ONLINE INFORMATION LITERACY OF THE SOCIAL SCIENCE RESEARCH SCHOLARS

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Abstract

Information is cornerstone of research. The research scholars were solely dependable on library collection for satisfying their research needs before the birth of the Internet. However, with the introduction of the online sources, there are evidences of departure from total reliance on print collection to the online information. This online information is stored in various digital archives; available in many formats and retrieved through different search tools by applying various search techniques. The scholars need to be literate about these digital archives, formats and search tools and techniques. The present study was conducted to how far the social science scholars' are aware and make use of online sources, search tools and techniques. The study was conducted on social science scholars of the University of Kashmir, Jammu & Kashmir, India carrying the M.Phil. & Ph.D. research programmes. The survey method was applied to conduct the study and questionnaire was used as a data collection tool. The results reveal that majority of the scholars are aware and make use of search engines and OPACs whereas majority of them aren't aware of other search facilities like gateways (subject/regional), directories, meta-search engines and deep Web search tools. The findings also depict that excluding phrase searching, all the scholars aren't aware and make use other search techniques like field searching, keyword searching, Boolean Operators and truncation methods. The findings also reveal that majority of the scholars are aware and highly make use of JSTOR, JCCC/UGC Consortium and Directory of Open Access Journals (DOAJ) respectively whereas other sources like Directory of Open Access Repositories (OpenDOAR), Project Muse, Questia, Ebrary, EBSCOHOST aren't used adequately due to illiteracy. At the end the suggestions are recommended to enhance online searching skills of the scholars.

INTRODUCTION

Information is bedrock of research. Information seeking is thus a regular activity of research scholars to satisfy their research needs. In the course of information seeking, the individual may interact with manual information systems such as libraries, or with computer-based systems like the Web **(Wilson, 2000)**. Before few decades, the information seekers were solely dependable on library collection for satisfying their information needs. With the emergence of the Internet, there are evidences of departure from total reliance on print collection to the electronic information. The libraries welcomed this move and started to subscribe the electronic sources as well. Most of the libraries provide services from a hybrid collection- *print and electronic.* The online collection in libraries has made the gateways of information more wide and open. It hasn't only enriched the library collection but facilitated researchers to retrieve information from any corner of the world at anytime. The online collection includes various useful paid, open as well as free information sources such as journals, books, magazines, digests, encyclopaedias, dictionaries, wikis, blogs, working papers, thesis, dissertations, research reports, conference proceedings, patents, etc. These sources are stored in various digital archives like databases, repositories, directories and retrievable through various search tools like search engines (Google, Yahoo, MSN etc.) by applying various search techniques (Boolean operators, field search etc.).

The Web has also become the biggest publishing platform as the authors and publishers are in favour of making their publications available online for fee or free because the online accessibility of articles has dramatically increased their citation, journal's impact factor and the author's prestige **(Peter, 2002)**. The Web has thus become a hub of research scholars who off and on dives in this ocean to find

information of interest. It has freed the scholar from the limitations of his private library and opened new doors to enter world of information. However, without awareness of the Web sources, search tools and techniques, searching information on the Web is like surfing aimlessly with the waves of water (**Loan, 2010**). Therefore, it is necessary that research scholars must be acquainted with the ways of connecting, searching, retrieving and evaluating the online information. Otherwise, all webs and nets of the information networks capturing the whole globe are of no use for those who aren't information literates.

RELATED STUDIES

A sizable literature on different aspects of information seeking behaviour is available but relatively few studies deal with the information searching skills of social science scholars. **Folster (1995)** reviewed social scientist information-seeking patterns and found that they preferred journals instead of other sources, to follow citations instead of using indexes or abstracts to find articles. **Shokeen and Kushik (2002)** studied about information seeking behaviour of social scientists working in the universities located in Haryana. They reported most of the social scientists visit the library daily. The first preferred method of searching the required information by the social scientists followed by searching through indexing and abstracting periodicals, and citations in articles respectively.

The Internet and the World Wide Web has greatly affected information seeking behavior of the scholars. The Web contains all sorts of information available in various formats at different locations at one place. As a result the Web has become the first choice of the scholars to find information. **Ebersole (2005)** reviewed the research conducted in 1998-99 examining students' perceptions and uses of the Web for academic purposes. The results of the content analysis of sites visited by students suggest that students believed that the Web is important and valuable information resource. **Chang and Perng (2001)** investigated the information requirements and search habits of graduate students at Tatung University in Taipei City, Taiwan and reported the extensive use of Internet by the students and mostly use web-based databases, electronic journals, and search engines. **De Groote and Dorsch (2001)** carried out a survey in the Library of Health Science Peoria (Chicago) to identify the impact of online journals on print journals usage. The results of the statistical analysis revealed that print journal usage decreased significantly since the introduction of online journals. **Morse and Clindworth (2000)** conducted a study in the Norris Medial Library at the University of Southern California to compare the usage of the matched set of biomedical journals available for use both in print and online. The findings of the study showed that users accessed online journals more than ten times as often as print versions.

The modern information seekers visit the physical library less, rarely use library websites and mostly begin searches with a commercial search engine (**Kenneway, 2007**). The study by **Online Computer Library Centre (OCLC, 2005)** revealed that majority of people use search engines rather than library resources for seeking information. **Loan, (2011)** also identified that all (100%) the undergraduate students make use of search engines in finding the online information. **Mi and Nesta (2006)** revealed that students perceive the Web as their information universe and Google as the most effective finding tool to explore it. **Asemi (2005)** reveals that 100% of the respondents use Internet to search information and Google is the most widely used search engine used by 68% of the Internet users followed by Yahoo (61%), MSN (15%) and Altavista (11%) respectively. **Kumbar, Giresh Kumar, Rajn, & Praveen (2005)** investigated research scholars' preferences in using search engines and identify that most of them (91.43%) use Google, followed by Yahoo (52.86%).

