Indian Journal of Humanities and Social Sciences
ISSN 2347-324X Volume 15, Number 2 (2026), pp. 143-151

http:// www.gbspublisher.com

Acquisition of Digital Skills Among Open and Distance Learners: A Study of KKHSOU

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Abstract

The backbone of open and distance education is information and communication technology. With the development of ICT, the concept of open and distance education has broadened. The modes of teaching and learning in open and distance education have evolved from postal services to multimedia (including print, radio, and television) and now to new media (such as Web 2.0, Web 3.0, and AI). With the support of ICT, open and distance universities are offering need-based education to millions of learners. With the increasing application of ICT in open and distance education, it is essential on the part of the learners to develop digital skills to access the learning content, materials, and support via digital platforms. The learners' digital skills directly correlate with their familiarity, awareness, and usage of digital platforms.

The present ICT-based world demands digital skills among learners to become acquainted with the fast-growing knowledge society. Education, economy, health, banking, and social and political fields have shifted from traditional society to the digital world. Digital skills among learners are considered essential for human resource development in the 21st century. Open and distance education should stretch the digital skills from basic to advanced levels among the postgraduate learners. Curriculum should fuel the learners' awareness and development of digital skills. The study has been conducted among postgraduate learners of KKHSOU. The purpose of the study is to examine the development of digital skills among the postgraduate learners during the programme. The study found that the majority of the postgraduate learners of KKHSOU have an moderate level of digital skills.

Keywords: Digital skills, Open and distance education, and KKHSOU,

Introduction: The idea of digital skills has emerged from the word "digital literacy," coined by Paul Glister (Glister, 1997). It covers a wide range of capabilities beyond reading and writing on digital platforms. Glister defines digital literacy as "the ability

to recognize and apply data in various forms via an extensive variety of resources anytime it comes in over computer". According to Buckingham (2015), "Digital (or computer) literacy often appears to amount to a minimal set of skills that will enable the user to operate effectively with software tools or in performing basic information retrieval tasks. " Digital skills are defined as a range of abilities to use digital devices, communication applications, and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work, and social activities at large (UNESCO, 2018). The UK Gov (2019) established a framework that includes five digital skills, i.e., using devices & handling information, creating & editing, communicating, conducting transactions, and being safe & responsible online. Simply using a smartphone or laptop just for entertainment cannot assume someone as tech-savvy. It's just more than just watching, scrolling, and searching on digital platforms. Digital skills are important for academic achievement, career success, lifelong learning, and being an informed citizen.

The present digital world is highly scattered and relevant in every aspect of life. Students have to keep up with technological advancement**.** To progress their technical skills and keep up with the digital era, the significance of encouraging and motivating students to continue undergoing courses, tutorials, etc. is crucial (Kulkarni & Ramesha, 2021). The education institution plays the pivotal role in imparting appropriate digital skills through innovative learning trajectories. (Reddy, R., Chaudhary, K. & Hussein, S. 2023). The technological advancement has increased the usage and application of ICT in higher education across disciplines and institutions. The most prominent frameworks, Technological Pedagogical Content Knowledge (TPACK) and Substitution, Augmentation, Modification and Redefinition (SAMR), guide the educators to integrate technology in the learning process (OECD, 2021).

In the ODL setting, learners' success is significantly influenced by their level of digital skills. As most of the learning activity has to be acquired from digital platforms therefore, awareness, knowledge and skills to handle the platform are first and foremost qualities on the part of learners. Apart from that ODL design, the programme trains the learners to acquaint themselves with digital skills from the admission process to learners' support services, app-based classes, blended teaching and learning, and MOOC courses to examination and result processes. In the setting of ODL, digital technology bridges the gap between learners and teachers, learners and learners and learners and the university. Nowadays, ODL universities have highly interactive digital campuses and tech-mediated infrastructure. E-content, synchronous and asynchronous student engagement, online assessment, e-learning management systems, e-library systems, etc. are the core of open and distance education. Therefore, in that ecosystem, teachers and students both should possess adequate digital skills to excel in their journey and prevent educational burnout.

Literature Review:

Jebaraj, C.M. (2026), studied digital literacy skills among college students' in Tamil Nadu. Students use digital platforms for fun staff, social media, watching videos, gaming. Students have basic proficiency with basic tasks but moderate proficiency in

