International Journal of Research in Library Science (IJRLS)

ISSN: 2455-104X

DOI: 10.26761/IJRLS.12.1.2026.2041

Volume 12, Issue 1 (January-March) 2026, Page: 195-206, Paper ID: IJRLS-2041

Influence of Digital Literacy on Information Literacy Competency among users of UAS Bangalore

S R Muralidharan[1]; P. Dharani Kumar[2]

Research Scholar, DOSR in Library and Information Science Kuvempu University, Jnana Sahyadri, Shankaragatta-577451, Shimoga, Karnataka[1]; Professor, DOSR in Library and Information Science, Kuvempu University, Jnana Sahyadri, Shankaragatta-577451, Shimoga, Karnataka, India[2]

srmurali4288@gmail.com; dr.dharanikumarp@gmail.com

ABSTRACT

The rapid growth of digital information resources has transformed academic libraries, making digital literacy a critical factor in developing information literacy competency among users. This study examines the influence of digital literacy on information literacy competency among users of the University of Agricultural Sciences (UAS), Bangalore. A descriptive survey method was employed, and data were collected from 216 respondents, including undergraduate students, postgraduate students, research scholars, and faculty members, using a structured questionnaire. The findings reveal that smartphones and laptops are the most preferred devices for accessing digital information, with a majority of users accessing resources from hostel/home and multiple locations. The study indicates a high level of basic digital literacy and information literacy among respondents; however, deficiencies were observed in advanced skills such as the use of academic databases, reference management tools, and formulation of effective search strategies. The results further demonstrate a strong positive influence of digital literacy on information literacy competency, research productivity, and academic performance. Lack of training, limited awareness of databases, and poor internet connectivity emerged as major challenges. The study concludes that enhancing digital literacy through continuous library-led training programmes and improved infrastructure is essential for strengthening information literacy competency among agricultural university library users.

KEYWORDS: Digital Literacy; Information Literacy Competency; Agricultural University Libraries; Electronic Information Resources; UAS Bangalore; Academic Library Users.

1. INTRODUCTION

In the contemporary knowledge-driven academic environment, universities increasingly rely on digital technologies for teaching, learning, and research. The rapid growth of electronic resources, online databases, and digital repositories has transformed the way information is accessed and utilized, particularly in specialized institutions such as agricultural universities. In this context, digital literacy—the ability to effectively use digital tools and

technologies—has become a crucial prerequisite for developing strong information literacy competency among academic users.

Information literacy encompasses the skills required to recognize information needs, locate relevant sources, critically evaluate information, and ethically use information for academic and research purposes (Association of College & Research Libraries, 2016). In agricultural universities, where research is multidisciplinary and data-intensive, information literacy plays a vital role in enhancing research quality and academic productivity. However, the effective use of scholarly databases, e-journals, and online research tools is largely influenced by users' level of digital literacy.

The University of Agricultural Sciences (UAS), Bangalore, being a premier agricultural institution, provides access to a wide range of digital resources to support education and research. Despite this, variations in users' digital skills may influence their ability to fully exploit available information resources. Therefore, examining the influence of digital literacy on information literacy competency among users of UAS Bangalore is essential to understand existing skill gaps and to design effective library training and instructional programs. This study aims to contribute empirical evidence to support strategic planning for enhancing digital and information literacy initiatives in agricultural university libraries.

2. LITERATURE REVIEW

The increasing integration of Information and Communication Technology (ICT) in academic libraries has drastically transformed users' access to information and the way academic research is conducted. With digital resources such as e-journals, databases, and online repositories becoming core to scholarly work, users' ability to interact with these resources effectively is increasingly contingent on both digital literacy and information literacy competencies. Digital literacy broadly refers to the skills required to use digital tools and technologies to locate, evaluate, and create information, while information literacy focuses on identifying information needs and using information accurately and ethically (Association of College & Research Libraries, 2016).

In the context of agricultural university libraries, studies have indicated distinct information seeking behaviour patterns shaped by ICT environments. The study by Kumari and Shivakrishan (2016) investigated users' information seeking behaviour in ICT environments among various Agricultural University libraries in Karnataka. The findings demonstrated that ICT significantly influences how users seek and retrieve information and underscored the growing reliance on electronic sources over traditional print media, particularly for academic work, research, and teaching functions. The study also highlighted users' expressed need for training to improve their skills in using ICT-based resources effectively, suggesting an intrinsic link between technological skills and efficient information retrieval practices.

