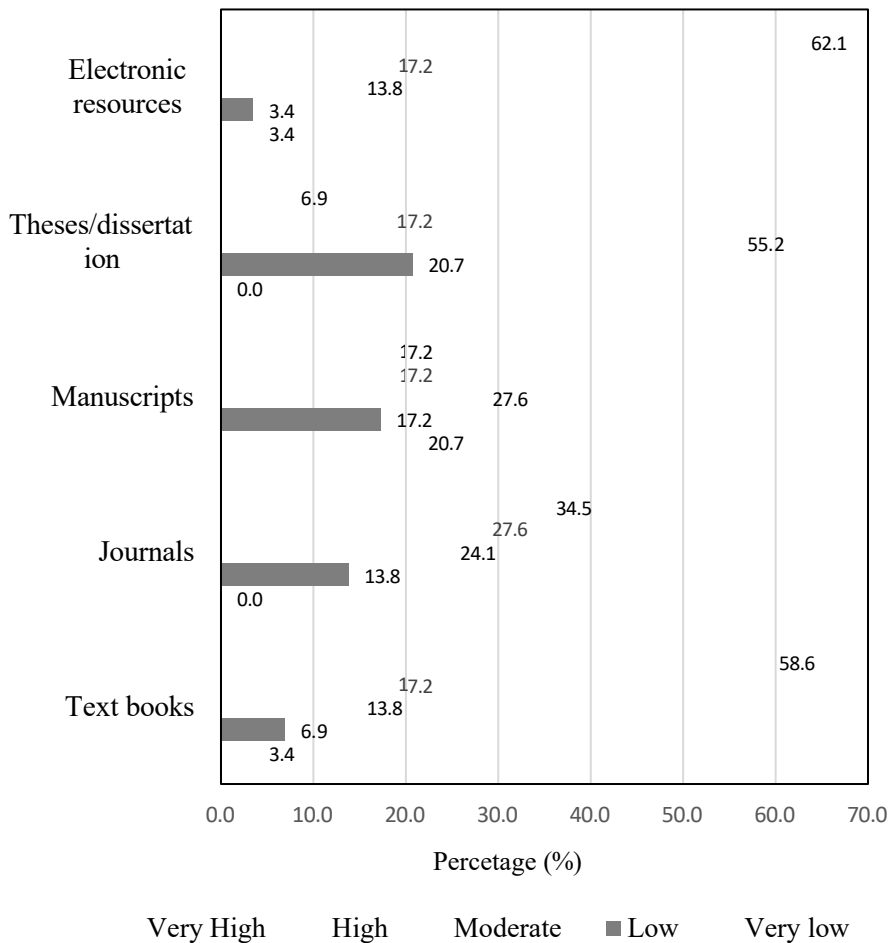
Types of Resources Participants Use for their Learning

According to Figure 2, the most used resources for learning activities by the participants are respectively Electronic Resources (62.1%), Textbooks (58.6%), and Journals (34.5%). The least used resource is the manuscripts such as documents

produced by the experts in the field and books of palm leaves among all the categories of resources (20.7%).

