

Assessment of Information Literacy Skills Among the Masters Students of Social Sciences of Mizoram University and Tezpur University in India

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ABSTRACT: *The importance of information literacy education lies in its potential to encourage a deep, rather than surface learning, and in its potential to transform dependent learners into independent, self-directed, lifelong learners. An information literate person can easily identify, find, evaluate, apply, and acknowledge the information in the right manner. This study intends to measure information literacy skills among the Masters students of social sciences of Mizoram University and Tezpur University in India. We use a kind of a qualitative study using semi-structured questionnaire and conducted this study with a standard set of questions. These questions range from the normal elementary level ones to digital literacy. The results are presented and widely discussed which will help in designing future information systems.*

Keywords: Information Literacy Skills, Mizoram University, Tezpur University, Social Science

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1. Introduction

In general terms, information literacy is the ability to find, access, select, evaluate, and use information from various sources. In the era of the growing ocean of information being available in various formats, it becomes important for the person to have information literacy skills so that he/she can find the right kind of information which will fulfill their information needs. Today information literate people are those who have learned how to learn. The information literacy skills provide the users with the various techniques and methods to find and solve their information need in minimum time.

1.1. Information Contributes

Information is considered important in many aspects and some of its major significances are: (i) To make a normal user, as an independent lifelong learner. (ii) It is an important and essential part of the growth of the country and establishing a strong democracy. (iii) It develops a critical thinking approach among the citizen for the effective and rapid growth of society. (iv) It is considered an important skill while accessing the information in the electronic environment. (v) It is an important and necessary skill for the ethical use of information. (v) It provides users with the essential skills which will be helpful in the

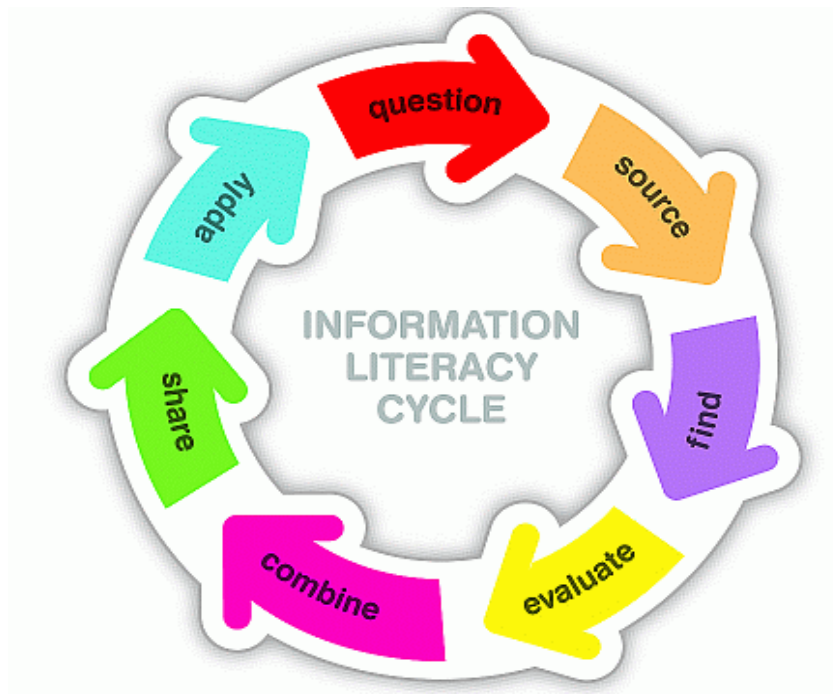


Figure 1. Information Literacy Cycle As viewed by Danielle M Walsh

professional as well as the educational field. Information literacy is one of the critical skills that needs to be learned by the students. The students should be trained and skilled enough to be information competent in the changing information environment.

Information Literacy is viewed as a set of abilities required to the individual users to identify, locate and use information resources. Walsh considered the influence of information technology on information literacy. [1] Further he identified seven components of the information literacy which are essential to understand it. (Figure 1)

As information is a core component required for every user, information researchers continue to initiate studies on the present conditions of the information search ability and skills of the users. These studies help to understand the difficulties faced by the users and reshape and design information systems to ensure optimal information use. The current work is an effort to understand the information literacy of selected users in two institutions. The section 2 specifies the scope of the work, the section 3 address the earlier studies, the section 4 lists the objectives followed by the discussions on methodology, analysis and conclusion.

2. Scope of the Study

As we have indicated that a well-designed work can tap the information requirements of the users and help us to understand and how the present information system operates. With this view we intend to track the requirements and measure the literacy, we took two universities and confined our focus to six social sciences departments which are covered by the Indian Council of Social Science Research (ICSSR). These departments include Education, Sociology, Social Work, Commerce, Mass Communication and Management and these form the studied divisions in both of the Universities. The study is also limited to only Master students,

3. Literature Review

Paul Zurkowski was the first one who used the term “information literacy” where he viewed it as the application of information

resources at workplace by literate people. [2] Lau et al. [3] have identified a few related concepts with information literacy such as information competency, user training, library orientation, bibliographic instruction, information fluency and a few more. It is somewhat intriguing to know that still these authors have included a few traditional components such as bibliographic instruction.