Similarly, regional studies in academic library settings have documented how users engage with electronic information resources. For instance, research on digital information seekers at Manonmaniam Sundaranar University found that although users frequently engage with online resources, many were not fully satisfied with internet facilities and lacked expertise in navigating digital platforms efficiently, pointing towards gaps in digital literacy that

subsequently affect resource utilisation. Further, studies focusing on information seeking patterns of university scholars in other Indian contexts illustrate that researchers' preferences for search channels, frequency of library visits, and modes of literature search are influenced by their familiarity with ICT tools.

Empirical evidence from Karnataka and elsewhere indicates that while agricultural university users may possess basic digital access, their proficiency in advanced digital competencies—such as effective search strategies, database navigation, and evaluation of search results—varies. These competencies are inherently linked with information literacy, as users who lack digital skills often struggle to accurately locate, critically evaluate, and appropriately apply information in academic tasks (Singh, 2014). For example, the ability to identify authoritative digital information sources and apply relevant search filters is a core intersection where digital and information literacies converge. Without such skills, electronic resource utilisation remains superficial.

Beyond agricultural universities, broader literature suggests that digital literacy can play a mediating role in enhancing information literacy outcomes. Studies on digital and information literacy in higher education note that effective digital skills not only facilitate access to information but also empower users to synthesise and apply information in research contexts, particularly in the face of an ever-expanding digital knowledge ecosystem.

Overall, existing literature reveals three interconnected themes relevant to this study: (1) the critical influence of ICT on information seeking behaviour**,** (2) the necessity of digital competency for effective interaction with e-resources**,** and (3) the role of information literacy in enabling meaningful use of information for academic and research success. Integrating these insights provides a strong conceptual foundation for examining how digital literacy influences information literacy competency among users at UAS Bangalore.

3. OBJECTIVES OF THE STUDY

1. To assess the level of digital literacy among users of the University of Agricultural Sciences (UAS), Bangalore.
2. To examine the level of information literacy competency among users of UAS Bangalore.
3. To analyze the relationship between digital literacy and information literacy competency among UAS Bangalore library users.
4. To identify the influence of digital literacy skills on the effective use of information resources by users of UAS Bangalore.

4. METHODOLOGY

The present study adopted a descriptive survey research design to examine the influence of digital literacy on information literacy competency among users of the University of Agricultural Sciences (UAS), Bangalore. The survey method was considered appropriate as it facilitates systematic collection of data from a large group of respondents and enables quantitative analysis of users' perceptions, skills, and competencies.

Population and Sample

The population of the study comprised students, research scholars, and faculty members of UAS Bangalore**.** UAS Bangalore offers 26 postgraduate programmes and 7 undergraduate programmes, catering to diverse academic and

research needs in agricultural sciences. A stratified sampling technique was employed to ensure representation from different academic categories.

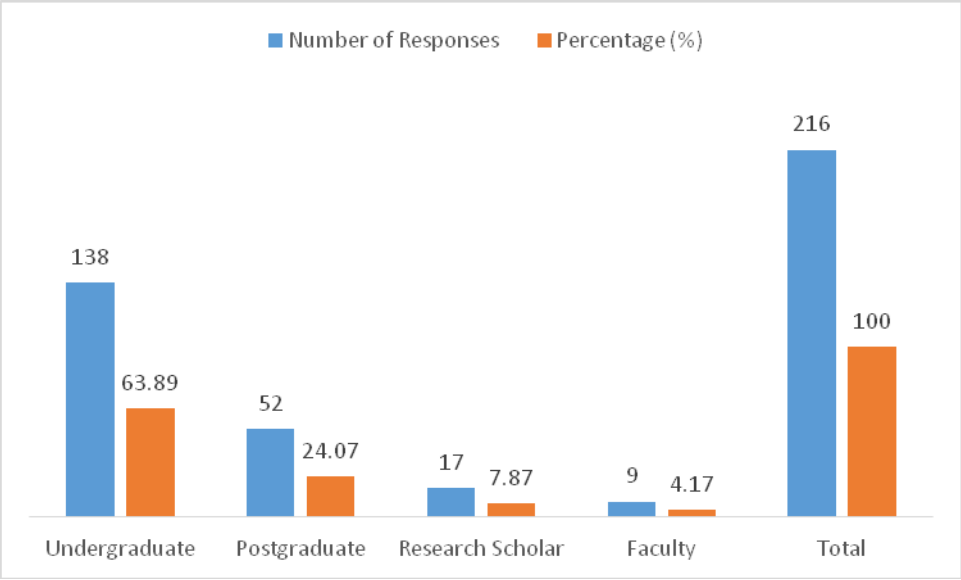
A total of 216 respondents participated in the study. The academic status-wise distribution of respondents is presented below:

