

Evaluating Information Literacy and User Engagement in University Libraries: A Study of Sambalpur University and Utkal University

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Abstract

This study explores the impact of information literacy on user engagement in digital environments within the university libraries of Utkal University and Sambalpur University in Odisha State. This quantitative research employs a survey method, using structured questionnaires to collect data from students at both universities. The collected data were analyzed to identify patterns, trends, and differences in the responses. The findings reveal a significant positive correlation between information literacy and user engagement in both university libraries. Specifically, critical thinking and evaluation skills were found to predict user engagement through user behavior and search approaches. Interface design, feedback, and motivation are factors influencing this relationship. Although there are high expectations for information literacy to enhance learning and research due to its accessibility and convenience, its usage is hindered by various challenges. These challenges include users' diverse learning styles and engagement behaviors toward information needs. The findings have implications for designing engaging digital interfaces, developing information literacy programs, and enhancing the user experience.

Keywords: Digital Environment, Digital Literacy, Information Literacy, Online Learning, User Experience and User Engagement.

1. Introduction

The rapid growth of information and the evolving technologies for its storage and access have created challenges for students in distinguishing credible sources from unreliable ones. This underscores the crucial role of information literacy skills in enabling students to effectively navigate and utilize academic resources (Tachie-Donkor & Ezema, 2023). The concept of information literacy, first introduced by Paul Zurkowski in 1974, has significantly evolved over the years. The US National Forum on Information Literacy (1989) defines it as “the ability to recognize when information is needed and to locate, evaluate, and effectively use information to address issues.” Similarly, the American Library Association (2006) defines it as “the ability to recognize the need for information and to locate, evaluate, and use it effectively.” These skills are essential for university students to access and critically evaluate reliable information resources, make informed decisions, engage in academic

discourse, and conduct impactful research. Moreover, these competencies are significantly enhanced through active user engagement facilitated by university libraries.

The concept of "student engagement" has been a topic of discussion in higher education since the 1930s and remains relevant in contemporary discourse. Generally, student engagement refers to opportunities beyond the classroom that foster a sense of belonging, enhance self-awareness, and enable the practical application of classroom knowledge in real-world contexts (Fargo & Mastrangelo, 2021). Academic libraries have both the potential and responsibility to contribute meaningfully to student engagement experiences. Schlak (2018) conceptualizes how academic libraries promote student engagement through four key approaches: optimizing space and services, integrating information literacy into experiences, fostering collaboration with knowledgeable staff, and shifting from transactional support to active partnerships that provide engagement opportunities. This study aims to explore the symbiotic relationship between information literacy and user engagement, highlighting their critical role in ensuring effective information-seeking, critical thinking, and meaningful interaction with digital content.

Numerous studies have examined various aspects of the relationship between information literacy and user engagement at both national and international levels, including those by Akter & Ahmed (2024), Sinha & Ugwulebo (2024), Vijesh (2024), Belotindos & Cansancio (2024), Austin (2024), Meena (2024), LeMire et al (2021), Singh & Kadyan (2021), McGuinness & Fulton (2019), Shafawi & Hassan (2018), Padmavathi et al (2017), Ahmad & Panda (2013), Kadli & Kumbar (2011), and Kinengyere (2007). However, no studies have explored the relationship between information literacy and user engagement in the context of two prominent state universities in Odisha: Utkal University and Sambalpur University. Therefore, the present study seeks to fill this research gap by investigating the relationship between information literacy and user engagement specifically focusing on how information literacy skills influence user engagement and identifying factors that either enhance or hinder this relationship in the libraries of Utkal University and Sambalpur University, Odisha.

