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ENHANCING INFORMATION LITERACY SKILLS AMONG UNDERGRADUATE STUDENTS AT AGRICULTURE UNIVERSITY, PESHAWAR

Sumbal[*1], Dr Rahim Jan[2], Dr. Saeed Ullah Jan[3], Dr Ghalib Khan[4], Hidayat Ullah[5]

*[*1]Ph.D. scholar Department of Library And Information Science Khushal Khan Khattak University, Karak*
[2,4]Assistant Professor Department of Library and Information Science, Khushal Khan Khattak University, Karak.
[3]HOD, Department of Library and Information Science, Khushal Khan Khattak University, Karak.
[5]Senior librarian Higher Education Department, KP

[*1]writtosumbal@gmaILS.com, [2]rahimjanrajjar@gmails.com, [3]dr.saeedullah@kkkuk.edu.pk, [4]ghalibkhan1@yahoo.com, [5]hidkhalillib@gmail.com

Corresponding Author: *

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ABSTRACT

Information literacy (IL) is an essential skill in the digital age, enabling individuals to effectively locate access, analyze, and utilize information. This study evaluates the information literacy skills (ILS) of B.Sc. Honors students at Agriculture University, Peshawar, aiming to identify gaps and provide recommendations for improvement. A descriptive survey method was employed, using a closed-ended questionnaire based on American Library Association (ALA) standards, collecting data from October 2023 to May 2024. The findings revealed significant deficiencies in ILS, particularly in accessing and evaluating information. Only 21% of students visited the library daily, while 20% never utilized this resource. Internet usage was high, with 73.3% using it for emails and 64.5% for social media, indicating a preference for digital resources. The study found that 65.8% of students relied on internet sources and 49.4% on peers for research, highlighting a lack of diverse resource usage. Many students lacked skills to evaluate the reliability and authority of information sources, underscoring a critical need for improvement. Over 57% of students strongly agreed on the need for ILS training. Recommendations include implementing keyword training, library resource training, Boolean logic training, and education on copyright and plagiarism. Regular workshops and enhanced internet services within the university library are also proposed. Integrating ILS components into the academic curriculum is recommended. Future research should focus on department-wise assessments, regular updates on student skills, and comprehensive studies at different educational levels. The study underscores the critical need for enhanced ILS training to improve academic performance and research capabilities.

Keywords: *Information Literacy, Agriculture University Peshawar, Library Usage, Internet Services, Training Programs.*

INTRODUCTION

Information literacy is essential skills in the digital age, enabling individuals to effectively locate, access, analyze, and use information (Becker, 2018). This study focuses on evaluating the ILS of B.Sc. Honors students at Agriculture University, Peshawar, and provides recommendations for enhancing these skills through targeted training programs. The research aims to equip students with the necessary skills to navigate and utilize the vast array of information resources available to them.

Literature review

The concept of information literacy has evolved significantly over the past few decades, gaining importance in the academic landscape. According to the American Library Association (1989), information literacy is a set of skills requiring individuals to recognize when information is needed and possess the ability to locate, evaluate, and use the needed information effectively. This definition underscores the critical role of information literacy in navigating the vast expanse of information in the digital age. Information literacy is essential for students in higher education as it empowers them to become effective researchers and learners. Bawden in 2001and Naik, M. & Padmini in 2014 describes it as an ongoing learning process that involves not only the acquisition of skills but also the development of values and competencies. Similarly, Doyle (1994) and Ahmad et.al. (2023) highlights the importance of information literacy in decision-making, problem-solving, and adapting to the information-rich society. Information literacy is often used interchangeably with terms like computer literacy, library literacy, and media literacy (Parang, Raine, and Stevenson, 2000). Singh et al. (2012) argue that information literacy extends beyond library use and requires support from various sectors, including educational institutions, governments, and non-governmental organizations. Libraries play a pivotal role in fostering information literacy among students (Ernst, 2023). Academic libraries must adapt to the changing information landscape to remain relevant (Franscotti et al., 2007). Studies by Yusuf & Iwu (2010) and Mason (2010) emphasize the importance of encouraging students to utilize library resources. The collaboration between librarians and faculty is crucial in integrating information literacy into the curriculum (Brasely & Sterling, 2008; Anderson, 2016).

