AGPE THE ROYAL GONDWANA RESEARCH JOURNAL
OF HISTORY, SCIENCE, ECONOMIC, POLITICAL AND SOCIAL SCIENCE
ISSN (E): 2583-1348 | A Peer reviewed | Open Access & Indexed
Volume 05 | Issue 08 | August 2024 | www.agpegondwanajournal.co.in | Page No. 25-33

ASSESSMENT OF DIGITAL LITERACY SKILLS AMONG RESEARCH SCHOLARS IN THE FACULTY OF SOCIAL SCIENCES AT ALIGARH MUSLIM UNIVERSITY, ALIGARH

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Abstract:

This study explores the digital literacy skills of research scholars in the Faculty of Social Sciences at Aligarh Muslim University, Aligarh. It also highlights the mean differences in the digital literacy skills between male and female scholars. Data was gathered using the "Digital Literacy Scale" developed by Amin et al. (2021) from 125 research scholars randomly. The scale's reliability was confirmed with a coefficient of 0.85, indicating high reliability. This study revealed that most research scholars possessed a high level of digital literacy skills. In addition, male scholars are better at using technology than female scholars. All in all, there was a positive level of digital literacy proficiency among research scholars, with the majority having high levels while no one had very low levels. From these findings, it can be seen that research scholars in the faculty of social sciences at AMU are generally digitally literate. These results form a firm foundation for upcoming research undertakings and interventions targeting the creation of inclusive and innovative digital learning contexts within educational institutions.

Keywords: Digital Literacy, Digital Literacy Skills, Research Scholars

Introduction

Amidst the rapidly evolving academic landscape, possessing proficient digital abilities is crucial for researchers. The advent of technology has revolutionised the research landscape, necessitating that scholars possess proficiency not just in their respective fields but also in utilising digital technologies. With the increasing integration of digital tools and platforms in research methodologies, it is imperative for scholars to possess proficient skills in using these digital

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resources. Digital literacy encompasses a wide range of skills, including proficiency in digital technologies, competence in using digital tools, and the ability to think critically in a digital context. In contemporary times, researchers must possess exceptional proficiency in utilising computers and digital technologies to conduct their study, analyse data, and disseminate their findings. Proficiency in utilising digital tools enables individuals to effectively manage vast amounts of online information, discern the credibility of sources, and critically evaluate the material they encounter (Wang et al., 2021, p. 1). In addition, proficiency in digital technology facilitates collaboration between researchers and specialists from around the globe, enabling them to publish their findings and participate in online academic communities (Kumar & Kumar, 2021, p. 1). Assessing the proficiency of research scholars in digital knowledge holds significant importance. It aids in determining their strengths and areas of improvement in digital abilities. Through conducting this type of research, one can discover more effective methods to assist scholars in utilising computers and online tools for their research. This implies that they can enhance their performance, effectively communicate their findings, and collaborate with other professionals regardless of their location. Hence, acquiring digital talents has been exceedingly crucial for contemporary research scholars

Digital Literacy

Digital literacy encompasses the knowledge, proficiency, and confidence in effectively utilising digital resources. The purpose is to utilise these tools for the purpose of discovering, comprehending, and managing digital content such as information, generating novel concepts, producing media, and engaging in online communication. According to Mammadova (2023), Digital literacy is a composite concept that encompasses the fusion of two distinct terms, namely "digital" and "literacy." According to the American Library Association, digital literacy is “the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.” Digital information is defined as the symbolic representation of data that can be accessed through electronic media such as e-journals, e-books, e-indexes, and the Internet. On the other hand, literacy pertains to the capacity to comprehend and effectively utilise this digital information. The current study's 9 c's of digital literacy skills, as defined by Chen (2015), are Communication- It entails participating thoughtfully in online conversations and being respectful while interacting with others online; Copyright- understanding of the rules governing the creation, use, and dissemination of digital material; Critical Thinking- Digital literacy involves critical thinking to analyse, comprehend, and synthesise internet content. Digital platforms' biased, truthful, and deceptive content must be identified; Character- competencies, flexibility, morality, and appropriate conduct in cyberspace; Citizenship- Digital citizenship pertains to the conscientious use of digital technologies and platforms. It entails participating in online communities with courtesy, making constructive contributions to digital spaces, and being conscious of one's digital presence; Curation- refers to the ability to select, organize, and present digital material in a manner that is both significant and pertinent; Connectedness-encompasses the capacity to create and sustain significant connections and networks in the digital domain; Creativity- This includes creating digital content, designing

multimedia, and coming up with new ways to use technology; Collaboration-the ability to effectively cooperate with people using digital tools in order to achieve shared goals.

