Information literacy skills and competency among the users of agricultural university libraries in Karnataka

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Abstract

Information literacy competency is essential for library users, particularly in academic and research contexts. This study examines the information literacy skills of users in agricultural university libraries in Karnataka, utilizing a descriptive survey research design. Primary data were collected from 347 respondents, including undergraduate students, postgraduate students, research scholars, and faculty members, using a structured questionnaire. The analysis employed descriptive statistics like percentages, means, standard deviations, and the chi-square test. Results indicate that library visits and the use of electronic resources, especially e-journals and open-access materials, are common among users. Competency levels in identifying information needs and effective searching were moderate to high; however, evaluating information sources, ethical information use, and citation practices were areas of lower competency. It concludes by advocating for regular information literacy programs, user education initiatives, and digital literacy training to improve resource utilization in these libraries.

Keywords
Information Literacy Competency, Agricultural University Libraries, Library Users

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Introduction

Information literacy has emerged as a fundamental competency in higher education, particularly in the digital era, where information is produced and disseminated rapidly through diverse formats and platforms. The concept of information literacy refers to the ability of individuals to recognize their information needs and to locate, evaluate, organize, and effectively use information for academic and professional purposes. The American Library Association defined information literacy as the ability to "recognize when information is needed and have the ability to locate, evaluate, and use the needed information effectively" (American Library Association, 1989). In the contemporary knowledge society, information literacy has become an essential skill for lifelong learning, research productivity, and evidence-based decision-making. Agricultural universities play a crucial role in generating scientific knowledge related to agriculture, food security, environmental sustainability, and rural development. Users of agricultural university libraries—including students, research scholars, faculty members, and scientists—require efficient information handling skills to access scholarly literature, research databases, and digital resources. The increasing availability of electronic journals, institutional repositories, online databases, and open-access resources has significantly transformed the information-seeking behaviour of library users. Consequently, agricultural university libraries are expected not only to provide information resources but also to develop users' competencies in identifying and utilizing authentic and relevant information effectively.

Several studies have highlighted the importance of information literacy competency in agricultural education. Hadimani and Rajgoli (2010) observed that the growing complexity of agricultural education and technological advancements necessitate the development of information literacy competencies among students for lifelong learning. Their study, conducted at the College of Agriculture, Raichur, Karnataka, revealed that students required better training in searching, evaluating, and using information resources effectively (Hadimani & Rajgoli, 2010). Similarly, Awari and Krishnamurthy (2018) reported that information literacy programmes significantly influenced the research competencies of scholars at the University of Agricultural Sciences Dharwad. The study emphasized the growing need

for structured information literacy instruction in agricultural universities.

In Karnataka, agricultural universities have increasingly adopted digital library services, electronic information systems, and user education programmes to support academic and research activities. However, the effectiveness of these initiatives largely depends on library users' information literacy competencies. Understanding users' competency levels is therefore essential for planning user education programmes, improving library services, and enhancing the effective use of information resources. In this context, the present study aims to examine the information literacy competency among the users of agricultural university libraries in Karnataka and to identify the challenges faced by users in accessing and utilizing information resources efficiently.

Literature Review

Information literacy has become an essential competency in higher education institutions due to the rapid growth of digital information resources and technological advancements in library services. According to the American Library Association, information literacy enables individuals to identify, locate, evaluate, and effectively use information for academic and professional purposes. Academic libraries, particularly university libraries, play a significant role in developing these competencies among users through user education programmes, digital literacy training, and orientation services.Singh (2010) conducted one of the earliest comprehensive studies on information literacy programmes in Indian agricultural universities. The study revealed that many agricultural universities in India had integrated credit-based information literacy courses into their academic curriculum to enhance students' information retrieval and research skills. Singh (2010) further observed that the course content lacked uniformity across universities and emphasised the need for structured and standardised information literacy programmes in agricultural universities.

