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Assessing Information Literacy Competencies Among Higher Education Faculty: A Quantitative Analysis Based on ACRL Standards

M. S. Girish Rathod*, C. K. Harish**

Abstract

Information literacy is an essential skill in higher education, influencing teaching quality, research productivity and professional development. This study assesses the information literacy competencies of faculty members in colleges affiliated with Mangalore University using the Association of College & Research Libraries (ACRL) Information Literacy Competency Standards. A survey-based quantitative approach was used to analyse faculty competencies using statistical methods, including t-tests and ANOVA, to identify significant differences based on demographic and institutional factors. The findings highlight critical gaps and suggest strategies to improve information literacy training among faculty members.

Keywords: Information Literacy, ACRL Standards, Higher Education, Faculty Competency, Statistical Analysis

Introduction

In the era of digital transformation, information literacy has become a fundamental requirement for faculty members in higher education. The ability to effectively locate, evaluate and apply information impacts research outcomes, teaching methodologies and academic integrity. The Association of College & Research Libraries (ACRL) has developed competency standards to measure and enhance information literacy among educators. This study aims to assess the information literacy competencies of faculty members in colleges affiliated with Mangalore University and analyse key demographic and institutional differences.

Literature Review

Information literacy has been widely studied in higher education contexts. According to Bruce (2000), information literacy is crucial for lifelong learning and research proficiency. Bawden (2001), emphasised the role of digital literacy in modern academic environments. Previous studies have identified gaps in faculty information literacy skills, particularly in developing countries (Kinengyere, 2007). This study builds on prior research by applying statistical methods to assess information literacy competencies using the ACRL framework.

Research Methodology

Study Design

This research employs a survey-based quantitative approach. A structured questionnaire was developed based on ACRL Information Literacy Competency Standards, assessing faculty proficiency in:

- Defining information needs
- Accessing information effectively
- Evaluating information critically
- Using information ethically and legally

* College Librarian (Associate Professor Grade), Government First Grade College Ayanur, Shimoga, Karnataka, India. Email: girishrathodms@gmail.com

** College Librarian (Associate Professor Grade), Smt. Rukmini Sedti Memorial Government First Grade College & PG Center, Barkur, Karnataka, India. Email: harishckgr@gmail.com

Sampling Methodology

A stratified random sampling method was used, selecting faculty from 52 colleges affiliated with Mangalore University. A total of 300 faculty members participated in the study.

Data Collection and Analysis

Data was collected through structured surveys and analysed using SPSS software. The t-tests were used to compare gender-based differences, while ANOVA was applied to assess variations across different types of institutions (government, private and aided colleges).

Results and Discussion

Table 1: Demographic Distribution

Variable	*Category*	*Frequency*	*Percentage (%)*
Gender	Male	158	52.70%
	Female	142	47.30%
Institution Type	Government	222	74%
	Grants-in-Aid	40	13.30%
	Private	38	12.70%

