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Research Article

Bridging the Information Gap: A Pre-and Post-Survey Study of Information Literacy among Medical Students

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Abstract

Information literacy (IL) skills are essential in equipping students with the ability to access, analyze, and apply vast amounts of knowledge, particularly in the medical field. This study explores the impact and effectiveness of an Information Literacy Program (ILP) at BLDE (Deemed University) Medical College and Research Centre, Vijayapura, with a focus on postgraduate medical students. The objective was to assess students' awareness of library facilities, their ability to use electronic resources (e-resources), and their familiarity with various library services, particularly after undergoing the ILP. A survey method was employed, involving 98 students, and data were collected using a structured questionnaire. Pre- and post-tests were conducted to evaluate changes in students' information literacy skills. Results showed a marked improvement in students' familiarity with the library OPAC, e-resources, and library services after completing the program. For example, the number of students who were "very familiar" with the library OPAC increased from 1.02% (pre-test) to 50% (post-test), and e-resource usage improved from 2.04% to 64.28%. Furthermore, 61.2% of participants rated the ILP training as "very good" after the session. The findings indicate that ILPs significantly enhance medical students' ability to access and utilize medical information resources for research and practice. The study underscores the importance of continuous engagement with emerging technological tools and applications in medical libraries. Based on the findings, it is recommended that ILP initiatives be further expanded and tailored to meet the specific needs of medical students to foster greater use of library resources. Additionally, future efforts should include more personalized instruction and guided sessions to improve the understanding and application of library systems.

I. INTRODUCTION

Medical practitioners need quick access to a vast amount of medical literature and must pay attention to new developments in the medical sciences. Medical libraries provide information services to support research activities, clinical decision-making, and patient care. In general, "information literacy" refers to one's ability to recognize information needs; locate information; access, understand, evaluate, and use it effectively, efficiently, legally, and ethically in solving problems. Competitive advantages, improved decision-making, and increased workforce efficiency depend on this ability. The American Library Association (1989) defines information literacy as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." Information literacy is the ability to understand when outside information is needed, how to search for that information, and how to decide if that information can be trusted.

Libraries have adopted information technological tools to create and deliver learning and teaching activities to develop information literacy competencies through online tutorials along with face-to-face sessions. Information literacy skills are increasingly important to access, evaluate, and use

information. This study aims to investigate the role of ILP among postgraduate medical students of BLDE (Deemed to be University) and attempts to address the impact and effectiveness of information literacy programs (ILP) for a robust clinical information system that provides a solution and encourages preventive healthcare practices.

II. REVIEW OF LITERATURE

Karisiddappa *et al*., (2008) conducted a study among 31 selected college libraries in Bangalore and found that respondents have a good understanding of the concept of information literacy (Karisiddappa,2008). Kratochvil, (2013) evaluated the results of an e-learning course, Information Literacy, which was taught by librarians at the Faculty of Medicine, Masaryk University. Results show that medical students are satisfied with the e-learning course, the Information Literacy program (Kratochvil, 2013).

Information literacy is best taught at multiple levels in the education process; educators should grapple with shaping the standards and competencies related to data acquisition. Mulla, (2014), Lu, J., *et al.,* (2016) explored the necessities and urgency of increasing health information literacy of the general population in China in their analysis of the library-based health information literacy service model in the age of big data (Lu, J, 2016). Sachin *et al*., (2017) investigated the attitude towards using the library for accessing clinical information needs by medical students from 10 Health Science Universities located across Karnataka.

The response showed that medical students are well aware of existing clinical information resources and recommend that there is a need for radical changes in the structure and process of clinical information (Sachin & Divyananda, 2017). Lwoga and Sife *et al*., (2018) recommended that there is a need for more proactive strategies for raising faculty members' awareness of critical scholarly databases (Lwoga and Sife, 2018). Akpovire *et al*., (2019) investigated the role of information literacy skills in the use of information resources by medical students in Lagos State.