Table-1 Academic Status of Respondents (N = 216)

Academic Status	*Number of Responses*	*Percentage (%)*
Undergraduate	138	63.89
Postgraduate	52	24.07
Research Scholar	17	7.87
Faculty	09	4.17
Total	**216**	**100.00**

This distribution reflects the actual user composition of the university, with undergraduate students forming the majority of library users.

Chart-1 Academic Status of Respondents



Data Collection Tool

Data were collected using a structured questionnaire, designed based on relevant literature and established digital literacy and information literacy frameworks. The questionnaire consisted of sections covering demographic details, access to digital resources, digital literacy skills, information literacy competency, and the perceived influence of digital literacy on information use. Responses to skill- and competency-related statements were measured using a five-point Likert scale, ranging from “Strongly Disagree” to “Strongly Agree.”

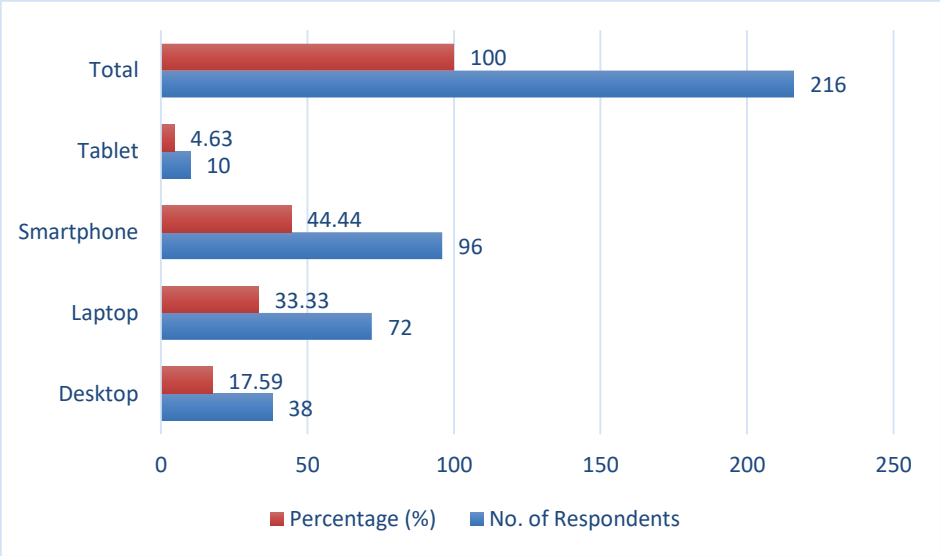
5. DATA ANALYSIS

The collected data were coded and analysed using appropriate statistical techniques. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to assess levels of digital literacy and information literacy competency. Inferential statistical methods, including correlation and regression analysis, were applied to examine the relationship and influence of digital literacy on information literacy competency among UAS Bangalore users.

Table-2 Devices Used (N=216)

Devices Used	No. of Respondents	Percentage (%)
Desktop	38	17.59
Laptop	72	33.33
Smartphone	96	44.44
Tablet	10	4.63
Total	**216**	**100.00**