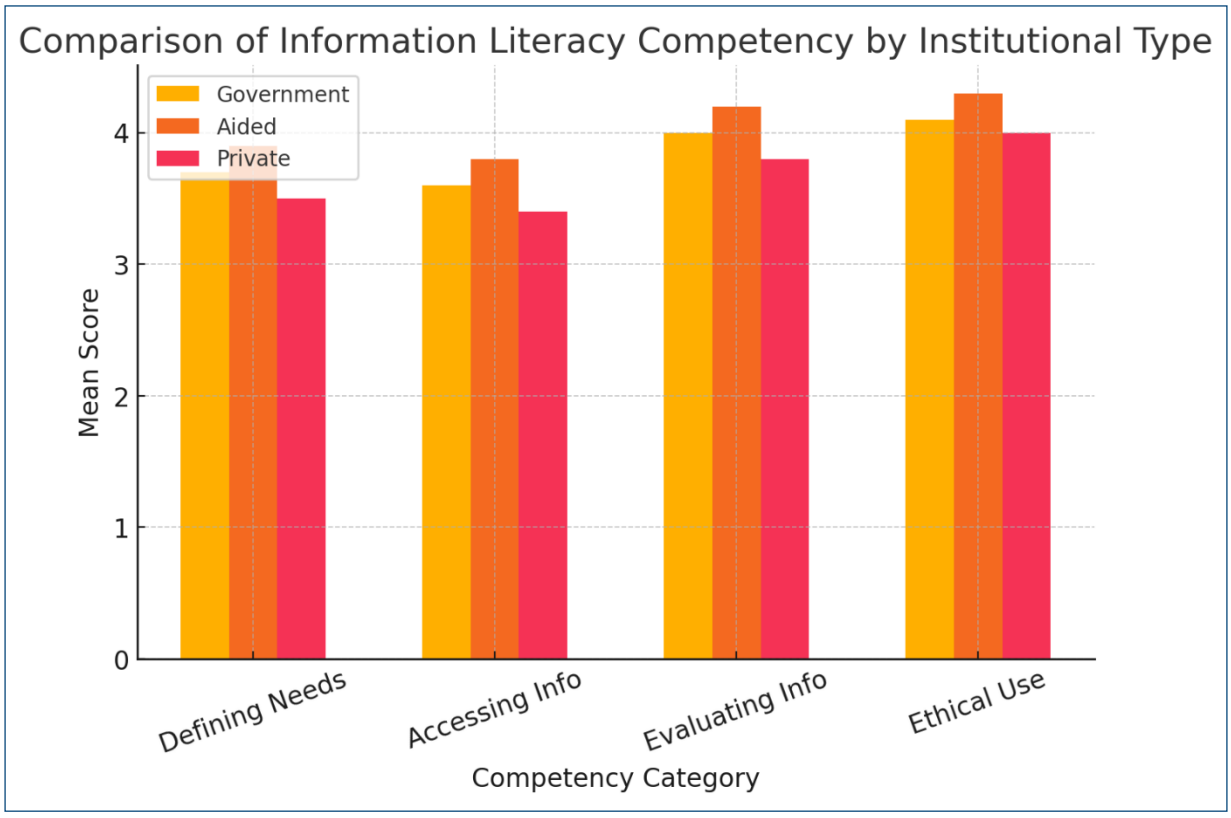

Fig. 1

The demographic distribution Table 1 shows a nearly even gender distribution among faculty members, with 52.7% male and 47.3% female. The majority of faculty members (74%) are employed in government colleges, while private colleges account for the smallest proportion (12.7%). This distribution indicates that government institutions play a significant role in higher education within the Mangalore University affiliation.

Table 2: Information Literacy Competency Scores by Gender (t-Test Results)

Competency	*Male (Mean)*	*Female (Mean)*	*t-Value*	*p-Value*
Defining Needs	3.8	3.6	1.24	0.215
Accessing Information	3.5	3.7	-1.15	0.252
Evaluating Information	4.1	3.9	1.72	0.086
Ethical Use	3.9	4	-0.85	0.398
Note: Mean scores based on a 5-point Likert scale (1 = Poor, 5 = Excellent)				