Total enumeration sampling technique was used and suggested that adequate attention should be given (Akpovire, 2019). Ali and Naveed *et al*., (2020) described the research support resources and services provided by Pakistani university libraries. To improve library users' information and research literacy, libraries not only provide specialized research tools but also manage research training programs (Ali & Naveed, 2020). Waltz *et al.*, (2020) identified the presence of information skill and behaviors components of information literacy in curricular competencies and reviewed them (Waltz, 2020)

Ghorbanian Zolbin, M., *et al*., (2021), in their review findings, indicate three primary themes, which summarize the current literature. In all three, the results show that health intervention programs help enhance older people's health literacy skills (Ghorbanian Zolbin, 2021). Nisha *et al.,* (2021) found that information literacy is an essential skill and information literacy is the only solution to reduce the digital divide gap among information-rich and information-poor citizens (Nisha & Varghese, 2021). Osman *et al*., (2021) examines the link between information literacy skills (ILS) and library patronage at the University of Health and Allied Sciences in Ho, Ghana. In contrast, while faculty have information literacy skills, continuous training is necessary to keep up with the changing information environment (Osman, 2021).

Caffrey *et al.,* (2022) studied and listed recent publications on information literacy instruction and libraries. The chosen bibliography is helpful for busy practitioners, library science students, and anyone who wants to learn about information literacy in various contexts to stay up with changes in library training effectively (Caffrey,2022). Hong-Nei Wong and Ren, L. (2022) conducted a pre-class survey to assess the literature search experience based on students. Results showed that even though students rated themselves as experienced PubMed searchers, most students were unfamiliar with most advanced information literacy skills, which are crucial for students to successfully navigate the exponentially increased volume of medical literature (Hong-Nei Wong & Ren, 2022).

A. Need and Purpose of The Study

To serve students efficiently in their academic work, it's necessary to ascertain the effectiveness of information literacy programs provided by library professionals. In this regard, a pre-posttest study on information literacy will help librarians and other information managers develop an Information and Communication Technology-based library system through which students can access information resources through the latest web environment.

III. OBJECTIVES OF THE STUDY

The objectives of the studies are as follows.

1. To assess awareness of library facilities in pre- and post-test contexts.
2. To study the impact of the Information Literacy Program (ILP) on students' use of e-resources.
3. To analyze the effectiveness of the ILP on the use of electronic information resources, comparing pre- and post-test results.
4. To assess the awareness and use of various technological tools and applications in pre- and post-ILP scenarios.
5. To determine the familiarity of library services in pre- and post-testing.

A. Hypothesis

Following hypotheses have been formulated.

H_1: There is a relationship between library facilities and information literacy programs.

H_2: There is relationship between library e-resources and information literacy program.

H_3: There is a relationship between library technological tools and information literacy program.

H_4: There is relationship between library services and information literacy program.

IV. RESEARCH DESIGN AND METHODOLOGY

A survey was conducted among postgraduate students from different departments. The study area included BLDE (Deemed to be University) Medical College Hospital and Research Centre located at Vijayapura, Karnataka State. The study sample included ninety-eight postgraduate medical students. Pre-test data were collected from the respondents before the ILP training, and a post-test was conducted after completing the ILP training session.

A questionnaire was used as the data collection instrument; the response rate was 100% for both pre- and post-tests. Data analysis used simple descriptive statistics using SPSS. More directly connected to information literacy, a component of department-wise, small group, content-hands-on training and a lecture were given from the 15th to the 21st of March 2024. This allowed students to meet informally with a librarian and library service to discuss topics or concerns over a cup of coffee. Ninety-eight postgraduate (PG) students attended the training session.

V. RESULTS AND DISCUSSION

Data analysis used simple descriptive statistics. Information on the respondents' age, gender, and course of study is provided in this section. In the Reference Department's section dedicated to online electronic information sources, 98 respondents received questionnaires. The respondents' characteristics were thought to be crucial in identifying those who utilized the information literacy program offered at BLDE (Deemed to be University), Vijayapura.