Information literacy is defined by many authors in their own perception and understanding. However, the context of information use is determined and explained in a document by David Hisle and Katy Webb. [4]

While conceptual explanations were offered by a large number of researchers, a few kind of empirical studies tried to understand information literacy by looking at the data collected and based on observations. Based on a large study involving 398 students and tracking their perception and responses, Ahmet Naci Çoklar, Nihal Dulkadir Yaman, Isil Kabakci Yurdakul found that the determiners of online information search competency are the information literacy and digital nativity. [5]

Of course, the information literacy is influenced largely by other variables or skills. There are evidences to support this relations and it has been addressed by many. In a massive study of 916 participants, Kim [6] found the structural relationship among digital literacy, learning strategies, and core competencies among South Korean college students. Also individual variations are found to have among the participants which is natural as skills are not equal among the participants.

The kind of online and digital use of resources are studied by many which can be classified as ‘case studies’. The normal practice for such kind of studies is the use of a specific population and identify the extent of the use of various resources. Some of the pertinent ones are of by Shukla and Verma [7] who evaluated the ICT and social media literacy skills among PG students. These exercise is followed by some others such as by Gudadhe [8], Swapna and Biradar [9], Dorvlo and Dadzie [10] Issa, A. O., et al. [11] and Khan, J. [12]. Quite recently a comprehensive understanding of the information literacy is available with the paper by Ane Landøy et al [13] where the conceptual understanding and various related issues are presented.

4. Aim of the Current Work

The exercises we took for this study are somewhat fundamental in search process. We intend to address some crucial issues in the work. One is the information access point while searching information resources. The overall aims are outlined in detail as below

4.1. Search Access Points

Normally in bibliographic data processing, the processors create database tables wherein each field is tagged as an element. The bibliographic details of documents normally contain the elements such as author, title, keywords, year, publication format, size and so on. These elements are normally deployed by users while search documents in the datasets. The access points are hence the known elements through which search keys are given by users. Among them we intend to know which elements are used.

4.2. Types or Resources

Users normally try to search different forms or document formats while searching. These include open access sources, other academic sources and on. We thus intend to find out the types of documents searched by users.

4.3. Forms of Documents

We further aim to analyse the forms of documents or document types used by the users. We thus track such document types preferred by users.

4.4. Mode of Learning

We aim to know how the users are able to come across or use the resources. The source of learning availability can help the information system designers and hence we measure it.

4.5. Frequency of Visit

We also try to understand and measure the frequency of library visit by different users. Thus, we add this feature in the work.

4.6. Awareness of Services and Difficulties Encountered

We aim to know the extent to which various services are known to the users and if the services are not known the information system designers can plan in a way to make known the various services. Thus we intend to measure and also the various difficulties they face while search for information.

4.7. Training Required

Finally, we intend to track the types of training required to the users.

5. Methodology

For the collection of the primary data, a structured questionnaire was framed with adequate questions and distributed among the post-graduate students of social sciences department i.e. (Education, Sociology, Social Work, Commerce, Mass Communication and Management) to obtain necessary information with related to information literacy skills. A total of 360 questionnaires were distributed among the respondents in which a total of 332 filled questionnaires were received by the respondents with 92.22% response rate. A good number of questionnaires were received back by the respondents to fulfil the objectives of the study. The primary data was collected in February 2020. The collected data have been analysed with a few measures and the statistical computation was also carried out.

6. Data Analysis

6.1. Characteristics of the Respondents

Table 1 shown the attributes of the respondents which constitute 332 in total number. In terms of age groups, the maximum 274 (82.53%) of the respondents were below 24 years age, followed by 55 (16.57%) of respondents were between 25-27 years age group and 3 (1%) of students were between 28-30 years age group. Out of a total of 332 respondents, 167 respondents were from Mizoram University while the rest 165 respondents were from the Tezpur University. The overall details have been given below table no 1. The Cramer's Value test revealed a significant difference between the age group of the respondents i.e. (CV = 0.089; $p = 0.89$).

Classification	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Total	Statistical Test	
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University			
Age	<24	23 (82.14%)	24 (85.72%)	27 (93.10%)	28 (100%)	22 (81.49%)	20 (86.95%)	29 (100%)	28 (100%)	13 (50%)	26 (89.65%)	17 (60.71%)	17 (58.62%)	274 (82.53%)	P= 0.885 r= 4 c= 12 q= 4 n= 332 cv= 0.089
	25-27	5 (17.86%)	4 (14.28%)	2 (6.90%)	0 (0%)	3 (11.11%)	3 (13.05%)	0 (0%)	0 (0%)	13 (50%)	3 (10.35%)	10 (35.71%)	12 (41.38%)	55 (16.57%)	
	28-30	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (7.40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (3.58%)	0 (0%)	3 (1%)	
	>31	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
Total	28 (100%)	28 (100%)	29 (100%)	28 (100%)	27 (100%)	23 (100%)	29 (100%)	28 (100%)	26 (100%)	29 (100%)	28 (100%)	29 (100%)	332 (100%)		

Table 1. Age-wise distribution of respondents

6.2. Access Points used by the Respondents

Table 2 depicts the access points used by both of the Universities respondents. The maximum 161 respondents of both of the

Universities were found to be using ‘Author’ as search term followed by 150 of respondents who preferred the title as the search option while 136 respondents have used the ‘Subject’ access. Interestingly 118 of the respondents have preferred the field ‘Editor’ as the search term. ‘Keywords’ search was adopted by 107 respondents while 28 respondents were using another type of searching options. The difference in the use of search terms is well known. Normally the users use the terms such as author, title, editor, only when they know the contributions. Otherwise most of the users normally prefer to search by keywords only. The whole data of the search strategies adopted by the respondents (departments-wise) were shown in below table no. 2. The Cramer’s Value test was applied on the search strategies adopted by the respondents, a significant difference calculated in the search strategies which are author, subject, title, keywords, editor and other i.e. (CV= 0.000; p=0.000).