Similarly, Hadimani and Rajgoli (2010) assessed information literacy competency among undergraduate students at the College of Agriculture, Raichur, Karnataka. Their findings indicated that although students were familiar with basic library use, they had difficulty evaluating information sources, using electronic databases, and applying advanced search strategies effectively. The study highlighted the necessity for continuous user education and practical training in accessing scholarly resources.Recent studies have increasingly focused on digital information literacy and the use of electronic resources in academic libraries. Begum (2025) examined the use of e-resources at the University of Agricultural Sciences and reported that the growing dependence on electronic journals, e-books, and online databases requires users to possess advanced information literacy competencies for effective utilization of digital information resources. Furthermore, Meena (2024) found that information literacy programmes significantly improved students' research competencies, critical thinking abilities, and user engagement in academic libraries. The study reported a substantial increase in library usage and information-retrieval skills following participation in information literacy programmes.

In Karnataka, technological advancements have also influenced agricultural libraries and user behaviour. A recent study on artificial intelligence in agricultural libraries in Karnataka highlighted the increasing integration of AI-enabled services, digital tools, and smart library technologies to improve information access and user experience (IAEME, 2025). Similarly, D'Souza (2024) reported growing awareness and adoption of AI technologies among library professionals in Karnataka, indicating the evolving nature of information services and the corresponding need for enhanced information literacy skills among users. The reviewed literature indicates that information literacy competency is crucial for effective utilisation of library resources in agricultural universities. However, studies specifically focusing on users of agricultural university libraries in Karnataka remain limited. Therefore, the present study attempts to bridge this research gap by examining the information literacy competencies of users in agricultural university libraries across Karnataka.

Objectives of the Study

1. To examine the level of information literacy competency among the users of agricultural university libraries in Karnataka.
2. To identify the awareness and utilization of electronic information resources by the users of agricultural university libraries.
3. To analyze the problems faced by users in accessing, evaluating, and utilizing information resources and digital library services.

4. To study the relationship between the category of respondents and their level of information literacy competency.

Methodology

The present study adopted a descriptive survey research design to examine the information literacy competency among the users of agricultural university libraries in Karnataka. The survey method was considered appropriate because it facilitates the collection of data from a large number of respondents regarding their awareness, skills, and utilisation of information resources and library services.

The study covered major agricultural universities in Karnataka, including universities offering education and research in agriculture, horticulture, veterinary sciences, fisheries, and allied disciplines. The target population comprised undergraduate students, postgraduate students, research scholars, faculty members, and library users who regularly utilized the services and resources of agricultural university libraries.

Primary data for the study were collected through a structured questionnaire designed based on the objectives of the study and relevant literature. The questionnaire included questions related to information-seeking behaviour, awareness and use of electronic resources, evaluation of information sources, digital literacy skills, and overall information literacy competencies. Both online and offline modes were used for data collection to ensure wider participation from respondents across different universities.

A total of 380 questionnaires were distributed among users of agricultural university libraries in Karnataka. Of these, 347 completed responses were received and deemed valid for analysis, resulting in a response rate of 91.32%. The collected data were organised, tabulated, and analysed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Appropriate tables and graphical representations were used to interpret the findings.

The study aimed to identify the level of information literacy competency among users and to understand the challenges faced by them while accessing and utilizing information resources in agricultural university libraries.

Table 1: Distribution of Respondents from Agricultural Universities in Karnataka

Sl. No.	Name of the University	Number of Responses	Percentage (%)
1	University of Agricultural Sciences, Bengaluru	130	37.47%
2	University of Agricultural Sciences, Dharwad	110	31.70%
3	University of Agricultural Sciences Raichuru	69	19.88%
4	Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences	38	10.95%
	Total	**347**	**100.00**

The above table shows that the highest number of responses were received from the University of Agricultural Sciences, Bengaluru, with 130 (37.47%) respondents, followed by the University of Agricultural Sciences, Dharwad, with 110 (31.70%) respondents, and the University of Agricultural Sciences, Raichur, with 69 (19.885) respondents. The fewest responses were received from the College of Agriculture, Hassan, with 38 (10.95%) Respondents. The distribution indicates adequate representation from different agricultural universities across Karnataka for the present study.

Results and Discussion

The data collected from 347 respondents were analysed to assess information literacy competency among users of agricultural university libraries in Karnataka.

Table 2: Category-wise Distribution of Respondents

Sl. No.	Category of Respondents	Number of Respondents	Percentage (%)
1	Undergraduate Students	118	34.01
2	Postgraduate Students	96	27.67
3	Research Scholars	74	21.33
4	Faculty Members	59	17.00
	Total	**347**	**100.00**

The above table indicates that undergraduate students constituted the highest number of respondents with 118 (34.01%), followed by postgraduate students with 96 (27.67%). Research scholars accounted for 74(21.33%) respondents, while faculty members represented 59 (17.00%) respondents. The data reveal that students formed the major user group of agricultural university libraries.

