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The Assessment of Information Literacy Instruction (ILI) in University Libraries of Pakistan

Abstract

The purpose of this paper was to explore the current assessment practices of information literacy instruction (ILI) in the libraries of universities in Pakistan. The research method consisted of a quantitative approach using a structured questionnaire for empirical data collection, which was sent to the libraries of universities of Pakistan. The findings of the study show that university libraries evaluated their information literacy instruction programs to find out the gaps and deficiencies through student and teachers' feedback. Student learning was also assessed through faculty feedback and oral feedback. The outcome of this study will help the Library and Information Sciences (LIS) schools, library associations, and universities comprehend the present status of information literacy instructions assessment in the libraries of Pakistani universities.

Keywords: Information Literacy; Information Literacy Instruction, Information Literacy Assessment; Assessment of Information Literacy Instruction Program; Pakistan

Introduction

Academic libraries exist primarily to support the mission of their parent organizations (Tewell, 2018). The more effective they are at achieving this objective, the more value they can demonstrate and this is the key to organizational support and longevity (Walker & Pearce, 2014). Academic libraries' primary role is to support teaching, learning, and research (Liu, Lo, & Isumura, 2016). As a result, an increasing number of user education programs are being designed and implemented by academic libraries around the world to enable students to find, locate, access, and evaluate information (Critz et al., 2012).

From a teaching and learning perspective, an information literacy instruction program must be assessed using suitable pedagogical methodologies. Information literacy is an important skill for students and therefore needs to be assessed by librarians. The assessment determines the nature and quality of education (Julien, Gross, & Latham, 2018; McMillan, 2013) and it pursues to collect information on student performance and provide feedback to facilitate student learning (Timmers & Veldkamp, 2011). Conner (2012) stated that the assessment of information literacy skills in higher education originated in the 1980s, but due to social demands on universities and colleges to build IL programs for undergraduate and graduate students, it has grown in popularity. Over the years, many tools for assessing information literacy have been developed and standardized, which have been used as pre-test and follow-up tests or as information literacy rubrics. To date, several theses have been produced on information literacy and rubric creation, as well as reliability and validity checks during development.

The assessment is very crucial to document the information literacy learning outcome to know the strengths and weaknesses of students and for the improvement of information literacy instruction programs (Oakleaf, 2009; Warner, 2003). Moreover, evaluation of the IL instruction program indicates its usefulness (Gross, 2009). It is imperative to put in place mechanisms to measure the success of our education system in equipping students with information literacy skills

and then holding education leaders answerable for results. Belanger, Bliquez, and Mondal (2012) argued that information literacy assessment helps librarians to establish their value in teaching and learning their higher education missions. Formal assessment is a significant source in demonstrating the importance of IL instructional programs to the educational mission of universities and to safeguard that learning has occurred.

This is Pakistan's first comprehensive national survey of its kind. The purpose of this paper is not to discover the most effective ways for evaluating information literacy programs. Instead, it aims to paint a picture of the various sorts of assessment methods in use.

Literature Review

In the discipline of library and information science, information literacy is a relatively recent and well-established subject of research. Researchers from various subject domains have conducted extensive studies on IL.

Given the ongoing expansion of library holdings and technological advancements in information processing, retrieval, and usage, library users require adequate library instruction. Academic libraries' users include students, faculty, and researchers who may lack the necessary skills or knowledge to use library materials. Users may find it difficult to access, identify, retrieve, and successfully utilize information from the library shelves and catalog that will benefit their learning, teaching, and research if they do not receive information literacy instruction (Omeluzor, Akibu, Dika, & Ukangwa, 2017). Academic Libraries' educational activities are critical to achieving their missions, whether they are being carried out through free lending of collections, providing in-person and online reference services, or developing instructional programs to teach library users how to access and assess information (Tewell, 2018).

Assessment is a component of quality instruction in all areas of education including IL instruction. Assessment can help learners to see where they've progressed and where they still need to grow, as well as contribute to the learning process. It informs instructors about the effectiveness of their instruction, assists them in determining the efficacy of their methods, and contributes to ongoing program development. The assessment can illustrate the value and constant need for library instruction programs to administrators, approval agencies, government organizations, parents, and learners (Erlinger, 2018). In information literacy instruction, evaluation has always played a role, but with a limited set of methods: as a preliminary assessment of prior learning, to verify the student's previous knowledge; such as post-session understanding; post-class assessment, which can also be a summative assessment of credit; and recurring formative examination with currently popular models of "small size" educational activities (Oakleaf, 2008; Turnbow & Zeidman-Karpinski, 2016).