The advent of information technology has transformed the way information is accessed and utilized. Mohktar & Majid (2008) and Shabi (2012) discuss how information literacy equips individuals with the skills needed to navigate the digital environment. Gopal and Rajgoli (2014) highlight the significance of information literacy in the digital age, emphasizing the need for models and methods to implement information literacy programs in higher education. Evaluating information literacy skills is essential to understand the effectiveness of these programs. Various studies have been conducted to assess the information literacy skills of students in different contexts. Green (2006) and Proulx et al. (2006) found that collaborative learning environments enhance students' information literacy skills. Ramakrishnegowda & Walmiki (2004) and Lamptey (2009) emphasize the importance of evaluating the reliability and validity of information sources.

Despite the recognized importance of information literacy, several challenges hinder its development among students. Studies by Dadzie (2007), Rafique (2014), Klomsri, & Tedre (2016) reveal that c. Factors such as inadequate training, lack of awareness, and limited access to resources contribute to these challenges. The need for structured information literacy training programs is a recurring theme in the literature. Jan (2016) and Elfenbein (2006) found that training programs significantly improve students' information literacy skills. Jdaitawi et al. (2011), Penton-Voak et al. (2012) and Farokhzadian et.al. (2021) suggest that such programs should be integrated into the curriculum to ensure continuous learning and skills development.

In conclusion, the literature underscores the critical role of information literacy in higher education and the need for effective training programs to enhance students' information literacy skills. By implementing comprehensive information literacy training and integrating information literacy components into the curriculum, educational institutions can better prepare students to navigate and utilize information resources in the digital age.

Methodology

A descriptive survey method was employed to gather data from undergraduate students using a closed-ended questionnaire based on American Library Association (ALA) standards. Data collection spanned from October 2023 to May 2024. The questionnaire addressed various aspects of ILSS, including library usage, internet services, research journal access, and the need for training. The questionnaire was designed to capture the perceptions and skills of students in different aspects of information literacy.

Population of the study by Semesters-cum-Gender wise

There were total 468 students of 2nd semester in which 399 were male, and 69 were female, out of 504 students of 3rd semester 416 were male, and 88 were female, in 443 students of 5th semester 361 were male, and 82 were female, and the remaining 486 students were from the 7th semester in which 412 were male and 74 were female. In these four academic years: from session 2020-24 to 2018-21, consists of eight semesters. Similarly at the same time there were only four running semesters. During the period of collecting data, there were 2nd, 3rd, 5th and 7th spring /fall running semester consisting currently of 1901 students.

Table: 1

Semesters-cum-Gender wise population of this study

Sr. No	Semesters	Total Population			Percentage
		Males	Female	Total	Total
1	2nd	399 (85.3%)	69 (14.7%)	468	24.6%
2	3rd	416 (82.5%)	88 (17.5%)	504	26.5%
3	5th	361 (81.5%)	82 (18.5%)	443	23.3%
4	7th	412 (84.8%)	74 (15.2%)	486	25.6%
Total	4	1588 (83.5%)	313 (16.5)	1901	100%

Components of the Questionnaire and its Sub variables

The questionnaire had three sections, having 39 main items. The first section is regarding Demographic information for the gathering the data regarding the background information of the students. This section has 04 questions incorporated regarding age, gender, semesters, marital status, and use of multiple choice questions. Section two was regarding library and internet use that was also having four (04) questions with the opportunity to use of multiple choices questions and to tick more than one option if necessary. The questionnaire components and its sub-variables were represented in this part of the questionnaire.

The last section (3rd) includes five dimensions by ALA for the measurement of ILS consist of 31 questions statements. These dimensions were: (i) identification of needed information (ii) access to information (iii) evaluation of information (iv) interpretation of information (v) ethically and legal use of information and (vi) training about library resources and services. A 5-Point Likert Scale *(Strongly Disagree 1, Disagree 2, Neutral 3, Agree 4, and Strongly Agree 5)* was used to solicit respondents' opinions about their ILS. Table 2 depicts the main components of the questionnaire.

