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Information Literacy among Research Scholars of University of Jammu in an Electronic Environment: A case study

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Abstract

Information literacy refers to the abilities of an individual in identifying, retrieving, and utilising appropriate and required information. The present study attempts to examine the information literacy skills of the research scholars of University of Jammu. For data collection, a well semi-structured questionnaire was framed and distributed among 270 research scholars of the University of Jammu. Out of 270 questionnaires, 236 were received back from 90 male and 146 female research scholars respectively. It is observed that majority (81%) of the research scholars have knowledge of simple search techniques compared to the other search technique. Based on the findings, necessary suggestions were made by the researcher for providing effective and proper information literacy among research scholars. The result of the study reflects that information literacy program should be incorporated in the course curriculum and more awareness is required among students on online databases and digital resources that will make the students more information literate. Users need awareness regarding the use of OPAC in the search and retrieval of information and also needs awareness about different search strategies in refining the search and in the use of Boolean Operator (AND, OR, NOT).

Keywords: Information Literacy, Digital Information Literacy, Information literacy skills, user education, Information and Communication Technology Skills, etc.

Introduction

Information is the key to the development of the nation as well as individual wealth. The prominent feature of the modern information society is that more people are producing information faster than in the past. Information appraises man's lives and helps in increasing knowledge. Ready access to information is essential to individual development as well as to national growth. In the present times, given the crucial need for information and easy access to information resources, the society is nominated as an information society (Mangla, 2003).

Today, information is available in various forms and formats. The web is the most used source of information. One should be aware of these sources to know how to find information from these sources. One should know how the information has been organized and how to use various research techniques. Students should also know how to evaluate information obtained from the public domain. They should evaluate the information for reliability, authenticity, sustainability, accuracy before actually using it. The ability to analyse information critically in a digital environment requires evaluation skills. These evaluation skills help select quality digital sources. It is possible with the help of an information literacy programme (Singh, 2013).

Accordingly, the undergoing study is an attempt to assess the Information Literacy among research scholars of Jammu and Kashmir in general and those registered as research scholars of the University of Jammu in various subject disciplines in particular.

For the last so many years, the internet becomes an essential tool for communication, storage, and retrieval of information. With the fast growth of knowledge and easy access to information, the internet plays an important role in the institutions of high learning and research (Hajam, 2017, p.153).

In developed countries like America, UK, Australia various organisations, associations, professional bodies and information professionals individually are involved for the promotion of information literacy by formulating different guidelines, standards, online tutorials, policy documents, etc.

According to American Library Association, "Information literacy is a set of abilities requiring individuals to recognise when information is needed and can locate, evaluate, and use effectively the needed information" (ALA, 2000).

Studies on information literacy programmes in India have shown that the government has taken major initiatives at the school level. However, for higher education in India, no tested models and standards for information literacy have been introduced. In higher education institutions in India, user education, library information and bibliography information programmes are provided.

Kuhlltau states that " Collaboration between librarians and teaching staff is crucial because instructional work in Information Literacy can be undertaken cohesively with teachers as an expert in the context and content and librarians as experts in the resources and process"(Kuhlthau,2001).

Statement of the Problem

As the electronic resources are available in various complicated formats, it is very difficult for the users to understand the formats of the electronic documents in which they are available. Moreover, sometimes users do not know, which type of information is available to them and how can they access it. To meet the challenges and needs of the ever-increasing availability of information for research and study information literacy is required.

So from a research scholar's point of view, one finds that there is a need to conduct a study analyzing the information literacy competency among the research scholars in India, for this purpose, it is mandatory to conduct a user survey of higher educational institutions. The proposed study aims to focus on the importance of information literacy among the research scholars of university of Jammu in an electronic environment.