Walsh (2009) reviewed the literature for searching of different methods used by library and information professionals to assess IL competencies. The author searched the databases i.e. CINAHL, ERIC, LISA, and LISTA, and found 127 papers on information literacy assessment methods. In literature, it was found that IL instructors used 9 types of methods. The most common methods of IL assessment were MCQs, bibliographic analysis, self-assessments, quizzes, and tests. The other methods that had rarely been used were articles, notes, portfolios, and final scores. Clairoux, Desbiens, Clar, Dupont, and St-Jean (2013) used user satisfaction surveys and scoring features of the literature search to evaluate students learning outcomes after delivering a series of

information literacy workshops in Canada. Assessment of information literacy program outcome in Chinese university libraries practiced through quizzes, MCQs, short answers, essays, and self-reviews (Jabeen, Yun, Rafiq, Jabeen, & Tahir, 2016).

There are three assessment strategies (i) diagnostic (ii) formative and summative feedback and (iii) quality assurance assessment. The first type of test contains quantitative assessment methods including pre-test and post-test surveys. This testing increases students' motivation to learn the subject. The second test i.e. formative assessment generally denotes tests and assignments that students take to assess whether learning is taking place, while summative assessment refers to an exam that takes place at the end of a program. There are two types of measurement in quality assurance assessments: student performance and overall performance data. In this case, students can self-grade or can be graded by a librarian or expert (Andretta, 2005; Harlen, 2007; Webber & Johnston, 2006). Assessment of information literacy instruction effectiveness is carried out through students performance, students input on instruction programs, faculty input, number of students covered (Diekema, Gerrity, & Mitchell, 2019). Information literacy instruction is assessed through surveys focus groups and other learning assessment tools (Erlinger, 2018).

Julien et al. (2018) in their studies of information literacy instruction practices in academic libraries in the United States have confirmed that mostly assessment and evaluation are still informal. Unless the systematic assessment of IL instructional programs is applied, the outcome of the instruction program is uncertain and it would be difficult for management to support IL instruction programs. Librarians used different approaches for evaluating students' learning and effectiveness of IL instruction but the main sources for these assessments rely heavily on self-evaluation of students and feedback of faculty.

Lau, Bonilla, and Gárate (2017) conducted a comprehensive exploratory assessment at CETYS University, Mexico after the end of the first semester. The process involved three research methods. The first technique was to organize a panel discussion with seven out of nine teachers who assisted one or more sessions. The goal of the focus group was to investigate their teaching experiences, what they did, what was missed in the course, and what to do in subsequent learning experiences. Based on the comments from the focus group discussion, it was found that the course needed to be modified to focus more on IL skills than theoretical knowledge. The second method was an exploratory investigation of students' information literacy skills. Students were invited to voluntarily share their two papers: the paper prepared at the end of the study period and one completed by the conclusion of the preceding school year. The comparison of the two documents produced positive results, but there was space for improvement.

In African universities, the most commonly used assessment methods were collaborative classroom learning exercises, multiple-choice questions, and short answers (Baro & Keboh, 2012). The formal evaluation of information literacy instructions in developing countries is almost non-existent (Vijay & Satish, 2010).

An ongoing assessment cycle can help to determine the best ways to serve students regarding information literacy instruction programs. The content of the instruction, methods and evaluation tools are under the control of the librarian for experimentation. The investment of time and effort in performing and repeating the evaluation cycles leads to continuous improvement (Woitte & McCay, 2019).

From the review of the related literature, it is apparent that assessment is a component of quality instruction in all areas of education. The researchers revealed that sizeable literature on information literacy assessment is produced worldwide but very limited research was done on the issue in Pakistan. Information literacy in Pakistan is still in its infancy stage (Anwar & Naveed, 2019; Bhatti, 2010; Iqbal & Idrees, 2020, 2021) and no separate study has been done on assessment practices of information literacy instruction (ILI) in Pakistan. A comprehensive study was, therefore, required to identify the assessment practices of information literacy in Pakistani academic libraries.

Purpose of the Study

The purpose of this quantitative research was to explore the assessment of information literacy instruction (ILI) programs and students' learning in the academic libraries of the degree-awarding institutions in Pakistan.

Methods

The population of the study was geographically dispersed throughout Pakistan. Therefore, the survey method was adopted for it. The population of this study comprised central libraries of the degree-awarding institutions recognized by the Higher Education Commission (HEC) of Pakistan. It encompasses both private and public sector institutions of all four provinces of the country as well as Azad Jammu and Kashmir, Gilgit Baltistan, and the capital city of Islamabad. The heads or representatives of central libraries of degree-awarding institutions were the participants of this study. A list of 192 universities/degree awarding institutions, available on the website of HEC was retrieved.