	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Statistical Test
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	
Author	27 (16.7%)	25 (15.5%)	15 (9.32%)	5 (3.11%)	9 (5.59%)	7 (4.35%)	8 (4.97%)	6 (3.73%)	15 (9.32%)	20 (12.4%)	10 (6.2%)	14 (8.70%)	<p>P= 0.000</p> <p>r= 6</p> <p>c= 12</p> <p>q= 6</p> <p>n= 700</p> <p>cv= 0.000005</p>
Subject	15 (11.0%)	20 (14.7%)	12 (8.82%)	16 (11.7%)	0 (0%)	21 (15.4%)	15 (11.0%)	17 (12.5%)	5 (3.68%)	4 (2.94%)	3 (2.2%)	8 (5.88%)	
Title	18 (12%)	14 (9.33%)	14 (9.33%)	16 (10.6%)	16 (10.6%)	11 (7.33%)	14 (9.33%)	9 (6%)	8 (5.33%)	7 (4.67%)	6 (4%)	17 (11.3%)	
Keywords	9 (8.41%)	11 (10.2%)	6 (5.61%)	8 (7.48%)	9 (8.41%)	4 (3.74%)	12 (11.2%)	13 (12.1%)	15 (14.0%)	5 (4.67%)	0 (0%)	15 (14.0%)	
Editor	11 (9.32%)	6 (5.08%)	7 (5.93%)	11 (9.32%)	13 (11.0%)	18 (15.2%)	20 (16.9%)	5 (4.24%)	7 (5.93%)	7 (5.93%)	9 (7.6%)	4 (3.39%)	
Other	2 (7.14%)	1 (3.57%)	3 (10.7%)	5 (17.8%)	4 (14.2%)	2 (7.14%)	5 (17.8%)	2 (7.14%)	0 (0%)	0 (0%)	1 (3.57%)	3 (10.7%)	

Table 2. Access Points used by the respondents

6.3. Types of Resources used by the Respondents

Table 3 illustrates the types of resources used by the respondents of both of the Universities. The classification of the types of

Databases	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Statistical Test
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	
Open Access / Open Source Resources	25 (11.0%)	24 (10.5%)	20 (8.81%)	26 (11.4%)	20 (8.81%)	21 (9.2%)	12 (5.29%)	11 (4.85%)	8 (3.5%)	21 (9.25%)	24 (10.5%)	15 (6.6%)	<p>p= 0.000002</p> <p>q= 4</p> <p>n= 763</p> <p>cv= 0.000008</p>
Academic databases	10 (5.05%)	22 (11.1%)	18 (9.09%)	21 (10.6%)	19 (9.60%)	13 (7.9%)	17 (12.6%)	13 (6.57%)	19 (9.6%)	25 (12.6%)	2 (1.01%)	19 (9.6%)	
Institutional repositories	15 (8.11%)	15 (8.11%)	15 (8.11%)	17 (9.19%)	15 (8.11%)	6 (3.2%)	20 (10.8%)	25 (13.5%)	3 (1.6%)	19 (10.2%)	21 (11.3%)	14 (7.5%)	
E-thesis and dissertations	19 (12.4%)	9 (5.88%)	24 (15.6%)	10 (6.54%)	19 (12.4%)	11 (7.1%)	17 (11.1%)	16 (10.4%)	5 (3.2%)	8 (5.23%)	6 (3.92%)	9 (5.88%)	

Table 3. Types of databases used by the respondents

resources is somewhat arbitrary. On the observation of the data, it has been found that the maximum 227 responses came on ‘Open Access or Open Source Resources’, followed by ‘Academic Databases’ i.e. 198 responses. The resource type, ‘Institutional Repositories’ was chosen by the 185 respondents where the ‘E-thesis and Dissertations’ was preferred by 153. The department-wise data of types of the resources used by the respondents were given below table no. 3. The Cramer’s Value test was applied to the types of databases used by the respondents, a significant difference was found (CV= 0.000; p-0.000).

6.4. Forms of Documents used for Information Needs

While engaging in information search, there is a type of field access- search by form. It is common to understand that a few kinds of information pieces are available as specific categories. For instance, original domain information is available in the form of journals. The users tend to exhibit a kind of search of the forms of documents. They prefer to search certain kinds of information while initiating search. Table 4 reveals that the types of sources that the respondents were satisfied with the information they prefer to seek in both the studied environments. In the use of ‘Print Sources’, the highest 157 response came from ‘Journals’, followed by ‘Books’ which account. The other preferences are 135 responses for ‘Reference Sources’, ‘Back Volumes of Periodicals’ chosen by 96 respondents; 71 for ‘Standards and Specifications’, 44 respondents were for ‘Technical Reports’ while only 19 respondents used ‘Patents’ in the printed resources category of the both of the Universities.

As the most preferred publishing medium currently is the digital format, it is quite natural to expect the preference of the ‘Electronic Sources’ by many users. Large numbers of respondents of both of the Universities were chosen ‘E-Books’ for their need, i.e. 138 responses, followed by ‘E-Journals’ i.e. 126 responses and ‘E-References Sources’ and ‘Online Virtual Resources’ by 125 respondents. The other ones are ‘Databases’ and ‘CD-ROM Sources’ used by 116 and 113 respondents respectively, and only 69 respondents chose ‘Government Publications’.