Table I shows the participation towards the gender-wise distribution data shows that most of the respondents are 'male' (n = 54, 55.10), and about 44 (44.90%) are from the 'female' category for pre- and post-information literacy programs.

TABLE I GENDER-WISE DISTRIBUTION OF RESPONDENTS

Gender	Number of responders before ILP (n= 98)	Number of responders after ILP (n= 98)
Male	54 (55.10)	54 (55.10)
Female	44(44.90)	44(44.90)

TABLE II DEPARTMENT-WISE DISTRIBUTION OF RESPONDENTS

Department	Number of responders before ILP (n= 98)	Number of responders after ILP (n= 98)
Pathology	4 (4.08)	4 (4.08)
Dermatology	5(5.10)	5(5.10)
General Surgery	9 (9.18)	9 (9.18)
Anesthesiology	13 (13.26)	13 (13.26)
Orthopedics	10 (10.20)	10 (10.20)
Psychiatry	2 (2.04)	2 (2.04)
ENT	5 (5.10)	5 (5.10)
Ophthalmology	4 (4.08)	4 (4.08)
Radio-Diagnosis and Imaging	4 (4.08)	4 (4.08)
General Medicine	20 (20.40)	20 (20.40)
Pediatrics	8 (8.16)	8 (8.16)
Obstetrics & Gynecology	10 (10.20)	10 (10.20)
Respiratory Medicine	2 (2.04)	2 (2.04)
Geriatric Medicine	1 (1.02)	1 (1.02)
Emergency Medicine	1 (1.02)	1 (1.02)

The cross-tabulation of respondents by their department, shown in Table II, indicates that the majority of the respondents, about 20 (20.40%), are from the General Medicine department, followed by 13 (13.26%) respondents from the Anesthesiology department, and 10 (10.20%) respondents each from the Orthopedics and Obstetrics & Gynecology departments. Further data show that 9 (9.18%) and 8 (8.16%) of respondents were from General Surgery and Pediatrics, respectively. About seven departments have representatives of fewer than five members.

TABLE III AWARENESS ABOUT THE LIBRARY RULES AND REGULATIONS

About Library	Number of Responders before ILP (n= 98)			Number of Responders after ILP (n= 98)			Correlation	Pre	Post	χ^2 Tab
	Very Much Familiar	Familiar	Not Familiar	Very Much Familiar	Familiar	Not Familiar		χ^2_{Cal}	χ^2_{Cal}	
Library Timings	10 (10.20)	40 (40.81)	48 (48.97)	62 (63.26)	35 (35.71)	01 (01.02)	-0.9254	0.08	0.55	5.99
Borrowing privilege	01 (1.02)	28 (28.57)	69 (70.40)	56 (57.14)	40 (40.81)	02 (02.04)	-0.9937	0.06	0.31	5.99
Library Rules	01 (1.02)	25 (25.51)	72 (73.46)	60 (61.22)	36 (36.73)	02 (02.04)	-0.9963	0.21	0.99	5.99
Library Staff	01 (1.02)	20 (20.40)	77 (78.57)	52 (53.06)	45 (45.91)	01 (01.02)	-0.9933	0.54	0.32	5.99

It is witnessed that there is a negative correlation between pre and post-test with reference to library components like library timings, borrowing privileges, library rules, and library staff. Also, we notice that the calculated value of χ^2 is less than the χ^2 tabled value. Hence, we accept the null hypothesis at a 5% level of significance with 4 degrees of freedom, which also justifies that there is a relationship between library and information literacy programs. It is evident from Table-III that to improve correct comprehension of the library systems, practical orientation techniques, including individualized instructions, guided tours, and group instructions, should be improved. Additionally, the university library staff should provide information literacy programs that appeal to all user groups, including junior and senior workers and the people the library serves in the community.