handling productivity tools and low proficiency in evaluation credibility of online sources, advance staff, citation tools, checking for plagiarism, data analysis apps and safety awareness. Đorđević, B., Milanović Zbiljić, S., & Radosavljević, M. (2025), examine five key digital competencies from basic to above basic level i.e. information and data digital literacy, communication and collaboration, problem solving, digital content creation and safety skills and it's impact on employability. The study found that above basic levels of communication and collaboration, digital content creation and safety significantly positive impact on employability in European countries. Romi, T. M. (2024), investigate digital skills impact on University students' academic performance in e learning system. The study found that students have satisfying common digital skills and educational digital skills but least satisfying advance digital skills. Further, common digital skills and educational digital skills positively impact students' academic effectiveness, efficiency and satisfaction. Adewumi, O.O. & Oladele, E.O. (2023) investigated on perceived E skills and digital literacy of distance learning students. The study found significant mean difference between perceived importance of E skills and digital literacy and their actual usages. Boro, B., Laltanzova, R. & Chanchinmawia, F. (2023), studied digital literacy skills among the postgraduate students in North eastern central Universities. The study found that 16% to 10% students can download/upload text, graphics, audio and video, feel securely safety while using computer and internet, know how to convert print materials to digital form, and use electronic resources for academic work. While less than 10% students can analyze digital data, use ICT to retrieve and process information, participated in creating and sharing knowledge through social networks and use digital tools for educational purpose. The study also found that more than half use academic networking sites occasionally and just a tiny percentage visit frequently. Vishnu, et. al. (2022) found that majority of learners in higher education in the context of covid19 triggered online learning have moderate level of digital competency. Krishnamurthy, C. & Shetteppanavar, L. (2019) conducted a study to know the digital Literacy among Female Postgraduate Students of Karnatak University. The study found that majority of the female P.G students has the ability to use computer and its applications and use the internet for one or the other purpose. The study also found that Google is the most search engine, and majority female P.G students are aware of Google scholar and web of science. Keskin, N.O., et al.(2015) open and distance learners have basic level of digital literacy competencies and at basic level they use information and communication technologies.

Objective of the study:

The objectives of the study are**:**

1) To study the familiarities with various digital platform, web based application, digital device among the postgraduate learners of KKHSOU.
2) To study the acquisition of digital skills among the postgraduate learners of KKHSOU.
3) To study the mean difference between male and female postgraduate learners the acquisition of digital skills at KKHSOU.

Hypothesis of the Study:
Null Hypothesis: There is no significant difference between male and female postgraduate learners of KKHSOU in the acquisition of digital skills.

Methodology: The present study has applied a case study method method. The data was collected among postgraduate learners from KKHSOU in 2023 across disciplines. The simple random sampling technique has been used for sample selection. 200 postgraduate learners are selected for the study. A self-structured Likert scale has been designed in Google Forms and sent to learners via email. Validity, reliability, and norms of the scale have been formulated with the help of experts in the education field.

Data analysis and Interpretation:
Analysis of objective 1: To study the familiarities with digital platform, web based application digital device, software and AI among the postgraduate learners of KKHSOU.

Table No.1: Postgraduate learner's familiarity with Digital platforms/ Web based application

Digital platforms/ Web based application	No of learners familiar with Digital platforms/ Web based application	Percentage of learners familiar with Digital platforms/ Web based application
SWAYAM	92	46%
NPTEL	47	23.5%
Google Classroom	176	88%
e-bidya	148	74%
e-SLM	200	100%
e- Pragya	74	37%
e-Gyankosh	126	63%
KKHSOU digital library	174	87%

Interpretation: From the table No. 1, It has found that 46% of postgraduate learners are familiar with SWAYAM, 23.5% of postgraduate learners are familiar with NPTEL, 88% of postgraduate learners are familiar with Google Classroom, 74% of postgraduate learners are familiar with ebidya, 100% of postgraduate learners are familiar with e-SLM, 37% of postgraduate learners are familiar with e Pragya, 63% of postgraduate learners are familiar with e-Gyankosh, 87% of postgraduate learners are familiar with KKHSOU digital library

Table No.2: Postgraduate learner's familiarity with Digital Devices with internet connection

Digital Devices with internet connection	No of learners familiar with	Percentage of learners familiar with
Smartphone	200	100%
Laptops/ Desktops	152	76%
Tablets	36	18%
Notepad	10	5%

Interpretation: From the Table No. , It has found that 100% of postgraduate learners are familiar with Smartphone, 76% of postgraduate learners are familiar with Laptops/ Desktops, 18% of postgraduate learners are familiar with e- Tablets, and only 5% of postgraduate learners are familiar with Notepad.

Table No.3: Postgraduate learner's familiarity with Software used for academic purpose

Software used for academic purpose	No of learners familiar with	Percentage of learners familiar with
Ouriginal (Urkund/ Turnitin)	Nil	0%
Grammarly	100	50%
SPSS	Nil	0%
Strata	Nil	0%
Mendeley	Nil	0%
Zotero	Nil	0%
MS- Office (Word, Excel)	180	90%

Interpretation: From the Table No. , It has found that 50% of postgraduate learners are familiar with Grammarly, 90% of postgraduate learners are familiar with MS-Office (Word, Excel), and none of the postgraduate learners are familiar with Ouriginal (Urkund/ Turnitin), SPSS, Strata, Mendeley, and Zotero.