Figure 2

Types of Resources Participants Use for their Learning

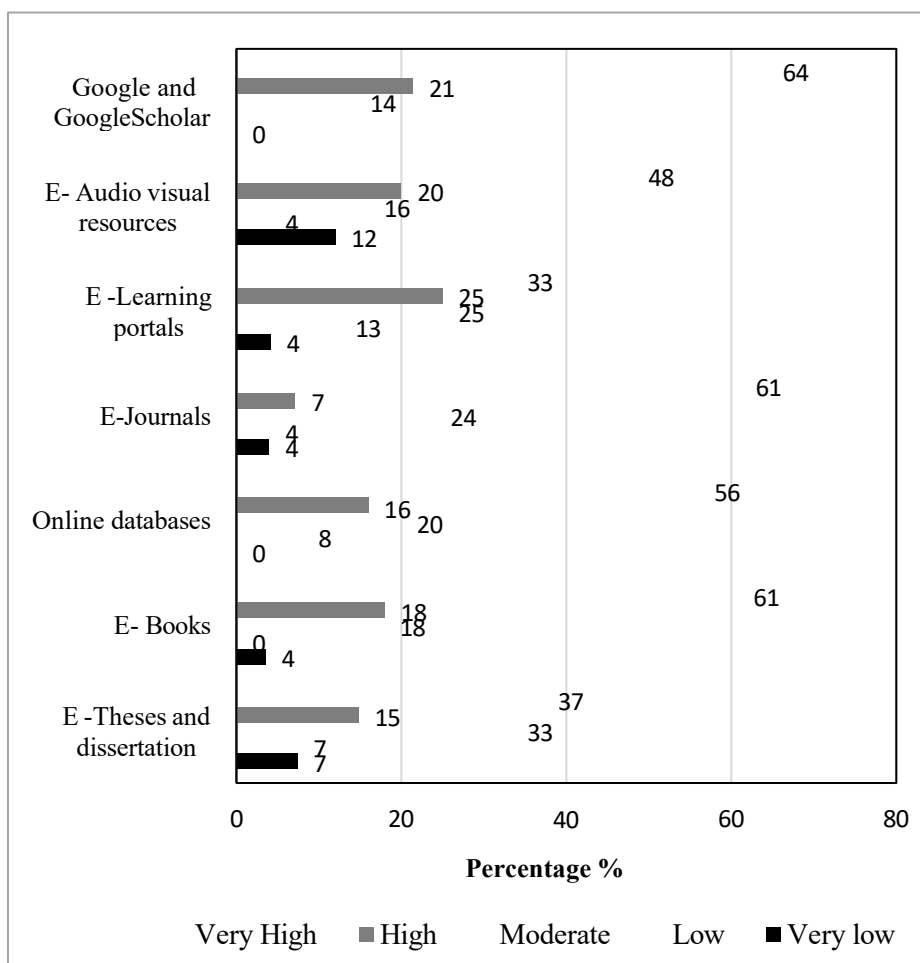


a. Types of online information sources used for academic requirements

The findings in Figure 03 indicate that study participants mostly use Google and Google Scholar (64%), E-journals (61%), E-books (61%), and online databases (56%) respectively to fulfill their academic requirements. E-audio visual resources (16%) and E-learning portals (17%) are claimed as the least-used online resources by the majority.

Figure 3

Usage of Online Information Sources for Academic Requirements by Participants

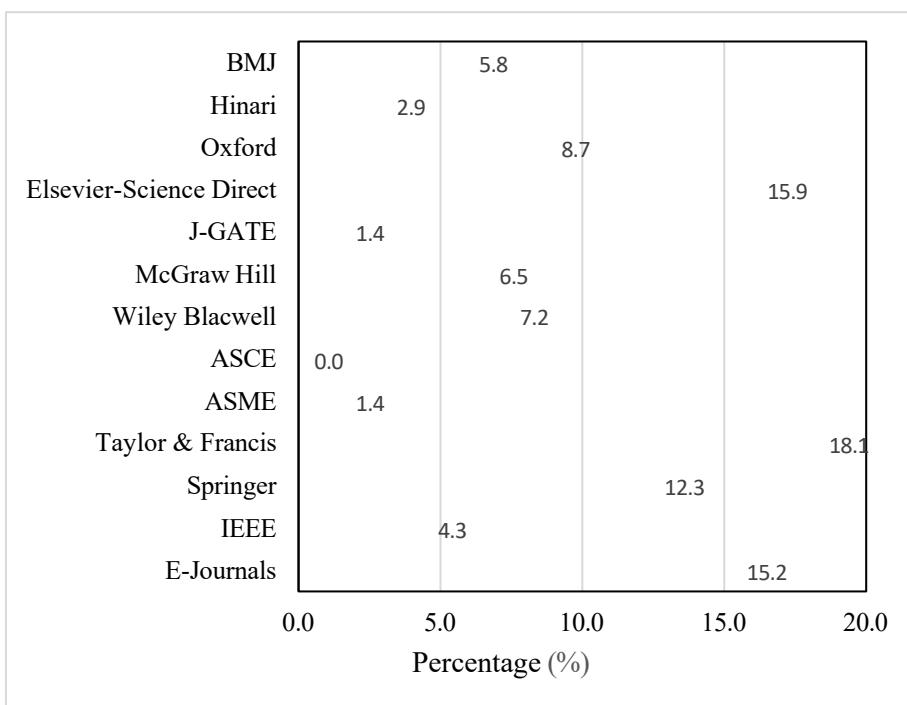


b. Types and usage of online databases

Figure 4 presents the findings of the level of usage of selected databases by the study participants. Taylor & Francis (18.1%), Elsevier-Science Direct (15.9%), Other e-journals (15.2%), and Springer (12.3%) are the mostly used databases respectively by the participants. The least used databases include ASME - (American Society of Mechanical Engineers) (1.4%), J-GATE (1.4%), and ASCE (American Society of Civil Engineers), (0.0%).