6.5. Modes of Learning of Computer, ICT and Internet

How one can acquire ICT skills is a question posed by researchers. We in this part try to understand the path the ICT reaches the users. Understanding of the use mode will help us to design learning systems. We posed this question to all the respondents and their responses are posted in the table 5. We basically found that a large number of respondents learn and understand ICT mainly from the Teachers which constitute 223 in number. 144 of them have indicated the staff available in the libraries and 126 and 113 responded as Self and Friends. The last on 63 responded to Other modes.

Source Types	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management	
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University
Print Source												
Books	19 (12.93%)	9 (6.12%)	14 (9.52%)	16 (10.88%)	17 (11.56%)	19 (12.93%)	2 (1.36%)	21 (14.29%)	8 (5.44%)	3 (2.04%)	1 (0.68%)	18 (12.24%)
Journals	11 (7.01%)	7 (4.46%)	9 (5.73%)	8 (5.10%)	5 (3.18%)	16 (10.19%)	15 (9.55%)	17 (10.83%)	19 (12.10%)	20 (12.74%)	21 (13.38%)	9 (5.73%)
Back volumes of periodicals	5 (5.21%)	8 (8.33%)	9 (9.38%)	19 (19.79%)	15 (15.63%)	6 (6.25%)	15 (15.63%)	14 (14.58%)	5 (5.21%)	0 (0%)	0 (0%)	0 (0%)
Reference sources	6 (4.44%)	18 (13.33%)	14 (10.37%)	6 (4.44%)	8 (5.93%)	7 (5.19%)	9 (6.67%)	11 (8.15%)	12 (8.89%)	18 (13.33%)	12 (8.89%)	14 (10.37%)
Standards and Specification	4 (5.63%)	14 (19.72%)	16 (22.45%)	8 (11.27%)	9 (12.68%)	3 (4.23%)	5 (7.04%)	7 (9.86%)	0	2 (2.82%)	1 (1.41%)	2 (2.82%)
Technical reports	0 (0%)	7 (15.91%)	9 (20.45%)	4 (9.09%)	0 (0%)	0 (0%)	0 (0%)	2 (4.55%)	4 (9.09%)	6 (13.64%)	7 (15.91%)	5 (11.36%)
Patents	0 (0%)	1 (5.26%)	3 (15.79%)	0 (0%)	1 (5.26%)	0 (0%)	5 (26.32%)	5 (26.32%)	4 (21.05%)	0 (0%)	0 (0%)	0 (0%)

Electronic Sources

E-Books	21 (15.22%)	17 (12.32%)	16 (11.59%)	11 (7.97%)	13 (9.42%)	22 (15.94%)	11 (7.97%)	5 (3.62%)	7 (5.07%)	9 (6.52%)	0 (0%)	6 (4.35%)
E-Journals	26 (20.63%)	4 (3.17%)	21 (16.67%)	9 (7.14%)	20 (15.87%)	7 (5.56%)	19 (15.08%)	0 (0%)	5 (3.97%)	9 (7.14%)	4 (3.17%)	2 (1.59%)
E-Reference Sources	14 (11.20%)	21 (16.80%)	2 (1.60%)	3 (2.40%)	6 (4.80%)	7 (5.60%)	15 (12%)	20 (16%)	21 (16.80%)	9 (7.20%)	7 (5.60%)	0 (0%)
CD-ROM Sources	9 (7.96%)	14 (12.39%)	12 (10.62%)	8 (7.08%)	7 (6.19%)	9 (7.96%)	5 (4.42%)	6 (5.31%)	15 (13.27%)	11 (9.73%)	9 (7.96%)	8 (7.08%)
Databases	8 (6.90%)	8 (6.90%)	4 (3.45%)	6 (5.17%)	9 (7.76%)	13 (11.21%)	17 (14.66%)	15 (12.93%)	21 (18.10%)	2 (1.72%)	6 (5.17%)	7 (6.03%)
Online Virtual Resources	14 (11.20%)	1 (0.80%)	0 (0%)	16 (12.80%)	14 (11.20%)	11 (8.80%)	9 (7.20%)	8 (6.40%)	5 (4%)	20 (16%)	15 (12%)	12 (9.60%)
Government Publications	3 (4.35%)	8 (11.59%)	4 (5.80%)	9 (13.04%)	8 (11.59%)	12 (17.39%)	0 (0%)	0 (0%)	3 (4.35%)	4 (5.80%)	7 (10.14%)	11 (15.94%)

Table 4. Types of sources that you use to satisfy your information needs

Classifications	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Statistical Test
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	
Teachers	23 (10.31%)	19 (8.52%)	8 (3.59%)	18 (8.07%)	20 (8.97%)	21 (9.42%)	17 (7.62%)	12 (5.38%)	23 (10.31%)	25 (11.21%)	20 (8.97%)	17 (7.62%)	<p>p= 0.000001</p> <p>q= 5</p> <p>n= 669</p> <p>cv= 0.00009</p>
Library Staffs	10 (6.94%)	8 (5.56%)	18 (12.50%)	21 (14.58%)	9 (6.25%)	4 (2.78%)	15 (10.42%)	9 (6.25%)	14 (9.72%)	16 (11.11%)	11 (7.64%)	9 (6.25%)	
Self	7 (5.56%)	17 (13.49%)	9 (7.14%)	14 (11.11%)	10 (7.94%)	11 (8.73%)	8 (6.35%)	16 (12.70%)	5 (3.97%)	8 (6.35%)	15 (11.90%)	6 (4.76%)	
Friends	2 (1.77%)	18 (15.93%)	14 (12.39%)	6 (5.31%)	4 (3.54%)	5 (4.42%)	9 (7.96%)	14 (12.39%)	13 (11.50%)	9 (7.96%)	5 (4.42%)	14 (12.39%)	
Other modes	2 (3.17%)	0 (0%)	6 (9.52%)	8 (12.70%)	3 (4.76%)	3 (4.76%)	10 (15.87%)	9 (14.29%)	1 (1.59%)	7 (11.11%)	2 (3.17%)	12 (19.05%)	