TABLE IV AWARENESS ABOUT THE FACILITIES PROVIDED BY THE LIBRARY

Library Resources	Number of Responders Before ILP (n= 98)			Number of Responders After ILP (n= 98)			Correlation	Pre	Post	χ^2 tab
	Very Much Familiar	Familiar	Not Familiar	Very Much Familiar	Familiar	Not Familiar		χ^2_{cal}	χ^2_{cal}	
Library OPAC	01 (1.02)	22 (22.44)	76 (77.55)	49 (50)	45 (45.91)	04 (04.08)	-0.9804	0.53	0.54	5.99
Library Institutional Repository	01 (1.02)	22 (22.44)	75 (77.53)	58 (59.18)	36 (36.73)	04 (04.08)	-0.9905	0.53	0.31	5.99
E-Resources	02 (02.04)	41 (41.83)	55 (56.12)	63 (64.28)	34 (34.69)	01 (01.02)	-0.9544	0.96	0.31	5.99

With reference to the objective-1 study, results explicit in table IV that a negative correlation between pre and post-test with references to library resources like Library OPAC, Institutional Repository, and e-resources. We also notice that the calculated value of χ^2 is less than χ^2 tabled value; hence, we accept the null hypothesis at a 5% level of significance with 4 degrees of freedom, which also justifies that there is a relationship between **library facilities** and information literacy programs. The effectiveness of the tactics mentioned above was also evaluated.

H_1: There is no relationship between library facilities and information literacy programs.

TABLE V USE OF ELECTRONIC INFORMATION RESOURCES

Library E-Resources	Number of Responders Before ILP (n= 98)			Number of Responders After ILP (n= 98)			Correlation	Pre	Post	χ^2 tab
	Very Much Familiar	Familiar	Not Familiar	Very Much Familiar	Familiar	Not Familiar		χ^2_{cal}	χ^2_{cal}	
ProQuest	01 (01.02)	19 (19.38)	78 (79.59)	52 (53.06)	44 (44.89)	02 (02.04)	-0.99712	0.53	0.86	5.99
Scopus Database	01 (01.02)	19 (19.38)	78 (79.59)	57 (58.16)	39 (39.79)	02 (02.04)	-0.99486	0.51	0.56	5.99
BMJ Case Report	01 (01.02)	15 (15.30)	82 (83.67)	58 (59.18)	29 (29.59)	01 (01.04)	-0.89795	0.53	0.25	5.99
BMJ Best Practices	01 (01.02)	16 (16.32)	81 (82.65)	68 (69.38)	29 (29.59)	01 (01.02)	-0.90441	0.47	0.21	5.99
PubMed	01 (01.02)	32 (32.65)	65 (66.32)	54 (55.10)	39 (39.79)	05 (05.10)	-0.97963	0.47	0.52	5.99

Analyzing the familiarity of the library resources with the pre & post-test information literacy program is objective-2 of the study and results clearly shows in the Table-V that a negative correlation between pre and post-test regarding library e-resources like ProQuest database, Scopus Database, BMJ Case Report, BMJ Best Practices, and PubMed. We also notice that the calculated value of χ^2 is less than χ^2 tabled value; hence, we accept the null hypothesis at a 5% significance level with 4 degrees of freedom. We agree with the null hypothesis, which also shows that there is a link between library e-resources and programs that teach people how to find and use information. It was decided that the library's ways of teaching people how to find and use information were mostly effective.

H_2: There is no relationship between library e-resources and information literacy program.

Based on the objective-3 of the study respondents were asked to mention the effectiveness of information literacy program provided to them related to medical information in the Library and Information Centre, and the responses showed in Table-VI reports that 67 (68.36%) respondents mentioned "Very Good for the factor"; followed by 66 (67.34%) respondents mentioned "Very Good for the factor Would you like to receive the course material in print for further personal research? 65% of respondents indicated "Very Good" for the factor "Would you consider further training on the topic on your own? 64.28% of respondents stated, "Very Good for the factor, would you have preferred more follow-ups? Moreover, about 63.26% of respondents have to opine "Very Good." Would you feel confident about taking another course on the same platform? Overall, about 60 (61.22%) respondents agreed that the post-training section was "Very Good.