Literature Review

Ertmer and Ottenbreit-Leftwich (2010) examine the studies on digital literacy and its impact on the process of teaching and learning. The study highlights the imperative for educators to attain digital literacy, enabling them to combine digital skills with essential learning principles. Kumar and Singh (2015) conducted a survey to assess the level of digital literacy among library and information science research scholars at Babasaheb Bhimrao Ambedkar University in Lucknow. The findings revealed that the doctoral researchers in library science demonstrated a high level of digital literacy and possessed strong literacy skills. However, they encounter deficiencies in their search findings. Additional challenges, such as issues with connectivity and limited availability of internet access points, were also being experienced. Kumar and Singh (2016) assess the digital literacy of research scholars in the field of library and information science from two renowned central universities in India, namely Aligarh Muslim University (AMU) and Banaras Hindu University (BHU). The survey found that a substantial proportion of research scholars at AMU exhibited digital literacy through self-directed learning and internet usage, while the degree of digital literacy was notably lower at BHU. Sumi (2018) found that, on average, research scholars have only attained a moderate level of digital literacy awareness. The limited utilisation of technology or insufficient exposure to the digital world may potentially hinder the achievement of the desired outcome. In the realm of scholarly pursuits, it seems that male scholars have a greater inclination towards utilising technology to broaden their exposure to the outside world compared to their female counterparts. Bansal and Singh (2019) investigate the current level of digital literacy among research scholars at Punjab Agricultural University, Ludhiana, as well as their familiarity with digital devices, the reasons they use them, how often they use them, and the value they place on information and communication technology tools. Most participants agreed that ICT tools helped their research by delivering faster, more user-friendly, and up-to-date data. However, respondents cited concerns about plagiarism, authenticity, lengthy screen-based study, and a preference for conventional learning. Kaur and Singh (2019) investigate the digital literacy skills possessed by research scholars specialising in the field of social sciences at Punjabi University, Patiala. The study reveals that a significant proportion of research scholars possess a moderate level of digital literacy skills. Chari (2020) emphasises the significance of digital literacy in pupils and its seamless integration into the curriculum. The study highlights the importance of digital literacy, which encompasses not just the utilisation of digital tools but also the cultivation of digital competencies such as communication, creativity, cooperation, and critical thinking. Egeli and Sagdinc (2021) examined the significance of digital literacy skills in the current education system. They emphasized that these skills play a dynamic role alongside the resources utilized during the instruction of students.

The information obtained can be used to develop targeted training programs, increase policy-informing curricula, and thus enhance the ability of scholars to conduct high-quality

research. This research is very important in making sure that scholars are well-prepared to meet the digital demands of contemporary academia.

After reviewing the various publications on digital literacy skills, It is therefore important to encourage digital literacy participation in the research process at a time when digital tools and resources are integral to academic work. By evaluating digital literacy skills among research scholars, this paper identifies current skill gaps that could slow down research quality and productivity. The results of this study are anticipated to contribute to the current state of affairs, which could be useful for the university's future digital literacy program design and coordination so that they can continue to be relevant and competitive in the dynamic academic field.

Objectives of the study

1. To assess the level of digital literacy skills among research scholars in the faculty of social sciences at Aligarh Muslim University.
2. To identify the significant difference in the level of digital literacy skills among male and female research scholars in the faculty of social sciences at Aligarh Muslim University.

Methodology

This research follows a descriptive methodology and utilizes a quantitative approach to meet its defined objectives. The data for this study was collected from the research scholars of the faculty of social sciences at Aligarh Muslim University, Aligarh.

Sample

200 questionnaires were distributed to research scholars affiliated with the Faculty of Social Sciences at Aligarh Muslim University through Google Forms. Ultimately, 125 completed questionnaires were received in response. Among the respondents, a clear majority of 70 respondents, constituting 56% of the total, identified themselves as male candidates. Conversely, the remaining 55 respondents, comprising 44% of the sample, identified themselves as female candidates. This data highlights a higher participation rate of male respondents compared to their female counterparts within the Faculty of Social Sciences at Aligarh Muslim University.