Table 5. Modes of learning of computer, ICT and Internet

6.6. Frequency of use of the Library, Computer and Place of Access to the Internet

In this part, we intend to measure the frequency of the use of the library and the technology available for information use. Table 6 illustrates that the frequency of use of the library, computers and the Internet by the respondents. Out of a total 332 respondents, the maximum 250 respondents were using library always, followed by 26 respondents who never ventured to go to the library. 22 accounts for the use of the library sometimes while 17 each respondents visit to the library whenever requirement of information arises.

On the observation of table 6, it has been also found that large numbers 235 of respondents were always using the computer, followed by 36 respondents were never use it while 27 and 26 respondents were using computer whenever requirement of

information and sometimes respectively and only 9 students were using it rarely.

A substantial number of 96 of students use the Internet when they were in the Library, followed by the department use i.e. 91 of the respondents. 56 and 48 of the respondents have used the internet in departmental library and home/hostel respectively while 40 of respondents have surfed the internet in cybercafé.

The Cramer's Value test was applied in the frequency of use of the library, computer and place of access of Internet, the test revealed a significant difference in frequency of using the library is (CV = 0.000; p = 0.000), frequency of using the computer is (CV=0.000, p=0.000), and place of internet access is (CV = 0.000, p = 0.000).

6.7. Awareness about the services provided by the library

Any information service is expected to get maximum utilization when the services available are known to users. We intend to find the extent of the available knowledge of the respondents and hence we measured the (through Table 7) the awareness about the services provided by the library in both the Universities. On the observation of the table, it was found that the maximum 239 of students were known about the reference services, followed by 252 students were aware with circulation (Issue and Return) service while 244 and 218 respondents were known about internet browsing and photocopy services respectively. However, self-issue and return and database search services are known by 189 and 145 students respectively while 138 of respondents were aware of current awareness or selective dissemination of information (SDI) services. Departments-wise data of services provided by the library was shown in below table no. 7.

Attributes	Classifications	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Total	Statistical Test
		Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University		
Frequency of using the Library	Whenever requirement of information	1 (3.58%)	1 (3.58%)	0 (0%)	0 (0%)	1 (3.70%)	0	1 (3.45%)	2 (7.14%)	2 (7.69%)	3 (10.34%)	3 (10.71%)	3 (10.34%)	17	P=0.00 q=5 n=332 cv=0.00
	Sometimes	2 (7.14%)	3 (10.71%)	5 (17.24%)	4 (14.29%)	0	0	2 (6.90%)	2 (7.14%)	1 (3.85%)	0	1 (3.58%)	2 (6.90%)	22	
	Rarely	4 (14.28%)	3 (10.71%)	5 (17.24%)	2 (7.14%)	3 (11.12%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	17	
	Always	21 (75%)	20 (71.42%)	15 (51.72%)	19 (67.86%)	21 (77.78%)	23 (100%)	25 (86.20%)	22 (78.58%)	23 (88.46%)	24 (82.76%)	18 (64.29%)	19 (65.51%)	250	
	Never	0	1 (3.58%)	4 (13.80%)	3 (10.71%)	2 (7.40%)	0 (0%)	1 (3.45%)	2 (7.14%)	0 (0%)	2 (6.90%)	6 (21.42%)	5 (17.25%)	26	
Total		28 (100%)	28 (100%)	29 (100%)	28 (100%)	27 (100%)	23 (100%)	29 (100%)	28 (100%)	26 (100%)	29 (100%)	28 (100%)	29 (100%)	332	
Frequency of using the Computer	Whenever requirement of information	1 (3.58%)	0 (0%)	0 (0%)	0 (0%)	18 (66.66%)	3 (13.04%)	0 (0%)	3 (10.71%)	0 (0%)	2 (6.90%)	0 (0%)	0 (0%)	27	P=0.00 q=5 n=332 cv=0.00
	Sometimes	2 (7.14%)	0 (0%)	0 (0%)	0 (0%)	2 (7.41%)	0 (0%)	9 (31.03%)	3 (10.71%)	0 (0%)	5 (17.24%)	0 (0%)	5 (17.24%)	26	
	Rarely	0 (0%)	0 (0%)	4 (13.80%)	0 (0%)	2 (7.41%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (10.34%)	0 (0%)	0 (0%)	0 (0%)	