The questionnaire was developed by conducting a comprehensive literature review. It consisted of close-ended questions. To get the required data from the participants, the researcher visited the websites of the degree-awarding institutions for getting contact numbers, emails, and postal addresses of the chief librarians/heads of central libraries. By examining the university websites, contact numbers, and emails, 120 heads of central libraries were identified. The postal addresses of 72 remaining universities' central libraries were also obtained from their websites. It was decided to use a multi-tier approach (both postal mail, electronic mail, and personal visits) to distribute the questionnaires. The online survey was developed through Google doc.

Limitations

- The population of the study was geographically spread throughout Pakistan; therefore, the survey method was selected for this study which has its own limitations.
- This study appraised the assessment of information literacy instructions in university libraries using a self-administered questionnaire. The results may be affected by personal biases and IL knowledge of librarians of the university.
- The students, management, and faculty were not covered in this study.

Findings and Discussion

Evaluation of IL Instructions Program Effectiveness

The university libraries were asked to state if they were evaluating IL instructions program in their institutions. Data revealed that out of the 87 (100%) university libraries, an overwhelming majority 61 (70%) reported that they were practicing evaluation of their IL instruction programs while 26 (30%) indicated that they had never evaluated their IL instruction programs (Figure: 1).

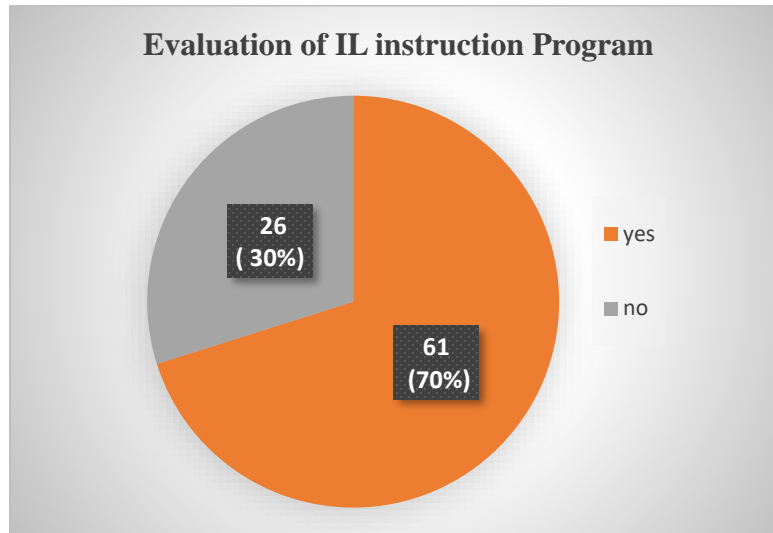


Figure 1. Evaluation of IL Instructions Program (N = 87)

A follow-up question was asked to those who evaluated their instruction programs to indicate their methods for evaluating instruction programs. Table 1 shows that most university libraries 52(85.25%) evaluated the effectiveness of their IL program through “informal feedback received from students”, followed by “informal feedback received from faculty 48(78.69%). Self-evaluation by individual instructors/librarians was the method reported by 36(59.02%) university libraries. The other methods used to determine the effectiveness of the IL instructions program were “feedback on a questionnaire from students”, used by 34(55.74%); “feedback on a questionnaire from faculty” 29(47.54%), and “through citation analysis of course assignments”, used by 22(36.07%).

Table 1

IL Instructions Assessment Methods (N = 61)

S. No	Evaluation Methods	Frequency	Percentage
1	Informally from feedback received from students	52	85.25%
2	Informally from feedback received from faculty	48	78.69%
3	Self-evaluation by individual instructors/librarians	36	59.02%
4	With feedback questionnaires to students	34	55.74%
5	With feedback questionnaires to faculty	29	47.54%
6	Through citation analysis of course assignments	22	36.07%

Assessment and evaluation of any teaching and learning program are very important because it potentially leads to improvement of IL delivery. The finding regarding the evaluation of the IL instruction program's effectiveness revealed that 70% of university libraries were evaluating their instruction program in one way or another. Informal feedback received from faculty and students was the main method for evaluating the effectiveness of information literacy instruction programs in university libraries of Pakistan. A study conducted by Julien et al. (2018) also reported that informal feedback from faculty and student is the most popular method for assessing the quality of IL instruction programs.

4.3.17 Assessment of Student Learning in IL Instructions Program

The university libraries were asked to indicate whether they assessed the student learning outcomes in their instruction program or not. The majority of respondents, i.e., 46 (53%) of the respondents reported that there was an assessment system while 41 (47%) reported that there were no assessment methods used for students' learning outcomes.