Table: 2

Questionnaire Components and its Sub variables

Variables	Sub variables	No. of Question	Question No.
Identification of Needed information	Define the topic. Find the needed information. Obtain needed information. Using Boolean operators.	4	9 10 11 12
Access to Information	Library catalogue and arrangement of materials in the library. The search required and relevant information. Use a thesaurus for alternate words. Use reliable information. Use internet tools.	5	13 14 15 16 17
	Evaluate internet sources. Determine the reliability of the information.		18 19

Evaluation of information	Sort out reliable material. Understand the criteria to evaluate the information. After retrieving I can study in detail.	5	20 21 22
Interpretation of Information	Interpret the results. I interpret the visual information. Incorporate the related information. Problem solving experience.	4	23 24 25 26
Ethically and Legal use of Information	*Understand parts of research and writing.* Prepared bibliography. Citation style. Ethical/legal using of information. Copyrights and plagiarism. How to avoid plagiarism.	6	27 28 29 30 31 32
Training about Library Resources and Services	I need training in defining a topic. I recommend the training to locate information. I recommend training for using keywords and Boolean logic etc. I recommend training for evaluating electronic sources. Training for preparing the bibliography, citation, indexing. I need training regarding lawful using information. Training on the effective use of electronic resources.	7	33 34 35 36 37 38 39

Detail Overall Attitude of the Respondents regarding Information Literacy Skills

In the present complex information world, it is extremely essential to recognize the skills information literacy of Agriculture University students. Table 3 expressed the opined of respondents about the identification of needed information skills. From the data provided by the respondents it is clear that (25.6%) respondents "strongly disagreed, (33.9%) disagreed, (13%) remained neutral, few (21%) agreed and very rare (6.3%) strongly agreed on statement "I can identify my needed information" of respondents, that identifies exactly what kind of information they need. On this statement that "I can access needed information" 28% respondents "strongly disagreed, 36% disagreed and 9.3% remain neutral while 17.9% agreed and 8.8% strongly agreed.

The feedback of the respondents was (29.9%) that "strongly disagreed, the majority (34.8%) of them disagreed and (8.7%) remain neutral on the question that "I can make evaluation of needed information" while (16.6%) "agreed" and very few (10%) "strongly agreed". When asked about the competencies such as interpretation of needed information. "I have the skills to interpret the needed information" (32.2%) respondents stated as "strongly disagreed, (30.2%) agreed, (11.8%) remain neutral, (12.8%) agreed and few (13%) strongly agreed and admitted having not enough knowledge regarding the interpretation of needed information. To know about students level of the ethical and legal use of information, the (29.6%) of the respondents were strongly disagreed and (31.4%) disagreed and (16.6%) remain neutral on the question that "I can evaluate the needed information," but few as (13.2%) agreed and very few (8.9%) strongly agreed.

Table 3

Frequency Distribution of Respondents' Opinions regarding Information Literacy Skills (response=561)

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Mean
Identification of needed information	575 (25.6%)	762 (33.9%)	293 (13%)	472 (21%)	142 (6.3%)	2244 (100%)	2.48
Access to needed information	787 (28%)	1011 (36%)	261 (9.3%)	500 (17.9%)	246 (8.8%)	2805 (100%)	2.43
Evaluation of needed information	840 (29.9%)	974 (34.8%)	243 (8.7%)	465 (16.6%)	283 (10%)	2805 (100%)	2.42
Interpretation of needed information	723 (32.2%)	677 (30.2%)	265 (11.8%)	286 (12.8%)	293 (13%)	2244 (100%)	2.44
Ability to understand the ethical and legal use of information	995 (29.6%)	1056 (31.4%)	558 (16.6%)	455 (13.2%)	302 (8.9%)	3366 (100%)	2.40
Total	3920 (29.11%)	4480 (33.27%)	1620 (12%)	2178 (16.17%)	1266 (9.4%)	13464 (100%)	2.43

This study aimed to understand the level of ILS of undergraduate students at Agriculture University, Peshawar. The result analysis delivered perception into the applicability of the five ALA Standards, for information literacy skills, that is the identification of needed information, resources; Standard 2, access to information; Standard 3, evaluation of information; Standard 4, interpretation of information and Standard 5, ethical and legal use of information.