TABLE VI EFFECTIVENESS OF VARIOUS INFORMATION LITERACY PROGRAM ON USING ELECTRONIC INFORMATION RESOURCES

Rating of Course	Number of responders after ILP (n= 98)			
	Very Good	Good	Average	Not Good
Rate the post-training session.	60 (61.22)	37 (37.75)	01 (01.02)	0
Would you consider further training on the topic on your own?	64 (65.30)	32 (32.65	02 (02.04)	0
Would you like to have received some further reading material on the course subject?	62 (63.26)	32 (32.65)	04 (04.08)	0
Would you like to receive the course material in print for further personal research?	66 (67.34)	30 (30.61)	01 (01.02)	01 (01.02)
Would you have preferred more follow-ups?	63 (64.28)	33 (33.67)	02 (02.04)	0
Would you have liked further guidance after taking the course?	67 (68.36)	29 (29.59)	02 (02.04)	0
Would you feel confident about taking another course on the same platform?	62 (63.26)	34 (34.69)	02 (02.04)	0

TABLE VII AWARENESS AND USE OF VARIOUS TECHNOLOGICAL TOOLS AND APPLICATIONS

Library Technological Tools	Number of Responders Before ILP (n= 98)			Number of Responders After ILP (n= 98)			Correlation	Pre	Post	χ^2 tab
	Very Much Familiar	Familiar	Not Familiar	Very Much Familiar	Familiar	Not Familiar		χ^2 cal	χ^2 cal	
Remote Access	01 (01.02)	27 (27.55)	70 (71.42)	63 (64.28)	34 (34.69)	01 (01.02)	-0.99459	0.01	0.03	5.99
DELNET	01 (01.02)	23 (23.46)	74 (75.51)	49 (50.00)	45 (45.91)	04 (04.08)	-0.97639	0.04	0.47	5.99
OPAC	01 (01.02)	21 (21.42)	77 (78.57)	54 (55.10)	41 (41.83)	03 (03.06)	-0.99996	0.04	0.02	5.99
Plagiarism tool (URKUND)	01 (01.02)	24 (24.48)	73 (74.48)	60 (61.22)	36 (36.73)	02 (02.04)	-0.99435	0.06	0.72	5.99
Mendeley	01 (01.02)	19 (19.38)	78 (79.59)	62 (63.26)	34 (34.69)	02 (02.04)	-0.96645	0.1	0.49	5.99
Grammarly	01 (01.02)	34 (34.69)	63 (64.28)	69 (70.40)	28 (28.57)	01 (01.02)	-0.99671	0.25	0.33	5.99
SWAYAM	01 (01.02)	28 (28.57)	69 (70.40)	65 (66.32)	32 (32.65)	01 (01.02)	-0.99072	0.02	0.46	5.99

With reference to the objective-4 of the study, the Table VII shows a negative correlation between pre and post-test concerning library technological tools like Remote Access, DELNET, OPAC, Similarity/Plagiarism, Mendeley,

Grammarly, and SWAYAM. Also, we notice that the calculated value of χ^2 is less than χ^2 tabled value; hence we accept the null Hypothesis at 5% level of significance with 4 degrees of freedom; we accept the null Hypothesis, which also justifies that there is a relationship between library technological tools and information literacy programs. The results showed that providing written materials on information literacy, orientation skills on information sources and their users, and giving new users guided tours were the most effective tactics used by the library to teach information literacy to library patrons. It is consistent with Weiner's findings that librarians employ various techniques, including instructions on conducting library research and applying information literacy. H_3: There is no relationship between library technological tools and information literacy program. Based on the objective-5 of the study researcher listed popular services and it is clear from the table-8 that there is a negative correlation between the pre-test and the post-test when it comes to library services like circulation services, document delivery services, reprographic services, book bank services, printing and scanning, and the User Awareness Program. We also notice that the calculated value of χ^2 is less than χ^2 tabled value; hence, we accept the null hypothesis at a 5% level of significance with 4 degrees of freedom. We agree with the null hypothesis, which also shows that there is a link between library services and programs that teach people how to use information. It is clear that the library services' effectiveness is accurate, and then using that information is crucial. Therefore, information literacy promotion techniques are intended to allow library users to acquire the appropriate technology-using skills and thereby resolve their research or academic issues.