2. Review of Literature

User engagement and need for information literacy

Singh and Kadyan (2021) conducted a survey to examine the perceptions of staff, postgraduate, and undergraduate students regarding library information resources and services at the Haryana libraries of YMCA Faridabad, MDU Rohtak, and DCRUST Sonipat Engineering and Management Institute. The study revealed that textbooks and reference books were the most frequently used library information sources among teachers and students. However, less than half of the users were satisfied with electronic resources. Students expressed dissatisfaction with CAS/SDI, Newspaper Clipping, Interlibrary Loan, and Internet Services, all of which were rated below the national average. Additionally, the study indicated that academics and students underutilized certain information sources and services. Zou (2015) explored how libraries understand users' requirements by leveraging "social media and social media usage" as a strategy to enhance participatory services and user engagement. The findings showed that social media effectively promoted user engagement and increased participatory services. The analysis also revealed that the age of users had minimal influence on social media involvement. The study focused exclusively on Twitter and found that while social media positively correlates with user engagement, "low-quality" social media content negatively affects users' moods and interests. Padmavathi et al. (2017)

reported that university libraries spend substantial amounts annually on acquiring books and other materials to meet users' needs by offering better resources and services. Nearly half of the respondents visited the library regularly, mainly to read newspapers and refer to books. The study suggested that a consistent user literacy program is essential to enable users to effectively utilize library resources and services. Ahmad and Panda (2013) found that most faculty members were familiar with the concept and use of e-resources. However, the study revealed a lack of awareness among library users about the variety of library resources and their utility. It also showed that all faculty members considered e-resources extremely valuable and essential for their work. Despite the widespread usage of e-resources at the institutes, respondents lacked understanding of how to use specific e-resources, such as CD-ROM databases and OPAC services. Kadli and Kumbar (2011) revealed that researchers, students, and faculty members primarily sought current knowledge from various library sources, including encyclopedias, journals, and electronic media. Library visits were largely influenced by the availability of resources, organizational care, and value-added services. The study found that less than half of campus library users visited daily, with the primary purpose being to gather information for class notes. Only a small proportion (n=06, 4.20%) of respondents sought information for general understanding and entertainment.

Information literacy skills and university students

A study by Akter and Ahmed (2024) evaluated the effectiveness of information literacy training in Bangladesh by assessing university students' proficiency in using internet and library resources and completing specific information-skills activities. The study was conducted in two stages: a survey involving 257 students and an experiment with 28 students to determine the effectiveness of the training. The findings revealed that students perceived themselves as proficient in using online and library resources, with notable variations in proficiency levels based on age and gender. Additionally, the students reported a high level of perceived competence in completing information-related activities, with no statistically significant differences observed among demographic factors. The results also indicated that participants in the experimental group performed poorly on a set of 22 task questions, achieving an overall correct score of 28.4%. However, after receiving skills training, their correct scores significantly increased to 57.1%. Sinha and Ugwulebo's (2024) study demonstrated that while most individuals possess basic digital literacy skills, they are less proficient in advanced digital literacy. The study emphasized the need for most participants to enhance and acquire advanced digital literacy skills. Similarly, LeMire et al. (2021) discussed the limitations of standard testing methods in fully assessing students' information literacy skills. They recommended that tests should focus more on real-world applications rather than merely identifying information sources.

User engagement and digital library resources

Vijesh (2024) conducted a study and found that integration of AI into libraries increases operational effectiveness and dramatically improves user experience by personalizing offerings and increasing accessibility to information. Belotindos and Cansancio (2024) explored that although user involvement was determined to be strong, students' perceptions of the design of the library area were quite high. While engaging users, library visits had the greatest mean rating, but aesthetics and atmosphere received the highest mean ratings among the indicators of library space design. Furthermore, the findings demonstrated that user engagement is influenced by students' perceptions of the design of the library area. Austin (2024) conducted a study on Leeds Beckett University Library to check whether there would

be a probability to analyze learning resource utilization and expenses, student engagement, and library impact in-depth by utilizing OpenAthens and student record data, explaining the various methods used to assess how the library's electronic resources are being used to determine student and course engagement levels. The result of the study shows that it is possible to conduct in-depth analyses of student engagement, learning resource utilization, and library effect utilizing OpenAthens and student record data. Additionally, as a result, academics and library professionals have engaged with the project and benefited from its outcomes. Shafawi & Hassan (2018) study mentioned Information Quality, Perceived Interactivity, and Perceived Net Benefit as the factors affecting user engagement with social platforms. According to the findings of the study affective and behavioral dimensions significantly impact library usage, whereas the cognitive dimension is insignificant. The study comprehends the factors influencing social media participation and provides recommendations for assessing libraries' social media presence.