Chart-2: Devices Used



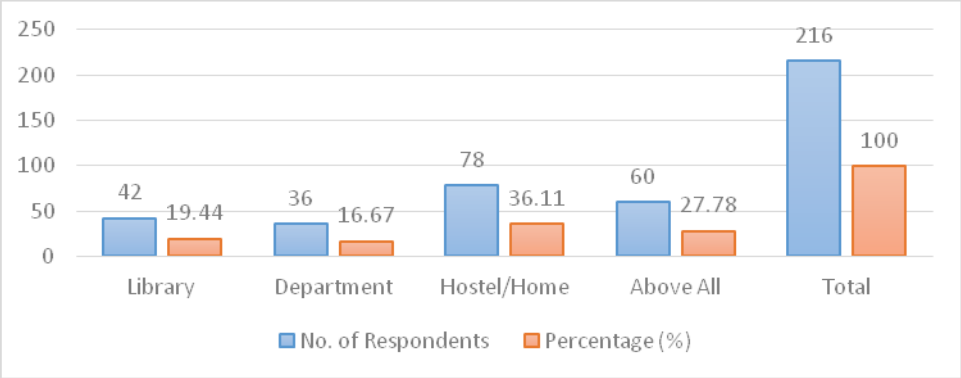
The data indicate that smartphones are the most commonly used devices, with 96 (44.44%) respondents accessing digital information through them, reflecting the growing preference for mobile-based access. This is followed by laptops used by 72 (33.33%), respondents highlighting their importance for academic and research-related activities. Desktop computers are used by 38 (17.59%), respondents suggesting moderate reliance on fixed computing facilities within the campus. In contrast, tablets are the least preferred devices, used by only 10 (4.63%) respondents, indicating limited adoption of this medium for accessing digital resources among UAS Bangalore users.

Table-3 Place of Access to Digital Resources (N = 216)

Place of Access	No. of Respondents	Percentage (%)
Library	42	19.44
Department	36	16.67
Hostel/Home	78	36.11

Above All	60	27.78
Total	**216**	**100.00**

Chart-3 Place of Access to Digital Resources

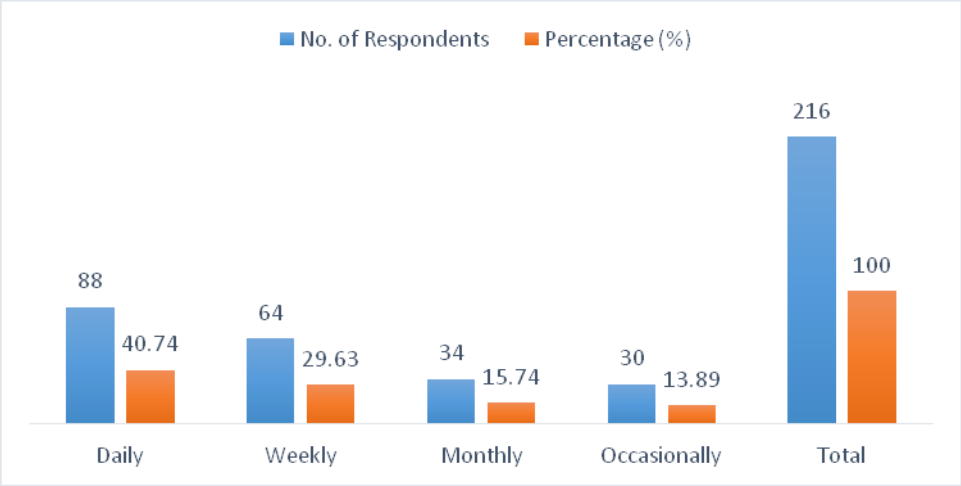


The table shows that **78 respondents (36.11%)** access digital resources primarily from their **hostel or home**, indicating a strong reliance on personal internet facilities. This is followed by **60 respondents (27.78%)** who reported accessing resources from **multiple locations (above all)**, reflecting flexible and ubiquitous access to digital information. Access through the **library accounts for 42 respondents (19.44%)**, demonstrating the continued relevance of library infrastructure in supporting digital access. Meanwhile, **36 respondents (16.67%)** access digital resources from their **departments**, suggesting comparatively lower dependence on departmental facilities.

Table-4 Frequency of Using Digital Resources (N = 216)

Frequency of Use	No. of Respondents	Percentage (%)
Daily	88	40.74
Weekly	64	29.63
Monthly	34	15.74
Occasionally	30	13.89
Total	**216**	**100.00**

Chart-4 Frequency of Using Digital Resources



The table reveals that a substantial proportion of respondents, 88 (40.74%)**,** use digital resources on a daily basis, indicating strong dependence on electronic information for academic and research activities. This is followed by 64 respondents (29.63%) who access digital resources weekly, reflecting regular but less intensive usage. Monthly usage is reported by 34 respondents (15.74%)**,** while 30 respondents (13.89%) use digital resources only occasionally, suggesting that a smaller segment of users engage with digital resources less frequently. Overall, the findings highlight widespread and consistent use of digital resources among users of UAS Bangalore.