Brief introduction about University of Jammu Library

University of Jammu, accredited as **'A+' Grade University by National Assessment & Accreditation Council of India** came into existence in 1969 vide Kashmir and Jammu Universities Act 1969 following bifurcation of the erstwhile University of Jammu and Kashmir. The University provides instructions in such branches of learning as it deems fit and makes provision for research and the advancement and dissemination of knowledge. The University stands for spiritual and material elements in life thirst for knowledge and virtue under the backdrop of holy peaks of Trikuta Hills. University of Jammu is primarily a research, teaching, affiliating, and examining body involved in the promotion of arts, science and other branches of learning. The University is open to all classes and creeds with the sole objective to carry people from darkness to light. The mission of the university is to become an innovative knowledge institution and contribute towards the transformation of Jammu and Kashmir into a peaceful and prosperous state with balanced socio-cultural and economic development.

Dhanvantri library is a Central Library of the Jammu University. The library caters to the educational and research needs of the academic community and its resources are consulted by scholars from all over the country and world. Its four-story building has spacious reading halls and compact stack areas. The Library has a collection of nearly 4,66,656 volumes that are rare as well as the latest, and 276 current periodicals with back numbers. The Library also provides the access to the different online journals on the campus.

Review of Literature

The studies which are related to the present study are as under

Shukla and Verma (2020) carried out the study to measures information literacy skills among the postgraduate students of social science of Mizoram and Tezpur University. The findings of the study reveal that there is a requirement of training programme to the students of both the universities on Information Technology adoption for information use. Aftab and Singh (2020) identified that majority of users in JNU and DU was not aware of various information sources and was not having adequate searching skills. The users in JNU required information for research work while in DU majority of the users' needed information for preparing assignments and projects. Vasudevan (2012) conducted the study to identify the level of information literacy of the research scholars of various universities of Kerala. The study reveals that 70% of the research scholars can identify, locate, collect and evaluate the required information. The scholars of the science stream are more aware as compared to humanities and languages. The study also reveals that the information literacy programme is very much required to meet the information needs of the research scholars. Lallaisangzuali (2015) conducted a study that aims to explore the status of information literacy of postgraduate students and research scholars of Mizoram University. The finding reveals that the majority of the postgraduate students and research scholars prefer to get their information both in print and electronic form. Hazim (2017) conducted a comprehensive study of user's information literacy competencies of scholarly community of Kashmir University. The finding of the study reveals that users need awareness regarding the use of OPAC, legal aspects and refining the search about the use of Boolean operators. Swarna and Birader (2017) main purpose of the study is to investigate the information literacy skills of the science postgraduate students studying at Kuvempu University and Davanagers University of Karnataka state. The study reveals that the majority of the students are competent to explain, evolve and review the information need on a topic. 50% of students are competent to recognize and use different information searching tools.

The findings of the Munshi and Priyanka (2016) study reveal that most of the students of Aligarh Muslim University are aware of the available information source in the library. Google is the most preferred search engine among the students. The study also suggested that to improve their information literacy skills, the library should take some valuable steps like motivational lectures, workshops, conferences, and online literacy program, which will help

to instruct students as to where to locate, access and how to evaluate information to meet their information needs.

Chanchinmawia, and Verma (2018) evaluate information literacy skills among the research scholars of Mizoram University. Majority of the research scholars were aware of the basic information of the library and were able to access information through print and electronic forms but improvements are required in handling information especially in the evaluation of electronic sources. This study requests the inclusion of an information literacy program in the curriculum and requires more awareness among the students which will make the students more information literate. In another study Asha and Kumari (2019) reveals that the majority of faculty members of the first-grade college affiliated to the University of Mysore possess a nominal level of information literacy skills. Most of the faculty members use simple search techniques rather than wild card search. The study also emphasizes the training programmes for the faculty members to improve information literacy skills. Mahajan & Kumar (2014) assess basic information literacy competency and the perception of information literacy behaviour of post-graduate students and research scholars of Punjab University, Chandigarh. Findings of the study reveals that scholars need competency to solve problems related to information. Sasikala and Dhanraju (2011) conducted a study to investigate information literacy skills of science students of Andra University the reveals that most of the students are depending on the subject catalogue, less than 20% are referring to subject bibliographies.