	Always	25 (89.9 0%)	21 (75%)	15 (51.7 2%)	28 (100 %)	5 (18.5 2%)	16 (16.5 6%)	20 (68.9 7%)	22 (78.5 8%)	21 (80.7 7%)	15 (51.7 2%)	28 (100 %)	19 (65.5 2%)	235
	Never	1 (3.58 %)	7 (25%)	10 (34.4 8%)	0 (0%)	0 (0%)	4 (17.4 0%)	0 (0%)	0 (0%)	5 (19.2 3%)	4 (13.8 0%)	0 (0%)	5 (17.2 4%)	36
	Total	28 (100 %)	28 (100 %)	29 (100 %)	28 (100 %)	27 (100 %)	23 (100 %)	29 (100 %)	28 (100 %)	26 (100 %)	29 (100 %)	28 (100 %)	29 (100 %)	332
Place of Inter net Acces s	Departm ent	10 (35.7 1%)	0 (0%)	15 (51.7 2%)	2 (7.14 %)	5 (18.5 2%)	8 (34.7 8%)	0 (0%)	8 (28.5 7%)	15 (57.6 9%)	5 (17.2 4%)	16 (57.1 4%)	7 (24.1 4%)	91
	Library	6 (21.4 3%)	0 (0%)	4 (13.8 0%)	2 (7.14 %)	15 (55.5 7%)	10 (43.4 8%)	10 (34.4 8%)	20 (71.4 3%)	4 (15.3 9%)	14 (48.2 9%)	5 (17.8 6%)	6 (20.6 9%)	96
	Departm ent Library	6 (21.4 3%)	0 (0%)	1 (3.44 %)	20 (71.4 3%)	7 (25.9 3%)	2 (8.70 %)	10 (34.4 8%)	0 (0%)	2 (7.69 %)	1 (3.45 %)	4 (14.2 9%)	4 (13.7 9%)	56
	Cyberca fe	4 (14.2 9%)	8 (28.5 7%)	5 (17.2 4%)	1 (3.58 %)	0 (0%)	0 (0%)	5 (17.2 4%)	0 (0%)	3 (11.5 4%)	1 (3.45 %)	3 (10.7 1%)	10 (34.4 8%)	40
	Home/H ostel	2 (7.14 %)	20 (71.4 3%)	4 (13.8 0%)	3 (10.7 1%)	0 (0%)	3 (13.0 4%)	4 (13.8 0%)	0 (0%)	2 (7.69 %)	8 (27.5 9%)	0 (0%)	2 (6.90 %)	48
	Total	28 (100 %)	28 (100 %)	29 (100 %)	28 (100 %)	27 (100 %)	23 (100 %)	29 (100 %)	28 (100 %)	26 (100 %)	29 (100 %)	28 (100 %)	29 (100 %)	332

p= 0.00
q= 5
n= 332
cv= 0.00
d

Table 6. Frequency of use of the library, computer and place of access to the Internet

Library Services	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management	
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University
Reference service	24 (10.0 4%)	25 (10.4 6%)	25 (10.4 6%)	23 (9.62 %)	15 (6.28 %)	11 (4.60 %)	17 (7.11 %)	18 (7.53 %)	21 (8.79 %)	17 (7.11 %)	23 (9.62 %)	20 (8.37 %)
Circulation(Issue/Return) service	23 (9.13 %)	27 (10.7 1%)	21 (8.33 %)	24 (9.52 %)	10 (3.97 %)	16 (6.35 %)	20 (7.94 %)	22 (8.73 %)	20 (7.94 %)	25 (9.92 %)	20 (7.94 %)	24 (9.52 %)
OPAC service	20 (7.87 %)	23 (9.06 %)	23 (9.06 %)	22 (8.66 %)	15 (5.91 %)	21 (8.27 %)	19 (7.48 %)	25 (9.84 %)	26 (10.2 4%)	22 (8.66 %)	17 (6.69 %)	21 (8.27 %)
Current Awareness service/ SDI	17 (12.3 2%)	14 (10.1 4%)	18 (13.0 4%)	12 (8.70 %)	10 (7.25 %)	6 (4.35 %)	14 (10.1 4%)	9 (6.52 %)	14 (10.1 4%)	6 (4.35 %)	10 (7.25 %)	8 (5.80 %)
Self-Issue and return service	24 (12.7 0%)	21 (11.1 1%)	17 (8.99 %)	15 (7.94 %)	13 (6.88 %)	11 (5.82 %)	12 (6.35 %)	10 (5.29 %)	11 (5.82 %)	16 (8.47 %)	21 (11.1 1%)	18 (9.52 %)
Database search service	10 (6.90 %)	16 (11.0 3%)	12 (8.28 %)	9 (6.21 %)	9 (6.21 %)	5 (3.45 %)	18 (12.4 1%)	15 (10.3 4%)	13 (8.97 %)	12 (8.28 %)	15 (10.3 4%)	11 (7.59 %)
Photocopy Services	25 (11.4 7%)	19 (8.72 %)	20 (9.17 %)	18 (8.26 %)	13 (5.96 %)	16 (7.34 %)	14 (6.42 %)	18 (8.26 %)	20 (9.17 %)	18 (8.26 %)	20 (9.17 %)	17 (7.80 %)
Internet Browsing Services	21 (8.61 %)	26 (10.6 6%)	16 (6.56 %)	20 (8.20 %)	18 (7.38 %)	16 (6.56 %)	21 (8.61 %)	25 (10.2 5%)	17 (6.97 %)	20 (8.20 %)	21 (8.61 %)	23 (9.43 %)

Table 7. Awareness about the services provided by the library

6.8. Difficulties Faced while Accessing Information

Table 8 reveals the difficulties faced while the students were accessing the information in both the Universities. When searching the print resources, a maximum of 188 students faced lack of knowledge about the arrangement of books on shelves, followed by lack of knowledge about the use of library catalogue i.e. 156, while 89 respondents were faced difficulties with lack of assistance from library staff.

While the respondents faced difficulties in electronic resources, a large number 122 of respondents were facing speed of access which is slow, followed by 112 of students were faced unfamiliarity with search methods while 95, 94 and 92 of respondents were faced virus problem for accessing information, too much time consuming for searching the information and unorganized data/contents in a search page respectively. However, 15 of the students were faced other type of problem using the electronic sources. The overall data departments wise has been shown in below table no. 8. The Cramer's Value test revealed a significant difference ($CV = 0.007, p = 0.006$) between print resources and electronic resource while accessing information they faced difficulties.