Figure 4

Usage of Online Databases by the Participants



c. Usage of Internet searching tools

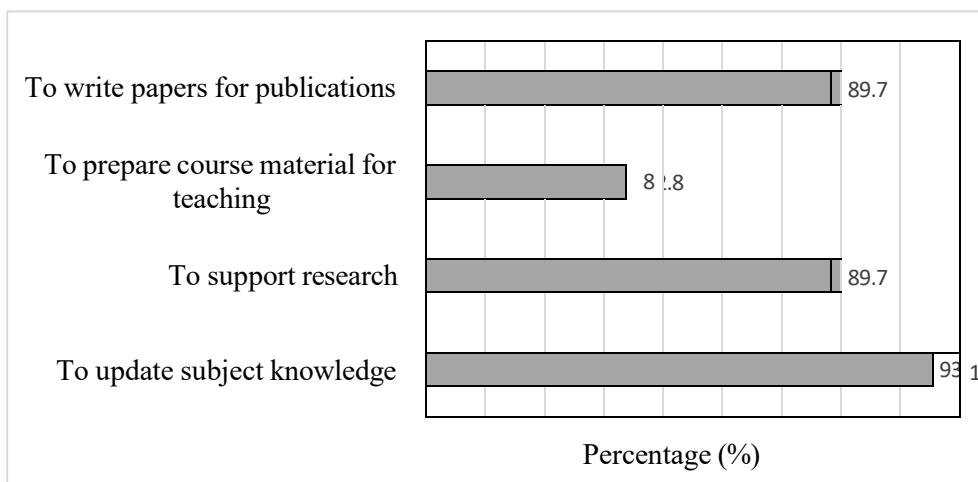
A majority (93.1%) of study participants have claimed that they are using Internet searching tools for their academic work while only 6.9% claimed that they are not using such tools.

Purpose of Using Electronic Information

As per the findings presented in Figure 5, the majority (93.1%) of participants have claimed that they are using electronic information to update their subject knowledge. But the same time considerable number of participants have claimed that they are using such information to prepare their scientific publications (89.7%), to support research (89.7%), and to prepare teaching materials (82.8%).

Figure 5

Purpose of Using Electronic Information



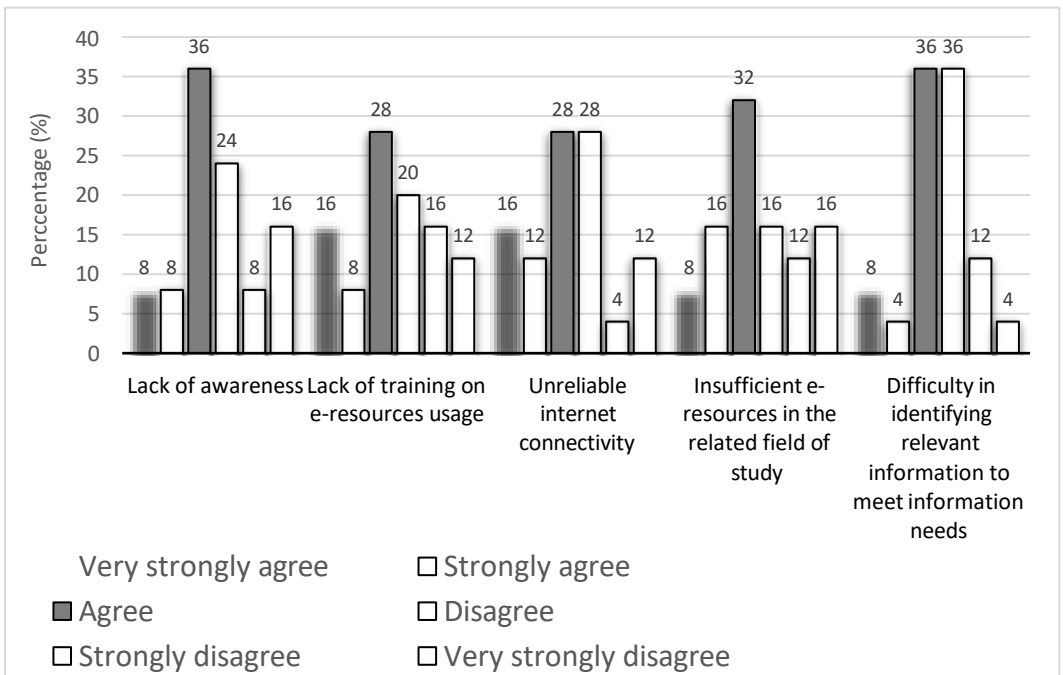
Challenges Faced by the Participants When Using Digital Information

This section presents the findings about specific challenges faced by the study participants in accessing, evaluating, and utilizing digital information for their research and other academic purposes. The study was focused on five selected

possible challenges namely, lack of proper awareness about the available digital information, lack of training about digital information usage, unstable internet connection, unavailability of sufficient digital information in the related field of study, and difficulty in identifying relevant information to meet information needs. Figure 6 presents the level of agreement among study participants regarding selected possible challenges encountered during the utilization of digital information. A majority of study participants expressed their agreement with two selected challenges associated with digital information usage. These challenges include unstable internet connection (56%) and unavailability of sufficient digital information in the related field of study (56%). Furthermore, a substantial majority (52%) of respondents claimed that they do not encounter difficulty in identifying relevant information to meet their information needs.