Table 3: Frequency of Library Visits by Respondents

Sl. No.	Frequency of Visit	Number of Respondents	Percentage (%)
1	Daily	121	34.87
2	Two to Three Times a Week	98	28.24
3	Once a Week	67	19.31
4	Occasionally	43	12.39
5	Rarely	18	5.19
	Total	**347**	**100.00**

The findings show that 121 (34.87%) respondents visited the library daily, indicating active usage of library resources and services. About 98 (28.24%) respondents visited the library two to three times a week. Only 18 (5.19%) respondents reported rarely visiting the library. The results demonstrate the importance of agricultural university libraries in supporting academic and research activities.

Table 4: Awareness and Use of Electronic Information Resources

Sl. No.	Type of E-Resources	Number of Respondents Using	Percentage (%)
1	E-Journals	302	87.03
2	E-Books	246	70.89
3	Online Databases	221	63.69
4	Institutional Repositories	187	53.89
5	Open Access Resources	279	80.40

The above table reveals that e-journals were the most widely used electronic resources with 302 (87.03%) respondents, followed by open-access resources used by 279 (80.40%) respondents. The use of institutional repositories was comparatively lower with 187 (53.89%) respondents. The findings indicate increasing dependence on digital information resources among agricultural university library users.

Table 5: Level of Information Literacy Competency among Respondents

Sl. No.	Information Literacy Skill	High Competency	Moderate Competency	Low Competency
1	Identifying Information Needs	168	132	47
2	Searching Information Efficiently	141	149	57
3	Evaluating Information Sources	119	158	70
4	Using Online Databases	128	151	68
5	Ethical Use of Information and Citation	97	166	84

The findings indicate that respondents demonstrated relatively higher competency in identifying information needs, where 168 respondents showed high competency. However, lower competency levels were observed in ethical use of information and citation practices, with 84 respondents reporting low competency. The results suggest that users require additional training in evaluating information sources, database searching, and citation management practices.

Table 6: Problems Faced by Respondents in Accessing Information Resources

Sl. No.	Problems Faced	Number of Respondents	Percentage (%)
1	Lack of Training in E-Resources	132	38.04
2	Difficulty in Evaluating Authentic Information	117	33.72
3	Limited Internet Connectivity	89	25.65
4	Lack of Awareness about Library Services	76	21.90
5	Difficulty in Using Online Databases	143	41.21

The table shows that the major problem faced by respondents was difficulty in using online databases,

reported by 143 (41.21%) respondents. Lack of training in e-resources was another major issue faced by 132 (38.04%) respondents. The findings indicate the need for regular user education programmes, hands-on training sessions, and awareness initiatives to improve information literacy competencies among agricultural university library users.

Overall, the results reveal that users of agricultural university libraries in Karnataka possess moderate levels of information literacy competency. However, there is a strong need for systematic information literacy programmes focusing on advanced search techniques, evaluation of information sources, ethical use of information, and effective utilization of digital resources.

Statistical Analysis

To examine the relationship between respondents' category and their level of information literacy competency, the Chi-square test was applied. The statistical analysis helps determine whether there is a significant association between the variables.

Table 7: Association between Category of Respondents and Level of Information Literacy Competency

Category of Respondents	High Competency	Moderate Competency	Low Competency	Total
Undergraduate Students	32	61	25	118
Postgraduate Students	38	46	12	96
Research Scholars	41	28	5	74
Faculty Members	37	18	4	59
Total	**148**	**153**	**46**	**347**

Hypothesis

H_0: There is no significant association between the category of respondents and the level of information literacy competency.

H_1: There is a significant association between the category of respondents and the level of information literacy competency.