Table-5 Digital Literacy Skills of Respondents (N = 216)

Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
I can operate computers and mobile devices confidently	6 (2.78)	14 (6.48)	28 (12.96)	96 (44.44)	72 (33.33)
I am comfortable using the internet for academic purposes	4 (1.85)	12 (5.56)	30 (13.89)	98 (45.37)	72 (33.33)
I can use search engines effectively to retrieve relevant information	8 (3.70)	18 (8.33)	34 (15.74)	92 (42.59)	64 (29.63)
I can use academic databases (J-Gate, Scopus, Web of Science, etc.)	16 (7.41)	34 (15.74)	48 (22.22)	72 (33.33)	46 (21.30)
I can download, save, and manage digital documents	6 (2.78)	16 (7.41)	36 (16.67)	94 (43.52)	64 (29.63)
I can use email and online platforms for academic communication	4 (1.85)	10 (4.63)	32 (14.81)	96 (44.44)	74 (34.26)
I am familiar with reference management tools (Zotero, Mendeley, EndNote)	28 (12.96)	46 (21.30)	54 (25.00)	56 (25.93)	32 (14.81)
I can identify reliable and authentic online information sources	10 (4.63)	22 (10.19)	44 (20.37)	86 (39.81)	54 (25.00)
I am aware of cyber security, privacy, and ethical use of digital information	12 (5.56)	26 (12.04)	48 (22.22)	78 (36.11)	52 (24.07)

The data indicate a high level of basic digital literacy among respondents, as a majority agreed or strongly agreed that they can operate computers and mobile devices confidently 168 (77.77%**)** respondents; and are comfortable using the internet for academic purposes 170 (78.70%**)** respondents**;** Similarly, effective use of search engines 156 (72.22%**)** respondents**;** and managing digital documents 158(73.15%**)** respondents; show strong positive responses, reflecting good operational digital skills. However, comparatively lower agreement levels are observed in the use of academic databases, where only 118(54.63%) respondents agreed or strongly agreed, indicating partial proficiency in advanced digital resources. Notably, familiarity with reference management tools is relatively limited, with only ***88(40.74%) respondents*** expressing agreement, highlighting a clear need for targeted training in specialized digital research tools at UAS Bangalore.

Table-6 Information Literacy Competency of Respondents (N = 216)

Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
I can clearly identify my information needs	6 (2.78)	14 (6.48)	32 (14.81)	98 (45.37)	66 (30.56)
I know which information sources are appropriate for my research	8 (3.70)	18 (8.33)	36 (16.67)	92 (42.59)	62 (28.70)
I can formulate effective search strategies	10 (4.63)	22 (10.19)	40 (18.52)	88 (40.74)	56 (25.93)
I can critically evaluate information for accuracy and relevance	8 (3.70)	20 (9.26)	44 (20.37)	86 (39.81)	58 (26.85)
I can compare information from multiple sources	6 (2.78)	18 (8.33)	42 (19.44)	90 (41.67)	60 (27.78)
I can organize information for academic use	8 (3.70)	16 (7.41)	38 (17.59)	96 (44.44)	58 (26.85)
I understand plagiarism and citation practices	10 (4.63)	20 (9.26)	34 (15.74)	84 (38.89)	68 (31.48)
I can properly cite and reference information sources	12 (5.56)	24 (11.11)	36 (16.67)	82 (37.96)	62 (28.70)
I can apply retrieved information to academic or research work	6 (2.78)	14 (6.48)	30 (13.89)	96 (44.44)	70 (32.41)

The findings reveal a strong level of information literacy competency among respondents, with a majority agreeing or strongly agreeing that they can clearly identify their information needs 164 (75.93%**)** respondents; and select appropriate information sources for research 154(71.29%**)** respondents;**.** Similarly, the ability to apply retrieved information to academic or research work shows high agreement, reported by 166 (76.85%) respondents, indicating effective use of information in academic contexts. However, comparatively lower levels of agreement are observed in formulating effective search strategies 144 (66.67%**)** respondents; and proper citation and referencing practices 144(66.66%**),** respondents; suggesting areas where additional instruction may be beneficial. Overall, the results suggest that while foundational information literacy skills are well developed among UAS Bangalore users, targeted training can further strengthen advanced competencies.