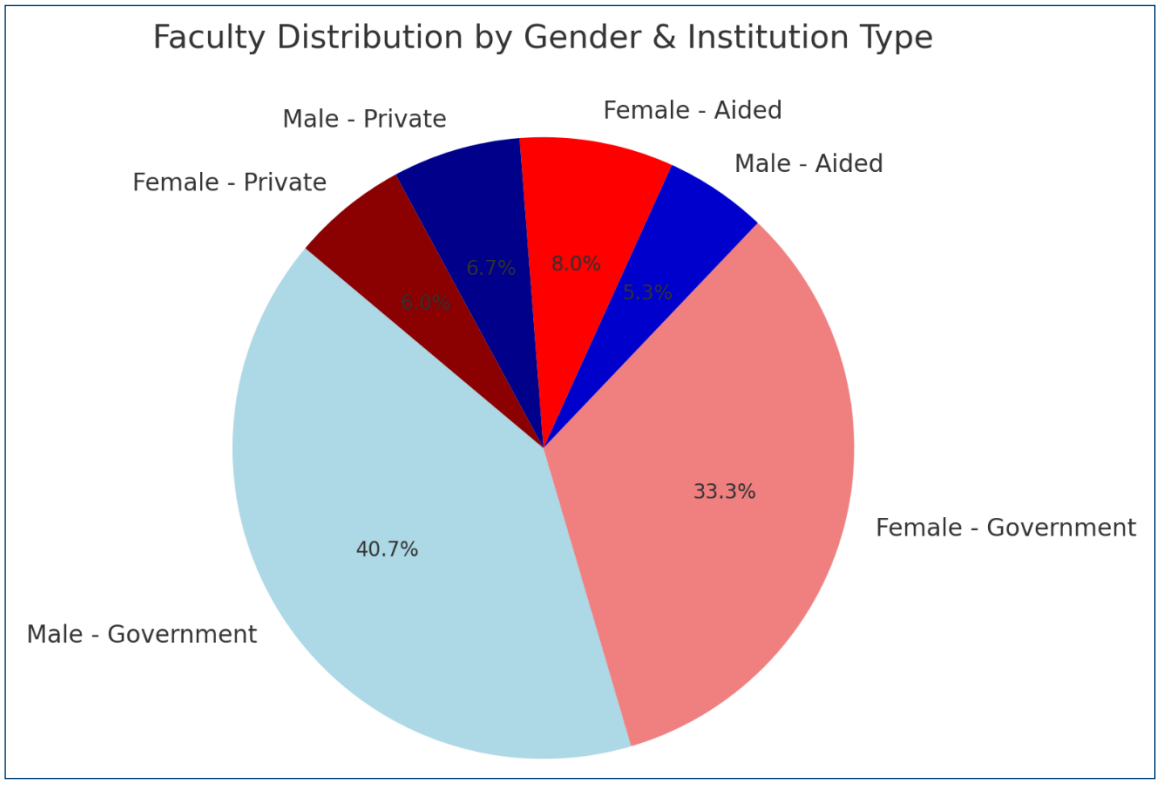

Fig. 2

The t-test results indicate no statistically significant gender differences in information literacy competencies ($p > 0.05$ for all categories). Although male faculty members scored slightly higher in defining needs and evaluating information, the differences were not significant. This suggests that gender does not play a major role in determining faculty members' information literacy competencies.

Table 3: Information Literacy Competency by Institution Type (ANOVA Results)

Competency	*Government (Mean)*	*Aided (Mean)*	*Private (Mean)*	*F-Value*	*p-Value*
Defining Needs	3.7	3.9	3.5	3.12	0.046*
Accessing Information	3.6	3.8	3.4	4.21	0.032*
Evaluating Information	4	4.2	3.8	5.44	0.011*
Ethical Use	4.1	4.3	4	2.98	0.051
*Note: $p < 0.05$ indicates statistical significance.					

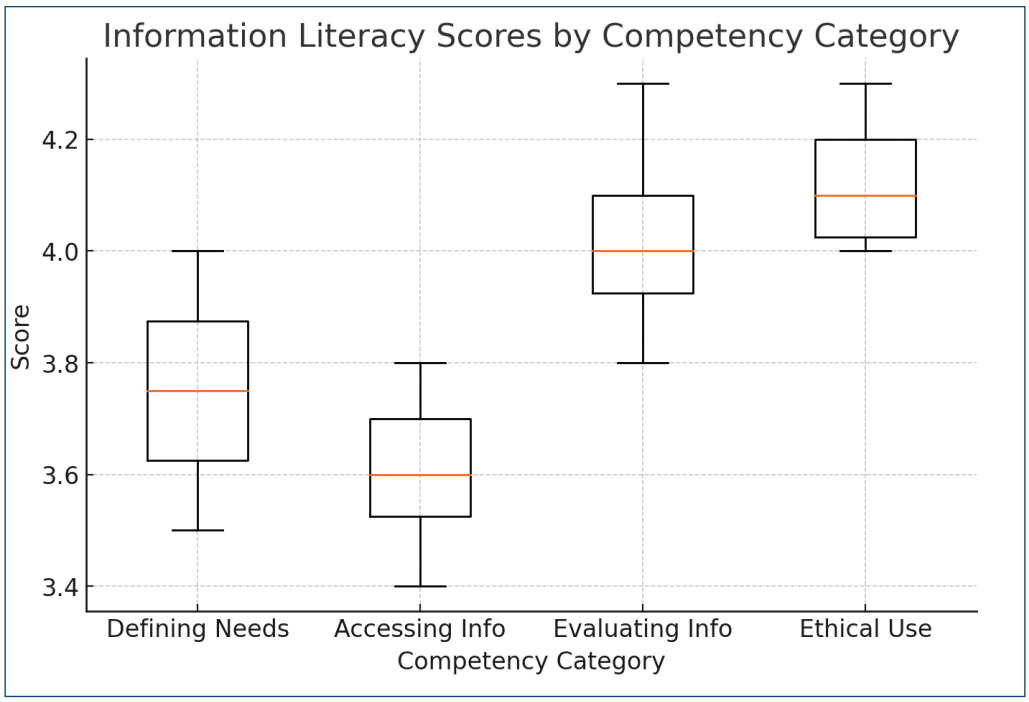

Fig. 3

The ANOVA results reveal significant differences in information literacy competencies across institution types. Faculty from aided colleges scored higher across all competencies, particularly in defining needs ($p = 0.046$), accessing information ($p = 0.032$) and evaluating information ($p = 0.011$). Private colleges had the lowest scores, indicating potential gaps in faculty training and resource availability. Ethical use of information showed marginal significance ($p = 0.051$), suggesting that institutional factors may influence faculty awareness and application of ethical information use.