Kour et.al (2012) conducted a study among students of Guru Nanak Dev University, Amritsar to know the information literacy proficiency of the research scholars in the Digital environment. The study reveals that the majority of the research scholars have awareness about the internet. Mishra, et.al (2014) investigates the level of awareness and use of e-journals among the research scholars of Banasthali Vidyapith University, Rajasthan. The survey reveals that the majority of students are aware of e-journals and use the same for their research purpose. Bibina (2016) conducted a study about digital literacy among the science research scholars of the University of Kerala. The findings reveal that the majority of the respondents are familiar with the web portal, online databases, digital libraries, archives, open access e-books/ e-journals, and search engines. The majority of research scholars have awareness about google scholars and web 2.0 based services. Lokesha and Aditaya (2019) the researcher investigates the purpose, methods, searching, access, problems, features and type of digital information resources at Mangalore University. More than 70% of the respondents are used e-newspapers, e-journals, e-books, e-databases to update their knowledge and for research

purpose. Islam (2007) carried out the study to explore the extent of internet skills among research scholars of Rajshashi University, Bangladesh. The study reveals that a high percentage of research scholars access the internet to support research and development. The majority of the respondents have an idea about advanced literature search techniques and practical knowledge about search engines and web browsing. Nachiappan (2017) conducted the study to analyze the information and computer literacy skills of the research scholars in Alagappa University. The data was collected based on seven information literacy and six computer literacy factors.

Objective of the study

The objectives of the study are given as under:

1. To assess the ability of the research scholars to search, locate, retrieve and evaluate the information from various information sources.
2. To identify the Information Literacy awareness among the research scholars.
3. To assess the research scholars' awareness about legal and ethical aspects while using information.

Scope of the study

The study mainly focuses on Information Literacy skills of research scholars in identifying, locating, searching, accessing, retrieving and using information from both print and electronic sources of information. The sample of this covers 236 research scholars of different departments of University of Jammu, Jammu.

Methodology

The primary data for the study was collected by a semi-structured questionnaire prepared on the lines to achieve the objectives of the present study, after a comprehensive review of literature and discussion with the university authorities. For the present study, the data gathering tools are the 'questionnaire'. To collect the data proportional stratified random sampling was used. The questionnaire was designed for Research Scholars to assess their information literacy skills. The questionnaire covers areas like demographic data; frequency of visiting the libraries, awareness about the services provided by the library, awareness about the use of printed and electronic resources, frequently used search engines, awareness regarding legal aspects and familiarity with Information Literacy programme, etc. The data obtained from the responses were tabulated and interpretations were drawn as follows.

Data Analysis and Interpretation

1. Demographic Information

a) Gender wise distribution of respondents

Table 1 indicates that 236 questionnaires were received from research scholars whom 90(62%) were female and 140 (38%) were male. The analysis of the data reveals that female research scholars are dominated over male research scholars.

Table 1: Gender wise distribution of respondents

Gender	No of respondents (%)
Male	90 (38%)
Female	146 (62%)
Total	236 (100%)

b) Faculty wise distribution of respondents

Table 2 depicts that out of 236 respondents 114 (48%) belong to the science stream, 67 (28%) of respondents are from the social science stream and 55 (24%) of respondents are from the arts and humanities stream. The analysis of the data reveals that the majority of the respondents belong to science stream.

Table2: Faculty wise distribution of respondents

Faculty	No of respondents (%)
Science	114 (48%)
Social Science	67 (28%)
Arts &Humanities	55 (24%)
Total	236 (100%)

8.2 Frequency of Visiting the Library

Table 3 depicts that 87(36%) of the research scholars visit the library 2-3 times a week 75 (32%) of the respondents visit the library daily, 49 (20%) rarely, 16 96%) monthly 9 (4%) once a week, while 3 (2%) users never visit the library. It is concluded from the table that out of 236 research scholars' majority of them 87 and 75 research scholars visit library on daily or twice a week to use library services and resources.