Impact of information literacy in engaging users

Meena (2024) conducted a study to explore the usefulness of user engagement techniques and information literacy programs (ILPs) in university libraries. The study uses a mixed-methods approach. The results show a significant average improvement in post-assessment scores of 23%, demonstrating the beneficial effects of ILPs on students' information literacy abilities. Metrics measuring user engagement, such as a 30% increase in library use, highlight the dynamic connection between user involvement and library services. Obstacles including limited resources and technological hurdles to accessibility are recognized, and suggestions for enhancement, derived from prosperous case studies, are put up. In their study, McGuinness & Fulton (2019) found that the tutorial's accessibility, usability, design, and length were judged effective in terms of user engagement; however, many technological difficulties, including browser incompatibility, uneven sound quality, and general Internet connection problems, were found to have interfered with the participants' ability to learn. Students generally expressed satisfaction with the tutorial's ability to facilitate their learning; however, they indicated a preference for a blended learning environment, which combines a variety of complementary learning approaches, rather than preferring online learning exclusively. A study by Kinengyere (2007) illustrated the level of information literacy in Uganda and how it affects electronic resources. It intends to highlight the innovations adopted by Makerere University Library to verify whether library users were trained for information searching, its evaluation, and its application to meet their information needs. Interviews with library staff and users of the chosen institutions were used to gather data for the study. However, in 2004–2005 user statistics and conducted literacy programs were considered as the primary source of information. The study also found some of the available resources have not been used at all. This indicates that users are either unaware that these resources exist, do not know how to access them, or are unaware of available benefits, supporting the need for IL. The result states that library professionals with positive attitudes and behaviors assist and train their users for information access.

3. Objectives of the study

The study's primary objective is to investigate the relationship between information literacy and user engagement in digital environments among university students. The other specific objectives are:

- i. To assess the information literacy competencies of university students.

- ii. To evaluate students' user engagement levels with digital library resources.
- iii. To analyze the impact of information literacy on user engagement.
- iv. To assess the effectiveness of digital library resources in promoting information literacy and user engagement.

4. Methodology

The research is conducted as a case study among two universities in Odisha, namely Sambalpur University and Utkal University. The targeted universities were studied separately to understand the relationship between information literacy and user engagement in digital environments. The descriptive analysis includes university descriptions, library attributes, and user characteristics to diagnose the research problem. For the present study, the survey method was adopted. A set of structured questionnaires with closed-ended questions was administered to elicit pertinent data from P.G. students and research scholars. In addition to the questionnaire method, library visits, personal interviews, and observation methods were used to collect the required information to supplement the questionnaire method and provide more clarity to the data. This approach was essential and was used to analyze and interpret the data. Other relevant secondary sources of data referred to include recorded data (e.g., library attendance registers), circulation statistics, syndicate proceedings, library committee proceedings, Self-Study Reports (SSR) of NAAC of the universities, and feedback from information recipients.

4.1 Sample determination

The research population comprises a heterogeneous group; therefore, Stratified Random Sampling was employed to obtain a representative sample. The population of the study was divided into sub-populations known as strata. The researcher selected items from each stratum, as they share greater homogeneity in their characteristics compared to the total population. This study aimed to collect data from students at two public universities in Odisha, with a combined student population of 4,093. Sambalpur University has a total of 1,719 students, comprising 1,532 postgraduate (P.G.) students and 258 research scholars. Utkal University has a total student population of 2,374, consisting of 2,128 postgraduate students and 245 research scholars, as shown in Table 1.

Table - 1: List of population strengths in both universities (Last updated on 25.09.2024)

S.N.	State Public University	P.G. students	Research Scholars	Total
1	Sambalpur University, Jyoti Vihar, Burla	1532	258	1719
2	Utkal University, Vani Vihar, Bhubaneswar	2128	245	2374

The researchers determined the sample size by using the Taro Yamane formula:

$$n = \frac{N}{1 + N(e)^2}, \text{ where:}$$

n = the required sample size from the population under study

N = the whole population that is under study

e = the precision or sampling error which is usually 0.10, 0.05 or 0.01.