The study revealed significant gaps in the ILS of students, particularly in accessing and evaluating information. Key findings include:

Library Usage: Only 21% of students visited the library daily, while 20% never visited. This low engagement with library resources echoes findings from previous research by Rehman & Alfaresi (2009), indicating a widespread issue with library usage among students.

Internet Services: A majority of students (73.3%) used the internet for emails, and 64.5% used it for social media, showing a preference for digital over physical resources. This supports earlier findings by Anderson (1999) and Park (2009) regarding students' reliance on online resources.

Research Journals: 65.8% of students relied on internet sources, while 49.4% sought information from peers. These findings align with those of Ramakrishnegowda & Walmiki (2004), highlighting a lack of diverse resource usage among students.

Information Evaluation: Many students lacked skills to evaluate the reliability and authority of information sources. The descriptive statistics showed low levels of competence, with mean scores for evaluation skills indicating a significant need for improvement.

Training Needs: Over 57% of students strongly agreed on the need for ILSS training, emphasizing the critical demand for structured training programs to address the existing gaps in information literacy.

Discussion

The findings from this study align with previous research, indicating a widespread lack of information literacy skills among students. The reliance on internet sources and the underutilization of library resources highlight the need for structured training programs. Such programs should focus on teaching students how to effectively search, evaluate, and use information, particularly using advanced search

techniques and understanding intellectual property rights.

Recommendations

Based on the findings, the following recommendations are proposed to enhance in\formation literacy skills among students at Agriculture University, Peshawar:

Keyword Training: Implement training programs to teach students how to use correct keywords for effective information retrieval.

Library Resource Training: Educate students on the use of various library resources and services to improve their ability to access needed information.

Boolean Logic Training: Provide specialized training in using Boolean operators and truncation for information searches, enhancing students' ability to retrieve relevant information.

Copyright and Plagiarism Education: Develop programs to educate students on intellectual property rights, including copyright laws and plagiarism, ensuring ethical use of information.

Regular Workshops: Arrange orientation programs, workshops, and seminars to keep students updated on new technologies and library resources. These initiatives should be designed to foster continuous learning and skills development.

Improved Internet Services: Enhance internet services within the university library to facilitate efficient information searches, providing students with reliable and fast access to digital resources.

Curriculum Integration: Include ILS components in the academic curriculum to align with job market demands. This integration will ensure that students develop necessary skills throughout their educational journey.

Future Research Directions

To build on the findings of this study, the following areas are suggested for further research:

Department-Wise Research: Conduct department-wise studies post-4th semester to identify which departments have the best ILS skills.

Regular Assessments: Continuously assess student ILS skills by semester, session, gender, and age groups to keep their awareness updated.

Different Education Levels: Investigate ILS and information searching skills at school, degree college, master's, MS, and Ph.D. levels to understand how these skills develop across different stages of education.

Institution-Wide Studies: Carry out comprehensive ILS studies across all departments and institutions of Agriculture University, Peshawar.

Comparative Studies: Compare ILS and information searching skills among students of various universities in Peshawar to identify best practices and areas for improvement.

Mixed Methods Research: Use qualitative methods such as interviews and observations for in-depth studies by graduate, MS, and Ph.D. students.

Periodic Studies: Conduct studies at regular intervals to cope with the rapidly changing digital information landscape.

Model Development: Propose a comprehensive model for student ILS skills to guide future training programs and initiatives.

Individual Case Studies: Conduct individual case studies in each department regarding the ILS of students to identify specific needs and tailor training programs accordingly.

Conclusion

This study underscores the critical need for enhanced information literacy training at Agriculture University, Peshawar. By implementing the recommended measures, the university can significantly improve students' academic performance and research capabilities

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