Figure 6

Challenges Faced by Participants when Using Digital Information



In addition, the research questioned participants for suggestions on potential solutions for the persistent issues that they encounter when using digital information. There are two major recommendations made by participants. These include the implementation of periodic awareness sessions aimed at enhancing the digital information literacy of academic staff (66.7%) and increasing institutional subscriptions to relevant databases (33.3%). These measures are identified by participants as instrumental in addressing the prevalent challenges associated with accessing digital information.

Discussion

The survey reveals the level of Digital Information Literacy among Indigenous Medicine University academics in Sri Lanka, as well as the need of multiple measures to promote the continuous development of IL skills in future. Findings revealed that academics prefer to find library information through online catalogues rather than by searching bookshelves, and prefer taking assistance from library staff. The users tend to utilize electronic resources such as e-journals and e-books mostly, to meet their academic and research requirements. The most frequently used databases were Taylor and Francis and Science Direct. The usage of online information sources by academics indicates a high reliance on internet search tools for finding information. Respondents mentioned that they primarily use information to update their subject knowledge and write publications in their discipline. However, the paper explores the challenges they face when using digital information for academic and research work. Awareness sessions are deemed insufficient, and institutional subscriptions to relevant databases are inadequate. Insufficient e-resources in their field are also identified as challenges.

Limitations of the Study

The scope of the study is limited to academics representing the indigenous medicine field in Sri Lanka and the findings may not be directly generalizable to other regions or indigenous communities. Nevertheless, this research represents a crucial step towards fostering a better understanding of digital information literacy among indigenous medicine university academics and advancing their contributions to both scientific research and the preservation of valuable Indigenous knowledge in Sri Lanka.

Conclusion and Recommendation

University education is rapidly moving into an online and digitalized form with the digitalization taking place in every sector in the country as well as in the world. Thus it is crucial to adapt to digitalization while maintaining a quality teaching, learning, and research environment in the universities. The university library could play a centralized role in this regard and the library should cater to the digital information needs of both students and academics effectively. Accordingly, it is recommended to implement initiatives to increase awareness by the library to enhance the level of digital information literacy among indigenous medicine university academics. Furthermore, the institute should take the necessary steps to subscribe to more online resources and additional databases relevant to indigenous medicine.

References

Baidoo, D. K., Asare, C., & Anafo, P. (2021). Information literacy and academic libraries: Students learning in the information age, the case of undergraduates at the Wisconsin International University College. *Library Philosophy and Practice*, 1-26.

- Cordell, R. M. (2013). Information literacy and digital literacy: Competing or complementary? *Communications in Information Literacy*, 7(2), 14.
- Gampaha Wickramarachchi University of Indigenous Medicine. (n.d.). Retrieved from <https://gwu.ac.lk/>
- Hegarty, B., Penman, M., Kelly, O., Jeffrey, L., Coburn, D., & McDonald, J. (2010). *Digital information literacy: Supported development of capability in tertiary environments*. Otago Polytechnic, i, 302.
- Jeffrey, L., Hegarty, B., Kelly, O., Penman, M., Coburn, D., & McDonald, J. (2011). Developing digital information literacy in higher education: Obstacles and supports. *Journal of Information Technology Education: Research*, 10(1), 383-413.
- Kinengyere, A. A. (2007). The effect of information literacy on the utilization of electronic information resources in selected academic and research institutions in Uganda. *The Electronic Library*, 25(3), 328-341.
- Kumar, R. (2020). Digital information literacy among the engineering students: A survey. *Library Philosophy and Practice*, 1-7.
- Mishra, C., & Maharana, B. (2007). A survey of digital information literacy of faculty at Sambalpur University. *Library Philosophy and Practice*, 9(2).
- Ranaweera, R. P. P., Kumara, A. D. B., & Samaradiwakara, G. D. M. N. (2014). Socio-cultural approach to digital information literacy of postgraduate students in Sri Lanka. In A. Noorhidawati et al. (Eds.), *ICOLIS 2014* (pp. 77-88). Kuala Lumpur: DLIS, FCSIT.