By substituting the necessary values into the formula, the sample size was calculated to be 324 for Sambalpur University and 342 for Utkal University. Following this, the researchers distributed questionnaires across both universities, as detailed in Table 2. A total of 666 questionnaires were distributed, with 324 questionnaires allocated to the users of Sambalpur

University and 342 to the users of Utkal University. However, due to varying response rates, the actual number of returned questionnaires differed. Sambalpur University had a response rate of 79.24%, with 271 questionnaires returned, while Utkal University recorded a response rate of 77.16%, with 250 questionnaires returned. Among the returned questionnaires, 123 were partially filled; therefore, the researchers excluded these questionnaires from the data analysis. The remaining 398 fully completed questionnaires accounted for 76.39% of the total responses, with 206 from Sambalpur University and 192 from Utkal University.

Table - 2: Response rates of users questionnaire

University	Distributed	Returned	Partially Filled	Fully Filled
Sambalpur University	342	271	65	206
Utkal University	324	250	58	192
Total	666	521	123	398

5. Results

5.1. Demographic analysis of respondents

5.1.1. Age-wise respondents' distribution

The age-wise distribution of respondents from both universities in Odisha is presented in Table 3. Out of 206 responses from Sambalpur University, the highest response rate was observed in the 20-25 age group, accounting for 47.57% (n=98), followed by the 25-30 and 30-35 age groups, at 31.06% (n=64) and 15.53% (n=32), respectively. The proportion of respondents aged over 40 years was the lowest. Similarly, out of 192 responses from Utkal University, the highest proportion of respondents also belonged to the 20-25 age group, representing 49.47% (n=95), followed by the 25-30 and 30-35 age groups, at 29.68% (n=57) and 15.10% (n=29), respectively. Respondents aged over 40 years were the least represented. The pattern was consistent across both universities, with the 20-25 age group being the highest contributors, while respondents aged over 40 years were the least represented.

Table - 3: Age-wise respondents' distribution

S.N.	User Age group	Sambalpur University	Utkal University
1	20-25	98	95
2	25-30	64	57
3	30-35	32	29
4	35-40	12	7
5	More than 40	0	4
	Total	206	192

5.1.2. Gender-based respondents' distribution

The Gender-based respondents' distribution from both the universities of Odisha is presented in Table 4. Sambalpur University's female responses outnumber the male category with 59.70% (n=123). However, the male response rate (n=105) at Utkal University is higher than the female response rate (54.68%).

Table - 4: Gender-based respondents' distribution

Gender	Sambalpur University	Utkal University
Male	83	105
Female	123	87
Total	206	192

5.1.3. Academic discipline of respondents' distribution

A thorough examination of the Academic Discipline of respondents who made a substantial contribution to the research project is given in Table 5. At Sambalpur University, students in the arts and humanities contributed the most, with 28.22% (n=59), followed by those in social science and science and technology, with 24.88% (n=52) and 24.40% (n=51).

Conversely, At Utkal University Social Science student's participation is more, with 31.25% (n=60) preceding Arts & Humanities with 27.08% (n=52) and Commerce and Management with 22.39% (n=43).

Table - 5: Academic discipline of respondents' distribution

S.N.	Disciplines	Sambalpur University	Utkal University
1	Arts & Humanities	59	52
2	Commerce and Management	44	43
3	Science and Technology	51	37
4	Social Science	52	60

5.1.4. User type distribution

The paper is restricted to only P.G. students and Research Scholars for the research study. Table 6 demonstrates the ratio of user type. In both universities, postgraduate students' responses are significantly higher from Research scholars.

Table - 6: User type distribution

S.N.	User Type	Sambalpur University	Utkal University
1	P.G.	148	161
2	Research Scholar	58	31
Total		206	192

5.2. Status of information literacy among university students

5.2.1. Confidence levels of users

Table 7 presents the users' trust levels in using digital libraries, including database searches, finding pertinent information, retrieving information, reference management abilities, etc. It was discovered that at Sambalpur University, 14.56% of users reported feeling very confident in their abilities, 31.06% reported feeling pretty confident, and 24.75% reported feeling moderately confident 14.07% lacked confidence.

Table - 7: Confidence levels of responders

S.N.	Confidence Level	Sambalpur University	Utkal University
1	Not at all confident	29	35
2	Slightly confident	32	29
3	Somewhat confident	51	33
4	Quite confident	64	54
5	Extreme confident	30	41
Total		206	192

5.2.2 Frequency of online database usage

The frequency of online database usage in both universities is shown in Table 8. Out of 206 students at Sambalpur University, 34.46% (n=71) reported using online databases frequently, 25.24% (n=52) reported using them sometimes, 18.93% (n=39) reported using them occasionally, and 2.56% of students reported never using them at all.