Table-7 Influence of Digital Literacy on Information Literacy (N = 216)

Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
My digital skills help me locate information more efficiently	6 (2.78)	12 (5.56)	28 (12.96)	98 (45.37)	72 (33.33)
Digital literacy improves my ability to evaluate information	8 (3.70)	16 (7.41)	34 (15.74)	94 (43.52)	64 (29.63)
Use of digital tools enhances my research productivity	6 (2.78)	18 (8.33)	32 (14.81)	90 (41.67)	70 (32.41)

Digital literacy positively influences my information literacy competency	4 (1.85)	10 (4.63)	30 (13.89)	96 (44.44)	76 (35.19)
Training in digital tools improves my overall academic performance	10 (4.63)	20 (9.26)	40 (18.52)	88 (40.74)	58 (26.85)

The results clearly demonstrate a strong perceived influence of digital literacy on information literacy competency among respondents. A large majority agreed or strongly agreed that their digital skills help them locate information more efficiently 170 (78.70%**)** respondents; and improve their ability to evaluate information 158 (73.15%**)** respondents;**.** Similarly, 160 (74.08%) respondents reported that the use of digital tools enhances their research productivity, highlighting the practical benefits of digital competence. Notably, 172 (79.63%) respondents acknowledged that digital literacy positively influences their overall information literacy competency, while 146 (67.59%) respondents agreed that training in digital tools improves academic performance, emphasizing the importance of continuous digital skills training at UAS Bangalore.

Table-8 Library Support and Training (N = 216)

Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
The UAS Bangalore library provides adequate digital resources	8 (3.70)	18 (8.33)	42 (19.44)	92 (42.59)	56 (25.93)
Library orientation programs help improve digital literacy	6 (2.78)	14 (6.48)	38 (17.59)	96 (44.44)	62 (28.70)
Library training programs enhance information literacy skills	6 (2.78)	12 (5.56)	36 (16.67)	98 (45.37)	64 (29.63)
I need more training programs on digital and information literacy	4 (1.85)	10 (4.63)	28 (12.96)	84 (38.89)	90 (41.67)

The findings indicate that the majority of respondents perceive ***strong library support for digital resources****, with* ***148 respondents (68.52%)*** agreeing or strongly agreeing that the UAS Bangalore library provides adequate digital resources. Library orientation programmes are viewed positively, as 158 (73.14%) respondents agreed or strongly agreed that such programmes help improve digital literacy. Similarly, 162(75.00%) respondents acknowledged that library training programmes enhance their information literacy skills, underscoring the effectiveness of library-led initiatives. Notably, a very high proportion of respondents 174 (80.56%) respondents expressed agreement on the need for more training programmes on digital and information literacy, highlighting a strong demand for continuous skill development support.

Table-9 Challenges Faced by Respondents in Using Digital Resources (N = 216)

Major Challenges	No. of Respondents	Percentage (%)
Lack of training	112	51.85
Poor internet connectivity	96	44.44
Difficulty in evaluating online information	78	36.11
Limited awareness of databases	104	48.15
Language barriers	62	28.70

The data reveal that lack of training is the most prominent challenge, reported by 112(51.85%), respondents indicating a significant need for structured skill-development programmes. This is followed by limited awareness of databases, identified by 104(48.15%) respondents which suggests insufficient familiarity with available scholarly resources. Poor internet connectivity remains a major concern for 96(44.44%) respondents potentially affecting consistent access to digital information. Additionally, 78(36.11%) respondents reported difficulty in evaluating online information, while 62(28.70%) respondents cited language barriers, highlighting the multifaceted challenges faced by users in effectively utilizing digital resources at UAS Bangalore.

Hypothesis Validation:

A correlation analysis was undertaken to examine the relationship between Digital Literacy and Information Literacy Competency among respondents (N = 216). Composite scores were derived by aggregating item responses under each construct. The analysis indicates a positive and statistically significant association between digital literacy and information literacy competencies. The strength of association is observed to be moderate to high, suggesting that respondents with higher levels of digital skills also demonstrate stronger abilities in identifying information needs, locating relevant sources, evaluating credibility, organizing content, and applying information for academic purposes. This relationship substantiates the theoretical proposition that digital literacy acts as a foundational enabler of higher-order information literacy skills.

Particularly, digital abilities related to efficient information location, evaluation using digital platforms, and use of research tools show strong alignment with competencies such as search strategy formulation, critical evaluation, and academic application of information. The findings therefore confirm that technological proficiency enhances cognitive and procedural dimensions of information use. The positive correlation signifies that improvements in digital literacy — through training in databases, search engines, referencing software, and academic tools — are likely to produce corresponding gains in information literacy competency among university users.