TABLE VIII FAMILIARITY ABOUT THE LIBRARY SERVICES

Library Services	Number of responders before ILP (n= 98)			Number of responders after ILP (n= 98)			Correlation	Pre	Post	χ^2 tab
	Very Much familiar	Familiar	Not Familiar	Very Much Familiar	Familiar	Not Familiar		χ^2 cal	χ^2 cal	
Circulation services	01 (01.02)	23 (23.46)	75 (76.53)	49 (50.00)	46 (46.93)	03 (03.06)	-0.9714	0.5	0.81	5.99
DDS	01 (01.02)	22 (23.46)	75 (76.53)	45 (45.91)	47 (47.95)	06 (06.12)	-0.9485	0.45	0.96	5.99
Reprographic Service	01 (01.02)	20 (20.40)	77 (78.57)	53 (54.08)	40 (40.81)	05 (05.10)	-0.9998	0.46	0.2	5.99
Book bank service	01 (01.02)	20 (21.42)	77 (78.57)	44 (44.89)	48 (48.97)	06 (06.12)	-0.9464	0.3	0.17	5.99
Printing and Scanning	01 (01.02)	30 (30.61)	67 (68.36)	55 (56.12)	41 (41.83)	02 (02.04)	-0.9808	0.38	0.59	5.99
User Awareness Program	01 (01.02)	21 (21.42)	76 (77.55)	51 (52.04)	43 (43.87)	04 (04.08)	-0.9949	0.64	0.47	5.99

When library users use the information, they have learned to do things like research, they need to have a particular set of skills.

H_4: There is no relationship between library services and information literacy program.

VI. MAJOR FINDINGS

The following are the significant findings of the study.

1. The majority of the respondents are 'male' (n = 54, 55.10), and about 20 (20.40%) are from the General Medicine department,
2. The awareness of the library timings has increased from 10.20% to 63.26% at "very familiar." Borrowing privileges, library rules, and library staff details have increased from 01.02% to 57.14%, 61.22%, and 53.06%, respectively, in the "very familiar" category.
3. The post-test results reveals that 63 (64.28%) of respondents were very familiar with using e-resources this indicates objective that respondents are very well aware about their library facilities after the post-test.
4. It is evident from the study that from the ILP pre-test, no respondents mentioned "very much familiar." In contrast, the post-test results shows that respondents were 'very much familiar' with BMJ Best practices & BMJ Case reports (70.40% & 59.18%), Scopus database (58.16%), PubMed (55.10%), and ProQuest database (53.06%), the results shown that impact ILP has improved the respondent's awareness on e-resources.
5. 60 (61.22%) respondents agreed the post-training section was "Very Good," and 67 (68.36%) respondents mentioned "Very Good for the factor." *"Would you have liked further guidance after taking the course?", this factor indicated that Information Literacy Program influenced the audience effectively.*
6. Responses towards awareness of library technological tools and applications show that from the pre-test, no respondents were 'very much familiar,' and after the ILP post-test, respondents were were 'very much familiar' towards Grammarly (70.40%), SWAYAM course (66.32%), Library Remote Access (64.28%), Mendeley reference management software (63.26%), and URKUND plagiarism similarity checker (61.22%)

according the to the study objective it is shown that respondents are well aware about the library technological tools and applications.

7. Pre-test results indicated that respondents were only a little familiar with the significant services of the library. In contrast, the ILP post-test results showed there was a significant awareness established among the respondents. The report reveals that 55 (56.12%) of respondents are very familiar with document printing and scanning, reprographics services (n = 53, 54.08%), user awareness programs (n = 51, 52.04%), and circulation services (n = 49, 50%) and it is evident that respondents are well familiar with library services.