Online database usage at Utkal University is quite common, with 38.54% (n=74) of respondents using them frequently, followed by 28.64% (n=55) who use them frequently and 25% (n=48) who use them occasionally. Of the users, 1.56% never used it.

The number of frequent users at the university is higher than those who visit digital resources sometimes or frequently. Sambalpur University has 1% more inactive users than Utkal universities.

Table - 8: Frequency of online database usage

S.N.	Online Database Usage Frequency	Sambalpur University	Utkal University
1	Never	12	3
2	Rare	32	12
3	Sometimes	39	48
4	Often	52	55
5	Always	71	74
Total		206	192

5.2.3 Evaluation of credibility of online resources

Table 9 looked into how people assess the reliability of internet sources. Although their aims are different, users in both libraries use a variety of techniques to assess credibility. Credibility evaluation abilities are predicted by education level and frequency of internet usage.

In Sambalpur University, 60.67% (n=125) of the users are credible, while in Utkal University, 59.89% (n=115) of the users are credible.

Table - 9: Evaluation of credibility of online resources

Credibility of online resources	Sambalpur University	Utkal University
Yes	125	115
No	81	77
Total	206	192

5.2.4 User-idea on usage of citation styles

Table 10 illustrates the awareness of the Usage of Citation Styles among students of Sambalpur University, which is 79.61%(n=164) compared to Utkal University at 61.45%(n=118).

Table - 10: User-idea on usage of citation styles

Usage of Citation Styles	Sambalpur University	Utkal University
Yes	164	118
No	42	74
Total	206	192

5.2.5 Users attending information literacy workshops/training

Table 11 indicates that respondents from Sambalpur University and Utkal University, respectively, were in favor of the IL workshops (66.01% [n=136] and 53.12% [n=102]), demonstrating a positive attitude toward the conduct of information training sessions and programs and the necessity of literacy programs among users.

Table - 11: Users attending information literacy workshops/training

Information literacy workshops/training	Sambalpur University	Utkal University
Yes	136	102
No	70	90
Total	206	192

5.3. Levels of User engagement of students with digital library resources

5.3.1 Users' engagement with the university library website

Table 12 illustrates the frequency of library website usage among students at Sambalpur and Utkal Universities, revealing varying patterns of engagement. At Sambalpur University, the majority of students use the library website either "Occasionally" 54 or "Never" 80, indicating a lower overall frequency of engagement. Similarly, at Utkal University, the largest group also uses the website "Occasionally" 64, but fewer students report "Never" using it 46. Regular usage, such as "Daily", is relatively low at both selected universities. Moderate use, including 1-2 times in a week and 3-4 times in a week, accounts for a combined 26.2% at Sambalpur and 32.8% at Utkal.

Table - 12: Users visiting the university library website

Library website	Sambalpur University	Utkal University
Daily	18	19
1-2 times in a week	17	21
3-4 times in a week	37	42
Occasionally	54	64
Never	80	46
Total	206	192

5.3.2 Users' activities on the university library website

Table 13 highlights the primary activities of students on the university library websites at Sambalpur and Utkal Universities, reflecting their preferences and engagement patterns. At both universities, the most common activities are searching for books/articles (174 at Sambalpur and 165 at Utkal) and accessing online databases (185 and 176, respectively), demonstrating a strong focus on academic resource discovery and utilization. Using online resources for research shows a noticeable difference, with 75 students at Sambalpur engaging in this activity compared to only 48 at Utkal, suggesting a higher inclination toward research-related tasks at Sambalpur. Participation in online discussions is minimal at both institutions (7 at Sambalpur and 5 at Utkal), indicating limited use of collaborative or interactive features. The "Other" category shows more responses at Utkal (23) compared to Sambalpur (13), possibly reflecting diverse or unlisted activities.