H_0: There is no significant relationship between Digital Literacy and Information Literacy.
H_1: There is a significant relationship between Digital Literacy and Information Literacy.

Correlation Matrix

Variables	Digital Literacy	Information Literacy
Digital Literacy	1.000	0.62**
Information Literacy	0.62**	1.000

Since the correlation coefficient is positive and statistically significant ($p < 0.01$), the null hypothesis (H_0) is rejected and the alternate hypothesis (H_1) is accepted. This confirms that digital literacy significantly influences information literacy competency.

KEY FINDINGS OF THE STUDY

1. The majority of respondents were undergraduate students (138; 63.89%)**,** followed by postgraduate students (52; 24.07%), indicating that undergraduate users constitute the primary users of digital resources at UAS Bangalore.
2. Smartphones (96 respondents; 44.44%) and laptops (72 respondents; 33.33%) were the most commonly used devices for accessing digital information, reflecting a strong preference for portable and personal digital devices.
3. A significant proportion of respondents accessed digital resources from hostel/home (78; 36.11%) and from multiple locations (60; 27.78%)**,** demonstrating flexible access patterns beyond the physical library.
4. Digital resource usage was frequent, with 88 (40.74%) respondents using resources daily and 64(29.63%) respondents using them weekly, indicating high dependence on electronic information for academic and research activities.
5. Respondents exhibited a high level of basic digital literacy, particularly in operating devices, internet usage, email communication, and managing digital documents. However, comparatively lower proficiency was observed in the use of academic databases and reference management tools**.**
6. Information literacy competency was generally strong, especially in identifying information needs, selecting appropriate sources, organizing information, and applying retrieved information. Nevertheless, search strategy formulation and citation practices emerged as areas requiring improvement.
7. A majority of respondents acknowledged that digital literacy positively influences information literacy competency, improves information evaluation, and enhances research productivity.
8. Library orientation and training programmes were perceived as effective; however, 80.56% of respondents expressed a strong need for additional training programmes on digital and information literacy.
9. Major challenges identified included lack of training (51.85%)**,** limited awareness of databases (48.15%)**,** and poor internet connectivity (44.44%)**.**

CONCLUSION

The study clearly establishes that digital literacy plays a significant and positive role in enhancing information literacy competency among users of the University of Agricultural Sciences, Bangalore. The findings reveal that while users possess adequate basic digital skills and demonstrate regular use of digital resources, gaps persist in advanced competencies such as database usage, reference management, and critical evaluation of online information. The high level of agreement regarding the influence of digital literacy on research productivity and information use underscores its importance in the academic and research ecosystem of agricultural universities. Furthermore, the strong demand for additional training programmes highlights the need for continuous, structured, and user-centric digital and information literacy initiatives. Strengthening library-led training, improving awareness of scholarly databases, and enhancing digital infrastructure will significantly contribute to more effective utilization of information resources and support academic excellence at UAS Bangalore.

REFERENCES

[1] Adithaya Kumari, H., & Shivakrishan S D. (2016). Information seeking behaviour in ICT environment among users in Karnataka State Agricultural University libraries: A study. *International Journal of Library and Information Studies*, 6(2), 36–49.

[2] Association of College & Research Libraries. (2016). *Framework for information literacy for higher education*. American Library Association. https://www.ala.org/acrl/standards/ilframework

[3] Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, 57(2), 218–259. https://doi.org/10.1108/EUM0000000007083

[4] Bruce, C. (1997). *The seven faces of information literacy*. Adelaide: Auslib Press.

[5] Kumar, B. T. S., & Kumari, J. (2014). Information literacy skills among students in higher education institutions: A study. *International Journal of Information Dissemination and Technology*, 4(2), 87–93.

[6] Ng, Wan. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. https://doi.org/10.1016/j.compedu.2012.04.016

[7] Singh, J. (2014). Information literacy and digital literacy in academic libraries: A conceptual analysis. *International Journal of Information Dissemination and Technology*, 4(2), 87–93.

[8] Tenopir, C., Volentine, R., & King, D. W. (2012). Scholarly reading and the value of academic library collections: Results of a study in six universities. *Insights*, 25(2), 130–149. https://doi.org/10.1629/2048-7754.25.2.130