Table No. 4: Postgraduate learner's familiarity with AI

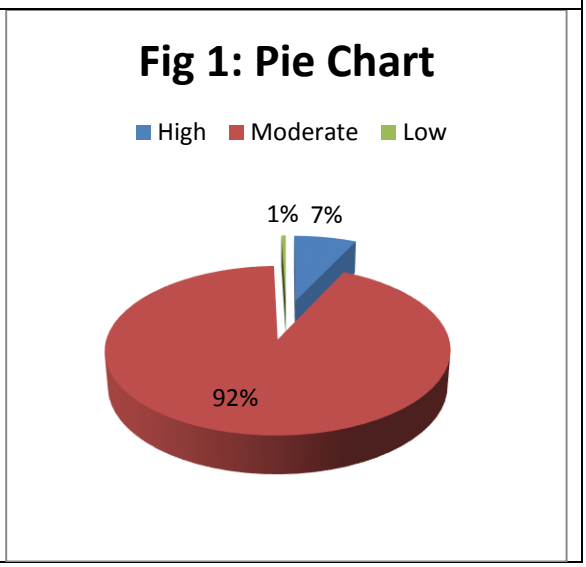
AI	No of learners familiar with	Percentage of learners familiar with
ChatGpt	200	100%
Consensus	Nil	0%
Semantic Scholar	Nil	0%
Google gemini	200	100%
Jennie ai	Nil	0%

Interpretation: From the Table No. , It has found that 100% of postgraduate learners are familiar with ChatGpt, 100% of postgraduate learners are familiar with Google Gemini, and none of the postgraduate learners are familiar with Consensus, Semantic Scholar, and Jennie ai.

Analysis of objective 2: To study the acquisition of digital skills among the postgraduate learners of KKHSOU.

Table No.1: Acquisition of digital skills among postgraduate learners

Variables	Levels	No. of learners	%
Digital Skills	High	14	7%
	Moderate	185	92.5%
	Low	1	0.5%

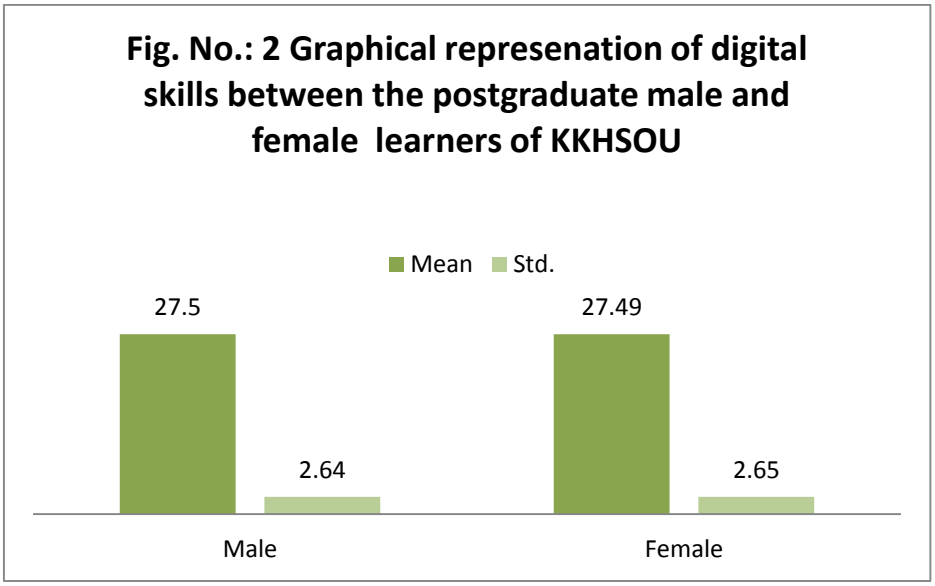


Interpretation: From the Table No. 5, It has found that 14 (7%) postgraduate learners have high level of digital skills, 185 (92.5%) postgraduate learners have moderate level of digital skills and only 1 (0.5%) postgraduate learners have low level of digital skills.

Analysis of objective No 2. : To study the significant differences between postgraduate male and female learners of KKHSOU in the acquisition of digital skills.

Table:3 Acquisition of Digital skills between the postgraduate male and female learners of KKHSOU

Variable	Gender	Mean	Std.	Df	t-test
Digital skills	Male	27.5	2.64		
	Female	27.49	2.65	198	0.0266



Interpretation: Based on Table 6, the mean and S.D. of digital skills for male postgraduate learners are 27.5 and 2.64, respectively, while for female postgraduate learners, they are 27.49 and 2.65 The calculated t-value is 0.0266 with 198 degrees of freedom (df). Since the calculated t-value (0.0266) is less than the critical value (1.972) at the 0.05 significance level, there is insufficient statistical evidence to reject the null hypothesis. In other words, there is no significant difference between male and female postgraduate learners of KKHSOU in the acquisition of digital skills.

Conclusion: The evolution of technologies has compelled ODL institutions to adopt and explore different digital tools and technologies and altered the pedagogical landscape as learners support mechanisms and develop coherent digital skills among ODL postgraduates (Nsamba & Chimbo, 2023). The shift in teaching and learning in open and distance institutions is driven by the integration of adaptive learning systems and immersive virtual platforms, where ODL learners have to acquire adequate technical fluency and the resilience to navigate technology-mediated academic ecosystems (Li, K.C., Belawati, T. & Hou, H., 2025). It is suggested to ODL universities to train and support learners to develop digital skills and help them to cope with the integrated technological framework/models implemented in the system. Moreover, learners should develop a positive attitude and keen interest in using digital tools for academic purposes. They should actively engage, adopt, and be aware of the digital ecosystem integrated by the program as well as the university.

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