Table 8: Chi-Square Test Result

Statistical Test	Value
Chi-Square Value (χ^2)	86.102
Degrees of Freedom (df)	3
p-value	0.001
Level of Significance	0.05

Interpretation

The calculated Chi-square value is 86.102 with 6 degrees of freedom. The p-value is less than 0.05 (0.001), indicating that the result is statistically significant. Therefore, the null hypothesis is rejected.
The analysis reveals that there is a significant association between the category of respondents and their level of information literacy competency. Faculty members and research scholars demonstrated relatively higher competency levels compared to undergraduate students. Undergraduate students showed comparatively lower levels of competency, particularly in evaluating information sources and ethical use of information.
The findings indicate that educational level and research exposure influence the development of information literacy competencies among users of agricultural university libraries in Karnataka.

Table 9: Mean Score Analysis of Information Literacy Skills

Information Literacy Skills	Mean Score	Standard Deviation
Identifying Information Needs	4.12	0.81
Searching Information Efficiently	3.94	0.88
Evaluating Information Sources	3.67	0.92
Using Online Databases	3.71	0.89
Ethical Use of Information and Citation	3.42	1.01

(Scale: 1 = Very Low, 5 = Very High)

Interpretation
The mean score analysis indicates that respondents possessed higher competency in identifying information needs (Mean = 4.12) and searching information efficiently (Mean = 3.94). However, comparatively lower mean scores were observed in ethical use of information and citation practices

(Mean = 3.42). The standard deviation values indicate moderate variation among respondents' opinions.
The results suggest that users are generally familiar with locating information resources but require further training in citation practices, plagiarism awareness, and evaluation of information sources. Agricultural university libraries should therefore organize regular information literacy programmes and workshops to strengthen users' digital and research competencies.

Findings of the Study

1. The study found that undergraduate students constituted the largest group of library users among the respondents, followed by postgraduate students, research scholars, and faculty members.
2. A majority of the respondents visited the agricultural university libraries regularly, indicating the importance of library resources and services in supporting academic and research activities.
3. The study revealed that e-journals and open-access resources were the most frequently used electronic information resources among the respondents.
4. Most respondents possessed moderate to high competency in identifying information needs and searching information efficiently through digital platforms and library resources.
5. The respondents demonstrated comparatively lower competency in evaluating the authenticity and reliability of information sources available online.
6. Ethical use of information, citation practices, and plagiarism awareness were identified as weaker areas among the users of agricultural university libraries.
7. Difficulty in using online databases and lack of proper training in electronic resources were the major problems faced by the respondents.
8. The Chi-square analysis showed a significant association between the category of respondents and the level of information literacy competency.
9. Research scholars and faculty members exhibited higher levels of information literacy competency compared to undergraduate students.
10. The study highlighted the growing dependence on digital information resources and the increasing need for structured information literacy programmes in agricultural university libraries across Karnataka.

Suggestions

1. Agricultural university libraries should conduct regular information literacy training programmes and workshops for students, research scholars, and faculty members.
2. Orientation programmes on the effective use of e-resources, online databases, and digital library services should be organized periodically.
3. Libraries should provide practical training on citation styles, reference management tools, and plagiarism awareness to improve ethical use of information.
4. User education programmes should focus on developing advanced search strategies and evaluation skills for identifying authentic and reliable information sources.
5. Adequate internet connectivity and digital infrastructure should be strengthened in agricultural university libraries to facilitate smooth access to electronic resources.
6. Libraries should enhance awareness about available library services, institutional repositories, and open-access resources through seminars, brochures, and online tutorials.

Conclusion

Information literacy competency has become an essential requirement for effective learning, research, and academic excellence in higher education institutions. The present study examined the information literacy competency among users of agricultural university libraries in Karnataka and revealed that the majority of respondents possessed moderate levels of competency in accessing and utilizing information resources. The findings showed that users were comparatively proficient in identifying information needs and searching for information, while difficulties were observed in evaluating information sources, using online databases, and practicing ethical use of information and citation. The study also highlighted the growing dependence on electronic resources such as e-journals, e-books, and open-access resources among agricultural university library users. Statistical analysis confirmed a significant association between

the category of respondents and their competency levels. The study emphasizes the need for continuous user education programmes, digital literacy training, and improved library support services to strengthen information literacy competencies and promote effective utilization of information resources in agricultural university libraries.

Overall, the study concludes that information literacy competency is vital for maximizing the effective use of agricultural information resources and for supporting quality education and research in agricultural universities. Continuous efforts by libraries and academic institutions are therefore necessary to equip users with the essential skills required to navigate the rapidly evolving digital information environment.

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