Types	Department of Education		Department of Sociology		Department of Social Work		Department of Commerce		Department of Mass Communication and Journalism		Department of Management		Statistical Test
	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	Mizoram University	Tezpur University	
Lack of knowledge about use of library catalogue	11 (7.05 %)	16 (10.26 %)	7 (4.49 %)	9 (5.77 %)	15 (9.62 %)	12 (7.69 %)	13 (8.33 %)	15 (9.62 %)	16 (10.26 %)	13 (8.33 %)	13 (8.33 %)	16 (10.26 %)	<p>p= 0.006 r= 9 c= 12 q= 9 n= 963 cv= 0.007</p>
Lack of knowledge about arrangement of books on shelves in library	20 (10.54 %)	18 (9.57 %)	16 (8.51 %)	23 (12.23 %)	16 (8.51 %)	7 (3.72 %)	16 (8.51 %)	14 (7.45 %)	12 (6.38 %)	17 (9.04 %)	13 (6.91 %)	16 (8.51 %)	
Lack of Assistance from library staff	6 (6.64 %)	4 (4.49 %)	6 (6.74 %)	6 (6.74 %)	11 (12.36 %)	1 (1.12 %)	11 (12.36 %)	11 (12.36 %)	4 (4.49 %)	10 (11.24 %)	11 (12.36 %)	8 (8.99 %)	
Electronic Sources													
Virus problem for accessing information	7 (7.37 %)	11 (11.58 %)	1 (1.05 %)	6 (6.32 %)	5 (5.26 %)	4 (4.21 %)	6 (6.32 %)	10 (10.53 %)	15 (15.79 %)	9 (9.47 %)	5 (5.26 %)	16 (16.84 %)	
Unfamiliarity with search methods	7 (6.25 %)	16 (14.29 %)	4 (3.57 %)	9 (8.04 %)	10 (8.39 %)	5 (4.46 %)	9 (8.04 %)	12 (10.71 %)	6 (5.36 %)	9 (8.04 %)	10 (8.39 %)	15 (13.39 %)	
Unorganized data/contents in a search page	5 (5.43 %)	11 (11.96 %)	6 (6.52 %)	5 (5.43 %)	9 (9.78 %)	8 (8.70 %)	9 (9.78 %)	6 (6.52 %)	5 (5.43 %)	14 (15.22 %)	5 (5.43 %)	9 (9.78 %)	

Too much time consuming for searching the information	6 (6.38%)	12 (12.77%)	8 (8.51%)	9 (9.57%)	11 (11.70%)	8 (8.51%)	6 (6.38%)	6 (6.38%)	7 (7.45%)	9 (9.57%)	4 (4.26%)	8 (8.51%)
Speed of access is slow	12 (9.84%)	3 (2.46%)	13 (10.66%)	16 (13.11%)	9 (7.38%)	8 (6.56%)	15 (12.30%)	5 (4.10%)	8 (6.56%)	12 (9.84%)	10 (8.20%)	11 (9.02%)
Any Other	2 (13.33%)	0 (0%)	0 (0%)	0 (0%)	1 (6.67%)	0 (0%)	3 (20%)	2 (13.33%)	0 (0%)	6 (40%)	1 (6.67%)	0 (0%)

Table 8. Difficulties faced while accessing information

6.9. Rate your skills from Excellent to Poor on the following skills

Table 9 depicts the rate of the students' skills themselves from excellent to poor from both of the universities. Out of a total 332 respondents, the maximum 191 (57.53%) of the students have a good accessing information skill, 180 (54.22%) of the respondents have good searching of information skills and a large number of students i.e. 188 (56.63%) have good evaluating of information skills while the maximum 179 constituting (53.92%) of students have good using of information skills. Figure 2 determine the relationship between Mizoram University and Tezpur University to check the skills of respondents and found that whether there is any relationship between the universities a chi-square analysis was performed and it was found that there was a significant difference between the respondents of both the universities.

Skills/ competences	Excellent	Very good	Good	Poor	Don't know	Total
Accessing information	31 (9.34%)	79 (23.80%)	191 (57.53%)	22 (6.63%)	9 (2.71%)	332 (100%)
Searching information	43 (12.95%)	81 (24.40%)	180 (54.22%)	21 (6.33%)	7 (2.11%)	332 (100%)
Evaluating information	24 (7.23%)	67 (20.18%)	188 (56.63%)	38 (11.45%)	15 (4.52%)	332 (100%)
Using information	43 (12.95%)	79 (23.80%)	179 (53.92%)	23 (6.93%)	8 (2.41%)	332 (100%)

University Name	Value	df	Chi-square(χ^2)	Decision
Mizoram	116	5	0.16	Significant
Tezpur	745.07	5	0.06	Significant