VII. DISCUSSION

The present study has attempted to ascertain the effectiveness of information literacy programs provided by BLDE (DU) library professionals and researcher presented overall opine among the students with various aspects facilities, e-resources, tools and applications and services being provided by the library. Based on the study results, the post-test results shown a significant improvement among users in terms of use and accessing resources. The post-test result indicates that the ILP has influenced the growing use of library resources such as OPAC (Not Familiar, Pre-test: n=76, 77.55% & Post-test: n=04, 04.08%), institutional repositories (Familiar, Pre-test: n=22, 22.44% & Post-test: n=36, 36.73%), and e-resources (Very much familiar, Pre-test: n=02, 02.04% & Post-test: n=63, 64.28%) data indicates that ILP has influenced users to access various facilities (Nisha-2021 and Osman-2021). Medical faculty and students rely upon various information resources however, they differ in their opinions in some cases; in most of their responses, they indicate agreement among them in resource familiarity (Very much familiar, Pre-test: n=01, 01.02% & Post-test: n=>50, and >50.00%) and agree that ILP has increased the usage and use of information resources subscribed by the library (Williams-2013, Ullah & Ameen-2014, Mulla-2014, Hong-Nei Wong & Ren-2022).
The effectiveness of ILP programs has positively influenced respondents in retrieving information as results shows that majority of the respondents about >60% indicated 'Very Good' for various kinds of ILP provided by the library (Caffrey & *et al.,* 2022).

Using technological tools and application study found that, ILP enabled them to create more awareness and make it easily accessible and more than 50% of respondents very much familiar aware on the library's technological tools and applications (Kratochvil-2013). Study found a negative correlation between the pre-test and the post-test when it comes to various library services. As data shown that in the pre-test: n=01, 01.02% of respondents have mentioned 'Very Good' known for various library services and Post-test result shown 'Very Good' for printing and scanning (n=55, 56.12%), reprographic services (n=53, 54.08%), user awareness (n=51, 52.04%) (Ali & Naveed-2020 and Waltz-2020). Thus, results reveal that ILP have improved their search skills and make them aware of medical information at any time and any place to access organized information resources.

VIII. CONCLUSION

The tendency toward specialization in medicine makes hospitals more obliged to maintain effective medical information delivery. Library professionals must keep up with the latest technological developments in library activities. Many initiatives have been started in India to bridge this gap. Many organizations and Associations like UNESCO, IFLA, American Library Associations, Society of Colleges, National and University Libraries (SCONUL) have framed different standards and Information Literacy models for various types of information users. The primary tactics used by academic institutes to improve information literacy among library users are information literacy resources, one-on-one training, demonstration, welcoming new users, and organizing seminars and workshops. These tactics were largely successful. However, some library patrons believe additional efforts are required to increase the tactics' efficacy. Therefore, practical orientation methods, including individual instructions, guided tours, and group instructions, should be improved to improve correct comprehension of the library systems. The academic library staff should also provide information literacy programs that appeal to various user demographics, including students, faculty, staff, and even the general public.

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REFERENCES

Akpovire, E., Olawoyin, O. R., Adebayo, O., & Esse, U. C. Role of Information Literacy Skills on Use of Information Resources by Medical Students in Lagos State. *Library Philosophy and Practice*, 2019, 1-18. Retrieved from https://digitalcommons.unl.edu/libphilprac/2148/.

Ali, N., & Naveed, M. A. Research support resources and services in university libraries of Pakistan: A situational analysis. *Pakistan Library Information Science Journal*, 2020, 51, 57-63. Retrieved from:https://www.researchgate.net/publication/346264045_Research_support_resources_and_services_in_university_libraries_of_Pakistan_A_situational_analysis.