Table 3: Frequency of Visiting the Library

Frequency	Responses (%)
Daily	75 (32%)
2-3 times a week	87 (36(%))
Monthly	16 (6%)
Once a week	9 (4%)
Rarely	49 (20%)
Never	3 (2%)
Total	236(100%)

8.3 Awareness about the services provided by your library

With regards to the awareness about the services provided by the library, the respondents were asked to select their options, Table 4 indicates that 181 (77%) of the respondents are aware of the current awareness service, 117 (50%) have awareness about the photocopying service, 111(47%) are aware of an online database, 94(40%) are aware of e-resources access, 80 (34%) are aware of SDI services, 61 (26%) are aware of electronic document delivery service, 49 (21%) are aware of OPAC/ Web OPAC and 27(11%) are aware of Inter Library Loan Service. Thus it is concluded that majority of research scholars are aware CAS followed by photocopying service, e-resources access and very few are aware of OPAC/ Web OPAC.

Table 4: Awareness about the services provided by your library (More than one Answer)

Services provided by your library	Responses (%)
Current Awareness Service	181 (77%)
Selective Dissemination of Information	80 (34%)
Inter Library Loan Service	27 (11%)
Photocopying service	117 (50%)
Electronic document delivery service	61 (26%)
E-resources access	94 (40%)
Online databases	111 (47%)
Virtual Library	56 (24%)
OPAC/ Web OPAC	49 (21%)

8.4 Method in searching the documents in the library

Locating the required information is a major problem in any library so the same was asked to these respondents. Table 5 depicts that 133(56%) of the respondents have physically verified the books on the racks, 110(47%) of the respondents consulted library staff, 73(31%) locate the book from the bookshelf by classification number, 69(29%) mentioned that they used OPAC for finding the required information in the library, and 48(20%) of the respondents identify the book from the card catalogue. Thus it is concluded majority of the research scholars have physically verified the books on the racks followed by consulting library staff. Very few mentioned that they used OPAC for finding the required information in the library. The respondents need to be more aware of the use of OPAC in searching document from the Library.

Table 5: Method in searching the documents in the library (More than one Answer)

Methods	Responses (%)
Identify the book from OPAC	69 (29%)
Physically verify the books on the racks	133 (56%)
Ask the library staff	110 (47%)
locate the book from the bookshelf by classification number	73 (31%)
Identify the book from the card catalogue	48 (20%)

8.5 Use of Information source by format

Table 6 reflects that majority 204 (87%) of the research scholars' use print and electronic format both followed by 20(8%) print format and only 12 (5%) of research scholars wish for information in electronic format. Data presented in the table display that majority of the research scholar's use both print and electronic sources both for their research work.

Table 6: Use of Information source by format

Format of Information	Responses (%)
Print	20 (8%)
Electronic	12 (5%)
Both	204 (87%)
Total	236 (100%)

8.6 Frequently used search engine

Table 7 shows that the majority 232 (98%) of the respondents use the Google search engine. Only 21 (9%) use yahoo, 11 (5%) use MSN, 6 (3%) use Altavista and 3 (1%) use other search engines for searching the information. Thus, it is concluded that majority of the research scholars irrespective of their discipline use Google search engine for searching information.

Table 7: Frequently used search engine (More than one Answer)

Search Engine	Responses (%)
Google	232 (98%)
Yahoo	21 (9%)
MSN	11 (5%)
Altavista	6 (3%)
Others	3 (1%)

8.7 Search techniques and strategies used

Regarding the search techniques and strategies used by the scholars to find information, Table 8 reflects that 192(81%) of the respondents used simple search techniques, 90(38%) used advanced search, 69(%) used phrases, 50(21%) used proximity of terms, 39(17)% used Boolean operators (AND, OR, NOT), and 11 (5%) used Wildcard/truncations key for their research.

It was revealed that majority of the research scholars are not aware of the importance of various search mechanism available for effective retrieval of information. Majority of the respondents have awareness about the simple search and advanced search technique only.