Table 9. Rate your skills from Excellent to Poor on the following skills

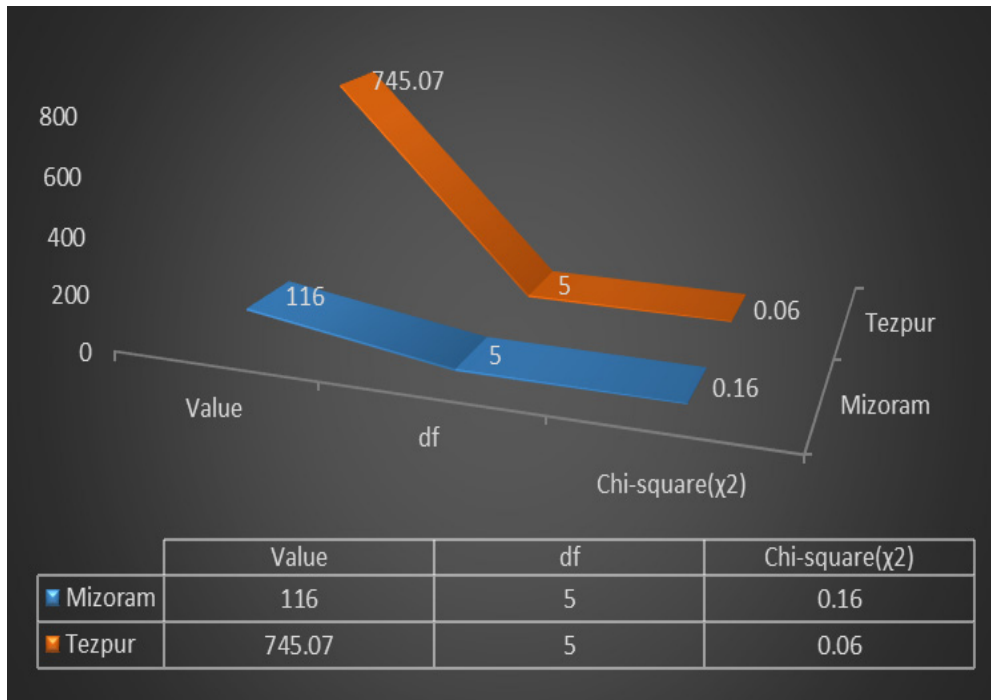


Figure 2. Statistical test applies in the following skills

6.10. Area Needed more Instruction or Training

Table 10 and figure 3 reveals the area needed more instruction or training programme to the students of both of the Universities. The maximum 125 (16.82%) of respondents needs on 'Use of e-resources', followed by 'Search Strategies' i.e. 111 (17.13%) of the respondents while 'Use of Computers' and 'OPAC/Web OPAC' instruction needed by 109 (16.82%) and 108 (16.67%) of respondents respectively while 92 constituting (14.20%) of respondents were needed 'Internet' instruction programme. However, the respondents of Tezpur University, A large number 115 (23.86%) of respondents were needed 'Use of e-resources' training, followed by 'Use of printed resources' and 'search strategies' i.e. 92 (19.09%) and 90 (18.67%) of respondents while 89 (18.46%) of students needed training in 'OPAC/Web OPAC' and 40 (8.30%) of respondents were needed training program in 'Internet' area.

Sl. No.	Areas where Instructions/ Training is needed	Mizoram University	Tezpur University
1	Use of printed resources	103 (15.90%)	92 (19.09%)
2	Use of e-resources	125 (19.29%)	115 (23.86%)
3	Use of Computers	109 (16.82%)	56 (11.62%)
4	Search strategies	111 (17.13%)	90 (18.67%)
5	OPAC/Web OPAC	108 (16.67%)	89 (18.46%)
6	Internet	92 (14.20%)	40 (8.30%)

Table 10. Area needed more instruction or training

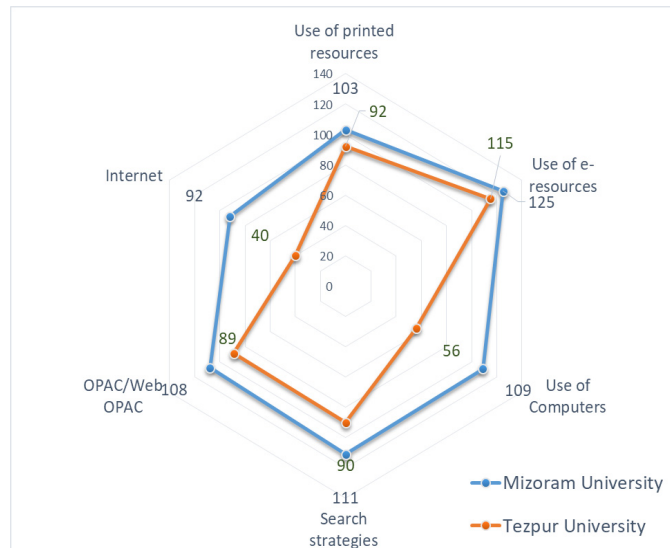


Figure 3. Area needed more instruction or training

7. Discussion and Conclusion

Some clear outcomes emerge from this study. The search options while studied we observed the uncommon search point author by many users. In other respects we found a kind of normal use pattern among the studied users of both the universities. The maximum numbers of students of both of the universities use a good pattern of information access, search and use. At the same time the search process at present is inadequate to meet the modern technologies of information delivery. Thus a continuous training is required to literate large number of users in information technology adoption for information use.

The study of information literacy and search efficiency and mode of access have been addressed and studied by large number of researchers in the past. It is clear that digital services have influence in the modern information services offered by libraries. The availability of information resources and services are undergoing drastic changes due to digital forms of information delivery. This growth is coupled with technological changes reflected in the information use. Thus information use and literacy studies need to be conducted often to understand how information reaches users and the difficulties users face while accessing information.

In the time of 21st-century libraries and librarians are playing a very important role in the efficient and effective execution of the Information Literacy Program at institutions. Libraries and Librarians play an important role in educating the people by teaching them information skills effectively and efficiently at all levels of education to enable them to be skilled and informative citizens of the country.

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