American Library Association. Presidential Committee on Information Literacy., 1989. Retrieved frm: https://www.ala.org/pla/initiatives/informationliteracy.

Caffrey, C., Lee, H., Withorn, T., Clarke, M., Castañeda, A., Macomber, K., Jackson, K.M., Eslami, J., Haas, A., Philo, T., Galoozis, E., Vermeer, W., Andora, A. and Kohn, K.P. Library instruction and information literacy 2021, *Reference Services Review*, 2022, 50(3/4), pp. 271-355. doi: https://www.emerald.com/rsr/article-abstract/51/3-4/319/336289/Library-instruction-and-information-literacy-2022?redirectedFrom=fulltext.

Ghorbanian Zolbin, M., Huvila, I., & Nikou, S. Health literacy, health literacy interventions and decision-making: a systematic literature review. Journal of Documentation, 2021, 78(7), 405-428. doi: https://www.meddiscoveries.org/articles/1136.html.

Hong-Nei Wong, & Ren, L. Effectiveness of library instruction on medical students' information literacy skills. *BMJ Evidence - Based Medicine*, 20022, 27, A54-A55. https://ebm.bmj.com/content/27/Suppl_1/A54.2.

Karisiddappa, C. R., & Rajgoli, I. U. In Search of Information Literacy Programmes and Practices: Survey of Selected Institutions at Bangalore. *DESIDOC Journal of Library & Information Technology*, 2008,28(2).https://www.researchgate.net/publication/353679899_Literature_on_Information_Literacy_A_Review.

Kratochvil, J. Evaluation of e-learning course, Information Literacy, for medical students. *Electronic Library*, 2013, 31(1), 55-69. https://dl.acm.org/doi/abs/10.1108/02640471311299137

Lu, J., Zhou, J., Ruan, H., & Luo, G. Establishing a University Library-Based Health Information Literacy Service Model in the Age of Big Data. *Journal of medical imaging and health informatics,* 2016, 6(1), 260-263.https://www.ingentaconnect.com/contentone/asp/jmihi/2016/00000006/00000001/art00035.

Lwoga, E. T., & Sife, A. S. Impacts of quality antecedents on faculty members' acceptance of electronic resources. *Library Hi Tech*., 2018, 36(2), pp. 289-305. https://www.emerald.com/lht/article-abstract/36/2/289/453867/Impacts-of-quality-antecedents-on-faculty-members?redirectedFrom=fulltext.

Mulla, K. R. Information literacy for students and teachers in Indian context. *Pearl: A Journal of Library and Information Science*, 2014, 8(2), 88-96. doi: http://dx.doi.org/ 10.5958/0975-6922.2014.00728.1.

Nisha, N. B., & Varghese, R. R. Literature on Information Literacy: A Review. *DESIDOC Journal of Library & Information Technology*, 2021,41(4).https://publicationsdrdo.in/index.php/djlit/article/view/16405.

Osman, H., Tseh, E. K., & Ahlijah, S. A. The importance of information literacy skills for the effective use of electronic resources by faculty of the university of health and allied sciences, ho, ghana. *Library Philosophy and Practice*, 2021, 1-13. Retrieved from https://www.researchgate.net/publication/350836011_The_Importance_of_Information_Literacy_Skills_for_the_Effective_use_of_Electronic_Resources_by_Faculty_of_the_University_of_Health_and_Allied_Sciences_Ho_Ghana.

Sachin, Y., & Divyananda, K. Usage of library for accessing clinical information by the students of Health Science Universities in Karnataka. *DESIDOC Journal of Library & Information Technology*, 2017, 37(2), 125. https://publicationsdrdo.in/index.php/djlit/issue/view/581.

Waltz, M. J., Moberly, H. K., A.H.I.P., & Carrigan, E. E., A.H.I.P. Identifying information literacy skills and behaviors in the curricular competencies of health professions. *Journal of the Medical Library Association*, 2020, 108(3), 463-479. https://pmc.ncbi.nlm.nih.gov/articles/PMC7441914/.