Tool

This study utilised the "Digital Literacy Scale" created and standardised by Amin et al. (2021). This scale is based on Chen's (2015) 9 C's of digital literacy and addresses digital literacy in its social, psychological, moral, and ethical dimensions in addition to the fundamental functional skills. This scale comprises 36 elements that are divided across 9 dimensions, which were derived from Chen's (2015) 9 C's (Communication, Copyright, Critical Thinking, Character, Citizenship, Curation, Connectedness, Creativity and Collaboration) framework of Digital Literacy. The reliability of the scale was established locally by the researcher. The dimension-wise reliability of the scale established by the researcher is presented in Table 1.

Table 1
Reliability Coefficients of the scale

Dimensions	No. of Items	Cronbach Alpha Dimension Values	Overall Cronbach Alpha of the Scale
Communication	7	.65	
Copyright	4	.79	
Critical Thinking	3	.69	
Character	3	.62	
Citizenship	4	.73	.85
Curation	3	.71	
Connectedness	5	.83	
Creativity	4	.75	
Collaboration	3	.73	

Results and Discussion

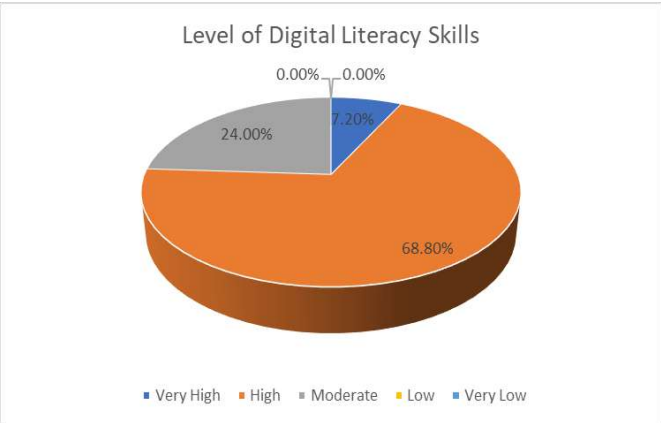
Objective 1

To assess the level of digital literacy skills among research scholars in the faculty of social sciences at Aligarh Muslim University.

Table 2
Percentage analysis of digital literacy skills score of the total sample (N = 125)

Very High		High		Average		Low		Very Low	
N	%	N	%	N	%	N	%	N	%
9	7.2	86	68.8	30	24	0	0	0	0

Figure 1
Diagrammatical presentation of level of digital literacy skills



The table presented above provides an overview of the digital literacy skills among research scholars. It reveals that 24% of the participants possess a moderate level of digital literacy skills, suggesting that there is room for improvement or targeted interventions to increase their proficiency

levels. While 68.8% exhibit a high level of digital literacy skills, this remark emphasizes the impressive proficiency of a considerable number of participants, indicating a solid understanding of how to navigate digital platforms and effectively use technology resources. Additionally, 7.2% of the research scholars demonstrate exceptional digital literacy skills, highlighting a remarkable subgroup within the research scholar community and demonstrating an impressive degree of ability that surpasses the advanced category. Based on the score ranges, no participants fell within the "very low" or "low" skill categories. This study's results align with the findings of Bhattacharya and Joshi (2018), Corrin and Munday (2018), Jefferies and Unwin (2019), Sharma and Goyal (2020), and Nair and Singh (2022). These studies indicated that the majority of the scholars or students reported high digital literacy, and some reported moderate and lower levels.

Objective No. 2

To identify the significant difference in the level of digital literacy skills among male and female research scholars in the faculty of social sciences at Aligarh Muslim University.

Null Hypothesis

There is no significant difference in the level of digital literacy skills among male and female research scholars in the faculty of social sciences at Aligarh Muslim University.