Table 8: Search techniques and strategies used (More than one Answer)

Search Strategies	Responses (%)
Boolean operator (AND, OR, NOT)	39 (17%)
Phrases	69 (29%)
Advance search	90 (38%)
Wildcard/truncations key	11 (5%)
Proximity of terms	50 (21%)

Simple search	192 (81%)

8.8 Awareness regarding the legal aspects while using information

Table 9 shows that the majority of the users 222 (94%) are aware of the legal aspects of using the information while only 14 (6%) of the users lack awareness about the legal aspects of using the information.

Table 9: Awareness regarding the legal aspects while using information

Awareness	Responses (%)
yes	222 (94%)
No	14 (6%)
Total	236(100%)

8.9 Awareness about the copyright

Table 10 depicts that majority 197 (83%) of the research scholars seek permission from the copyright holder. 20(9%) of the research scholars take information from others without giving the reference of that author. 16(6%) of the research scholars copy the entire text without giving information to the copyright holder and 3(1%) of the users do not know about the copyright law.

With regard to the awareness about the Copyright and Ethical use of information the responses of the scholars reveal that, majority of the research scholars are aware about the copyright law and principles of ethical use of information.

Table 10: Awareness about the copyright

Cite the author/ source	Responses (%)
Seek permission from the copyright holder and give the reference of that author	197 (83%)
Take information from other without giving the reference of that author	20 (9%)
Copy the whole text without informing the copyright holder	16 (6%)

Don't know about copyright	3 (1%)
Total	236 (100%)

8.10 Reference style manual

Table 11 reveals that the majority of the respondents 148 (62%) use APA style manual, 38 (16%) use MLA, 26 (11%) use Chicago, 14(6%) use Haward and 10 (4%) of the respondents use IEEE style manual for documentation of sources. The analysis of the data reveals that majority of the research scholars use APA style manual format for documentation of sources.

Table 11: Reference style manual

Style manual	Responses (%)
APA	148 (62%)
Chicago	26 (11%)
MLA	38 (16%)
Haward	14 (6%)
IEEE	10 (4%)
Total	236 (100%)

8.11 Familiarity with information literacy programme

The participants were asked to mention whether they are familiar with the term information literacy programme planned by their library. Table 12 shows that two third of 142 (60%) of the respondents are not familiar with the information literacy programme and only one third 94 (40%) of the respondents know about information literacy programme. The analysis of the data reveals that majority of the respondents are not well versed with information literacy.

Table 12: Familiarity with information literacy programme

Familiarity with information literacy programme	Responses (%)
Yes	94 (40%)
No	142 (60%)
Total	236 (100%)

8.12 Areas where Information Literacy programme required

Table 13 shows that the type of various options provided by the respondents with regards to the areas where Information Literacy programme required, 208(88%) of the respondents opt for digital library training, 195(83%) choose training in the use of online sources, 110(47%) opt for OPAC, 108 (46%) opt for In-house databases, 98 (41%) opt for use of print sources, 51 (21%) opt for CD- ROM database and 5(2%) opt for others. Overall analysis revealed that majority 335 (84.2%) of the respondent needs instruction and training on use of online sources, Digital library, In-house databases and use of OPAC.

Table 13: Areas where Information Literacy programme required (More than one answer)

Areas where Information Literacy programme required	Responses (%)
Use of print sources	98 (41%)
Use of online sources	195 (83%)
OPAC	110 (47%)
In-house databases	108 (46%)
Digital library	208 (88%)
CD- ROM database	51 (21%)
Others	5 (2%)

Conclusion

Information literacy is a major prerequisite for the academic community in the current ICT age as skills and abilities are key characteristics that helps the research scholars to retrieve the right information from the right source without wasting their time. The library users need awareness regarding the use of OPAC in the search and retrieval of information as only 21% of the research scholars are about the OPAC. There is an educational imbalance between rapidly evolving technologies and information available to users. Educating people to use information technologies is becoming an important educational objective for the teaching and research community. Information Literacy Programme should be linked with research scholars' needs and requirements and it should be more practical oriented and regular basis.

Universities should play a key role in spreading the knowledge of digital information resources.

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