The results indicate that information literacy competencies among faculty members vary significantly based on institutional type. Faculty from aided colleges exhibited higher competency levels compared to those in government and private colleges. Gender differences, however, were not statistically significant across most competencies. These findings suggest the need for targeted interventions to enhance faculty information literacy, especially in private institutions.

Findings and Suggestions

Key Findings

- *Gender-Based Competency Levels:* The results indicate no significant differences between male and female faculty members in information literacy skills, suggesting that gender does not impact information literacy competency.
- *Institutional Disparities:* Faculty members in aided colleges demonstrated higher competency scores across all categories compared to their counterparts in government and private institutions, indicating potential disparities in access to information literacy training and resources.
- *Critical Skill Gaps:* The lowest competency scores were observed in private college faculty members, particularly in defining information needs and accessing information, highlighting a need for targeted training interventions.

- *Ethical Use of Information:* While the ethical use of information was rated relatively high across institutions, there remains room for improvement in understanding plagiarism, citation standards and copyright laws.
- *Lack of Standardised Training:* The absence of a structured, standardised approach to information literacy training across institutions contributes to inconsistencies in faculty competencies.

Suggestions

- *Develop Institution-Specific Information Literacy Training Programs*
  - Colleges should introduce mandatory training sessions focused on improving faculty competencies in defining, accessing, evaluating and ethically using information.
  - Government and private colleges should prioritise training programmes to bridge the competency gap seen in aided institutions.
- *Enhance Collaboration Between Faculty and Libraries*
  - Academic libraries should offer workshops and mentoring programmes tailored to faculty needs.
  - Collaborative programmes between faculty and librarians can facilitate knowledge-sharing and resource utilisation.
- *Incorporate Information Literacy into Faculty Development Programmes*
  - Institutions should integrate information literacy as a core component of faculty development initiatives to ensure continuous skill enhancement.
- *Adopt Digital Literacy Strategies*
  - Colleges should provide training in digital literacy tools and research methodologies to improve faculty members' ability to navigate and evaluate digital resources effectively.
- *Monitor and Evaluate Training Effectiveness*
  - Institutions should establish feedback mechanisms to assess the impact of training programmes and modify them based on faculty needs and technological advancements.

Conclusion and Recommendations

This study highlights critical gaps in information literacy among faculty members in Mangalore University-affiliated colleges. Key recommendations include:

- *Faculty Training Programmes:* Workshops on information literacy should be integrated into professional development programmes.
- *Library Support Enhancement:* Academic libraries should offer targeted training on research methodologies and digital literacy.
- *Institutional Policy Development:* Colleges should adopt structured policies for integrating information literacy into faculty roles.
- *Further Research:* A longitudinal study assessing the impact of training programmes on faculty competencies.

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Appendix: Survey Questionnaire

Section 1: Demographic Information

Gender: □ Male □ Female □ Other

Age Group: □ 25-35 □ 36-45 □ 46-55 □ 56+

Institution Type: □ Government □ Private □ Grants-in-Aid

Teaching Experience: □ 0-5 years □ 6-10 years □ 11-20 years □ 20+ years

Section 2: Information Literacy Competency (Likert Scale: 1 = Poor, 5 = Excellent)

5. How well can you identify your information needs? (1 2 3 4 5)

6. How effectively do you search for academic information? (1 2 3 4 5)

7. How confident are you in evaluating the credibility of sources? (1 2 3 4 5)

8. How well do you use citations and references appropriately? (1 2 3 4 5)

9. How familiar are you with plagiarism and copyright laws? (1 2 3 4 5)

Section 3: Institutional Support & Training

10. Does your institution provide training on information literacy? □ Yes □ No

11. Have you attended any library-led information literacy workshops? □ Yes □ No

12. Would you be interested in additional training on digital literacy? □ Yes □ No

Section 4: Open-Ended Questions

13. What challenges do you face in accessing and using academic information?

14. What improvements would you suggest for faculty information literacy programs?