Table - 13: Users' activities on the university library website

Users' activities on the university library website	Sambalpur University	Utkal University
Search for books/articles	174	165
Access online databases	185	176
Use online resources for research	75	48
Participate in online discussions	7	5
Other (please specify)	13	23

5.3.3 Users' satisfaction with the library's digital resources

Table 14 reveals user satisfaction levels with library services at Sambalpur and Utkal Universities. At Sambalpur University, 29 users reported being "Very Satisfied," while 64 indicated being "Satisfied." In comparison, at Utkal University, 35 users were "Very Satisfied," and 41 were "Satisfied." Neutral responses ("Neither Satisfied nor Dissatisfied") were relatively high at both institutions, with 51 at Sambalpur and 54 at Utkal. Dissatisfaction levels were also notable, with 30 users at Sambalpur and 33 at Utkal reporting being "Dissatisfied," while 32 at Sambalpur and 29 at Utkal reported being "Very Dissatisfied."

Table - 14: Users' satisfaction with the library's digital resources

Users' satisfaction with the library's digital resources	Sambalpur University	Utkal University
Very Satisfied	29	35
Satisfied	64	41
Neither Satisfied nor Dissatisfied	51	54
Dissatisfied	30	33
Very Dissatisfied	32	29
Total	206	192

5.3.4 Users seeking assistance from library staff

Table 15 highlights the differences in users seeking assistance from library staff at Sambalpur and Utkal Universities. At Sambalpur University, a majority of users (154 out of 206) sought assistance from library staff, indicating a strong reliance on staff support. In contrast, at Utkal University, only 98 out of 192 users sought assistance, while a nearly equal number (94) reported not doing so.

Table - 15: Users seeking assistance from library staff

Users seeking assistance from library staff	Sambalpur University	Utkal University
Yes	154	98
No	52	94
Total	206	192

5.4. Impact of information literacy on user engagement

Table 16 highlights the perception of information literacy skills' importance for effective user engagement among students at Sambalpur University and Utkal University. At Sambalpur University, a significant majority (183 out of 206) affirm the role of information literacy, compared to 136 out of 192 at Utkal University. Negative responses are minimal for both universities, with only four and two respondents, respectively, indicating "No." However, a notable difference exists in the "Maybe" responses, with Utkal University recording 54 (28.1%) compared to Sambalpur's 19 (9.2%).

Table - 16: Importance of Information literacy skills for effective user engagement

Information literacy skills for effective user engagement	Sambalpur University	Utkal University
Yes	183	136
No	4	2
May be	19	54
Total	206	192

5.4.1. Impact of information literacy skills on user experience

Table 17 presents the perceived impact of information literacy skills on user experience at Sambalpur and Utkal Universities. At Sambalpur University, the majority of respondents (164 out of 206) reported that their user experience was "Strongly Affected" by information literacy skills, while an additional 28 reported being "Somewhat Affected." Similarly, at Utkal University, 132 respondents indicated being "Strongly Affected," and 51 reported being "Somewhat Affected." Neutral responses ("Neither Affected nor Unaffected") were minimal, with 12 at Sambalpur and 6 at Utkal. None of the respondents at either university reported being "Strongly Unaffected" or "Somewhat Unaffected." A small number fell under the "Others" category (2 at Sambalpur and 3 at Utkal).

Table - 17: Impact of information literacy skills on user experience

Information literacy skills impact on user experience	Sambalpur University	Utkal University
Strongly Unaffected	0	0
Somewhat Unaffected	0	0
Neither Affected or Unaffected	12	6
<i>Somewhat Affected</i>	28	51
Strongly Affected	164	132
Others	2	3
Total	206	192

5.5. Factors for improving information literacy skills

Figure 2 illustrates user engagement with various library services at Sambalpur University and Utkal University. Workshops and training sessions show high engagement at both universities, with Utkal University slightly leading (181 users) over Sambalpur University (178 users). Similarly, personalized support is well-utilized, with Sambalpur University (164 users) slightly surpassing Utkal University (159 users). Library events and exhibitions attract more users at Sambalpur University (176 users) compared to Utkal University (156 users), indicating greater participation in such activities.

Collaborative study areas are particularly popular at Sambalpur University (198 users), significantly exceeding engagement at Utkal University (158 users). In terms of access to technology and digital resources, Sambalpur University (185 users) again outperforms Utkal University (165 users), highlighting greater reliance on digital tools. Lastly, the "Others" category shows low engagement overall, with Sambalpur University (76 users) slightly ahead of Utkal University (65 users).