Table 3

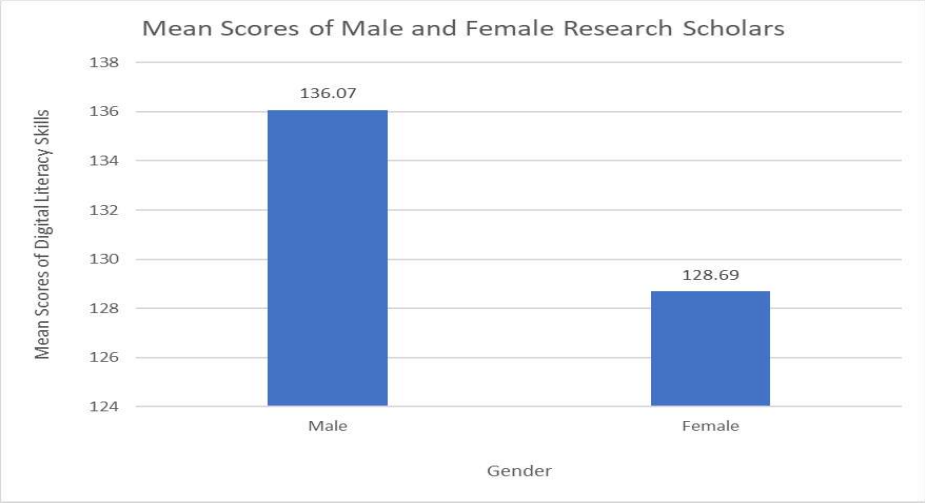
The mean difference in teacher effectiveness scores between male and female teachers

Variable	Groups	N	Mean	SD	*t*-value	*p*-value
Digital Literacy Skills	Male	70	136.07	13.89	3.145	.002
	Female	55	128.69	11.82		

Significant at 0.05 level

Figure 2

Diagrammatical presentation of digital literacy skills among male and female research scholars



The analysis compared digital literacy skill levels between male and female participants. Results presented in Table 3 revealed that, on average, male participants scored higher (M = 136.07, SD = 13.89) than female participants (M = 128.69, SD = 11.82) in these skills. The t-test indicated a statistically significant difference in digital literacy skills between male and female participants (t = 3.145, p = .002). The observed mean difference was 7.38, indicating that male participants, on average, displayed notably higher levels of digital literacy skills than their female counterparts. Therefore, the null hypothesis, "*there is no significant difference in the level of digital literacy skills among male and female research scholars of the faculty of social sciences at Aligarh Muslim University",* is rejected. This study's results align with the findings of Patel and Joshi (2017), Brown and Green (2018), Kumar and Sharma (2019), Roy and Sinha (2020), Singh and Kaur (2021).

Recommendations

By implementing the following suggestions, academic institutions can cultivate an environment that nurtures ongoing learning and facilitates the development of digital literacy skills.

- Design and develop tailored digital literacy training sessions that effectively address scholars' unique skill levels and learning needs.
- Design and implement programs and workshops that foster equitable skill development by leveraging the power of mentorship.
- Explore and embrace emerging technologies and innovative tools to enhance and elevate digital literacy skills.
- Design and cultivate collaborative environments that foster a collective mindset, encouraging individuals to contribute and exchange diverse knowledge actively.
- Foster an inclusive environment in digital education by valuing and incorporating diverse viewpoints and experiences.
- Continuously evaluate and enhance digital literacy initiatives by incorporating feedback and adapting to evolving trends. Ensure the continued usefulness and alignment of these initiatives with the needs and demands of scholars.
- Allocate resources to research programs that examine the causes of disparities among research scholars. Collaborate across diverse domains to devise innovative approaches for enhancing proficiency.
- Promote equitable access to resources and opportunities, irrespective of gender or proficiency.
- Propose initiatives aimed at equipping teachers with enhanced digital competencies.

Conclusion

The findings indicate that research scholars possess a predominantly robust digital literacy landscape. The academic community demonstrates a commendable overall competency, as evidenced by the prevalence of high proficiency and the absence of lower skill categories. It is evident that while there are research scholars with moderate proficiency levels in digital literacy,

there are also noticeable disparities based on gender. Therefore, it is crucial to implement targeted interventions and adopt sophisticated strategies to improve digital literacy skills and ensure equal opportunities for everyone. The findings presented in this study provide a solid basis for future research and initiatives focused on fostering inclusive and advanced digital literacy environments in academic settings.

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