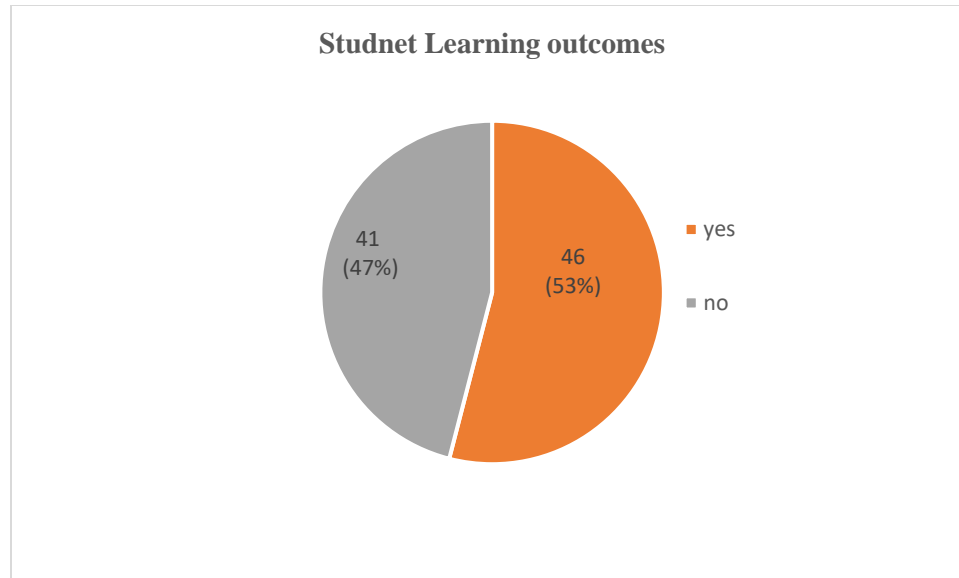


Figure 2. Student Learning Outcomes Assessment (N = 87)

A follow-up question was asked to those respondents who evaluated student learning outcomes in their instruction programs to indicate their methods for assessing the learning outcomes of students through instruction programs. Data collected from the respondents, presented in table 3 showed that most university libraries, i.e., 27 (58.70%) assessed student learning through faculty feedback, oral feedback was in practice by 26 (56.52%), and short answers by 24 (52.17%). Other methods included; assessing students' outcomes through multiple-choice questions (20, 43.48%); through student self-assessment (20, 43.48%), and quizzes/ tests (18, 39.13%). Formative assessment during in-class sessions, pre and post-instruction test results were the least used methods for assessing students' learning outcomes.

Table 2
 Students Learning Outcome Assessment Methods (N = 46)

Assessment Methods	Frequency	Percentage
Faculty feedback	27	58.70%
Oral Feedback	26	56.52%
Short answers	24	52.17%
Written Feedback	23	50.00%
Multiple-choice questions	20	43.48%
Through student self-assessment	20	43.48%
Quizzes/ tests	18	39.13%
Through information literacy assignments	16	34.78%
Through formative assessment during in-class sessions	10	21.74%
By comparing pre and post-instruction test results	8	17.39%
Through citation analysis of course assignments	0	0 %

The findings, further revealed that 53% of university libraries assessed student learning outcomes in their IL instruction programs. The most popular methods for assessing students' outcomes were faculty and oral feedback. The outcome-based assessment helps to give evidence in terms of the library's contribution regarding students' learning that result from gaining IL skills.

The most popular methods for assessing students' outcomes were faculty and oral feedback. The outcome-based assessment helps to give evidence in terms of the library's contribution regarding students' learning that result from gaining IL skills. Rockman (2002) reported that without producing evidence of what is taking place in IL activities, it would be difficult to justify the importance of IL. Hence, the prospect of IL being integrated into the mainstream curriculum and/or requests for funds to run IL activities are most likely to meet staff opposition and not be accepted by university structures. Assessment by the teacher remains the most common technique, while peer evaluation by other members, which is rarely employed in IL teaching, can be useful (Lowe, Booth, Tagge, & Stone, 2014). Here, in Pakistan evaluation methods need special attention for improvement of the situation and selecting more effective methods.

Conclusion

This exploratory study provides the first outline of current techniques to evaluate information literacy instruction (ILI) programs and students' learning in these programs. Libraries continue to devote a substantial amount of time and resources to instructional programs because they recognize the importance of systematic and sequential information literacy instruction in problem-solving and lifetime learning. It was concluded that the majority of university libraries evaluate their information literacy instruction programs mainly through informal feedback from students and faculty. Further, it was also concluded that almost half of the university libraries assessed student learning outcomes in their IL instruction programs. The most popular methods for assessing students' outcomes were faculty and oral feedback.

In considering the results of this research, keep in mind that the current research asks librarians about the assessment of information literacy programs and student skills. Additional stakeholders, including students and teachers, should be included in future research to get a complete picture. This research provides descriptive data about the assessment practices at university libraries in Pakistan, which consequently makes a positive contribution to the literature on information literacy instruction programs and student learning in developing countries.

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