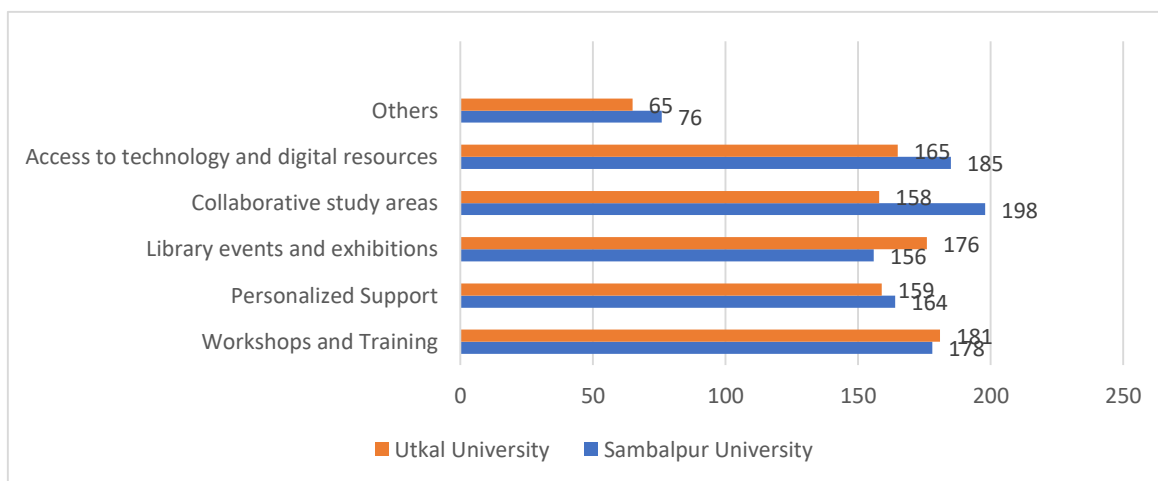


Fig. 1 Factors for improving information literacy skills

5.6. Users' suggestions for information literacy training

Table 18 highlights users' suggestions regarding the need for information literacy training at Sambalpur University and Utkal University. A significant majority at both universities support this idea, with 184 users at Sambalpur University and 187 at Utkal University expressing agreement. This indicates widespread recognition of the importance of such training. A small number of respondents opposed the need for training, with 18 users at Sambalpur University and only 5 at Utkal University expressing disagreement. Additionally, 4 users at Sambalpur University were uncertain ("Maybe"), whereas no users at Utkal University selected this option.

Table - 18: Users' suggestions for information literacy training

Information literacy training	Sambalpur University	Utkal University
Yes	184	187
No	18	5
May be	4	0
Total	206	192

6. Significance of the study

This study emphasizes the importance of enhancing digital library services and information literacy training to improve academic performance at both Sambalpur and Utkal Universities. The findings suggest a need for tailored library services and more comprehensive information literacy programs to boost student satisfaction and encourage independent resource usage. The higher awareness of reference styles and positive attitudes toward information literacy workshops at Sambalpur highlight the effectiveness of targeted training, which Utkal could adopt. The study also suggests that universities should invest in ongoing information literacy initiatives and provide better access to digital resources.

7. Conclusion

This study investigated the relationship between information literacy and user engagement in a digital environment, revealing significant correlations and insights. It provides valuable

information on the demographic, academic, and behavioral patterns of students at Sambalpur and Utkal Universities in Odisha concerning digital library usage and information literacy skills. Most respondents at Sambalpur and Utkal Universities were aged 20-25, with higher female participation at Sambalpur and higher male participation at Utkal. Students from the Arts, Social Sciences, and Science disciplines demonstrated the highest engagement with digital resources. While around 60% of students displayed credible digital literacy, overall satisfaction with library services remained moderate, with many seeking assistance from library professionals, indicating limited independent usage. Awareness of reference styles and positive attitudes towards information literacy workshops were more prominent at Sambalpur University, emphasizing the need for sustained IL training. The findings highlight the significance of digital resource access and personalized support at Sambalpur, while Utkal students emphasized the importance of workshops and events. The study confirms the need for continuous information literacy programs and enhanced library services to strengthen academic outcomes.

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