Holscher and Strube (2000) found that searching for relevant information on the Web is often a laborious and frustrating task for casual and experienced users. **Chu and Nancy (2008)** found that the research students had problems in finding relevant information sources and that they needed to at least achieve a competent level of expertise in order to effectively locate information. **Grimes and Boening (2001)** reported that students are using unevaluated and unauthenticated resources in research. **Loan (2011)** revealed that the students face various problems while searching the Internet. The widely faced problem is information overload- too many hits (39.74%), followed by Internet illiteracy- lack of Internet operating/searching skills (23.84%), financial barrier- paid information (15.89%) and information pollution- too many irrelevant hits (13.91%). He further reported that the

problem of the Internet illiteracy is more common among students of General Science, Social Sciences and Humanities as compared to Computer Science and Business & Commerce students.

A review of the literature reveals that scholars extensively use the Web but aren't experts in online searching. Hence, research in the area should continue to know their problems for developing best practices and bridging the Web literacy gap between experts and newbies.

PROBLEM STATEMENT

The Internet is the biggest treasure of information and provides on any branch of knowledge under the Sun. It is widely used by the scholars for research purposes and its search tools play active role in searching relevant information. However, the scholars need to be acquainted with new skills, tools and techniques for searching the online information. Moreover, new electronic resources are being developed at a rapid pace and existing resources change frequently. So scholars need to know about these sources and learn new skills to use them. Therefore, being the intermediates' the library and information professionals conduct studies on information seeking behaviour of academic community in order to know their strengths and weakness for organising and marketing information sources, designing better search tools and techniques and finally updating the information users at regular intervals.

RESEARCH DESIGN

Scope of the study

The scope of the present study is limited to the social science research scholars (M.Phil. and Ph.D.) of the University of Kashmir, Srinagar. The subjects covered in the faculty of social sciences are Economics, Geography, History, Islamic studies, Media education, Political science, Psychology, Sociology and Social work.

Research objectives

The study focused on online information literacy of the social science research scholars. The study aims to assess the social science scholars' awareness and use of online search tools, techniques and resources.

Methodology

The number of the research scholars (M.Phil. and Ph.D.) in the faculty of social sciences registered during 2009 and 2010 were 124. Out of 124, the 62 (50%) of the scholars were selected for the study through systematic random sampling technique. The data was collected through questionnaire method from May–August 2011. The response rate of scholars was 85.48% (53 out of 62).

Limitations

There are limitations to the study in terms of the size of the study population and sample, and the inherent issue of "self report," which is always problematic when a survey method is employed. Hence, further research with a more diverse sample from different universities and regions is essential to generalize these initial findings.

RESULTS

(i) Awareness & use of online search tools

The data reveals that all (100%) the scholars are aware and make use of search engines followed by Web OPACs (84.91%) whereas less than 50% of the scholars are aware and make use of other search tools like gateways (subject/regional), directories, meta-search engines and deep Web search tools (Table 1).

Table 1: Awareness & use of online search tools

Search tools	Aware	Use
Search Engines	53 (100)	53 (100)
Meta-Search Engines	11 (20.75)	09 (16.98)
Directories	22 (41.51)	13 (24.53)
Gateways (subject/regional)	25 (47.17)	19 (35.85)
Deep Web Search Tools	10 (18.87)	06 (11.32)
Web OPACs	45 (84.91)	45 (84.91)

Note: Figures in parenthesis is percentage (n=53)

(ii) Awareness & use of search engines

All the scholars are aware of Google (100%) and Yahoo (100%) whereas 69.81% are aware of Rediff and 39.62% of MSN. While comparing the use, only Google is used by cent percent (100%) of scholars and Yahoo by 86.79% and Rediff by 56.60% for searching the Web. Less than 25% of the scholars are aware of other search engines like Altavista, AOL and make use of them for searching the online information (Table 2).

Table 2: Awareness & use of search engines

Search engines	Aware	Use
Google	53 (100)	53 (100)
Yahoo	53 (100)	46 (86.79)
Altavista	11 (20.75)	08 (15.09)
Rediff	37 (69.81)	30 (56.60)
MSN	21 (39.62)	12 (22.64)
AOL	12 (22.64)	05 (09.43)
Others	13 (24.53)	13 (24.53)

Note: Figures in parenthesis is percentage (n=53)

(iii) Awareness & use of other search tools

Majority of the scholars aren't aware of other search facilities like gateways (subject/regional), directories, meta-search engines and deep Web search tools. Among all the scholars make use of Intute (16.98%), followed by Complete Planet (11.32%), Mamma (7.55%) and Metacrawler (7.55%) (Table 3).

Table 3: Awareness & use of other search tools

Other Search tools	Aware	Use
Metacrawler	05 (09.43)	04 (07.55)
Mamma	04 (07.55)	04 (07.55)
Intute	09 (16.98)	09 (16.98)
Complete Planet	10 (18.87)	06 (11.32)
Infomine	04 (07.55)	04 (07.55)
Dmoz	02 (03.77)	02 (03.77)
Others	11 (20.75)	11 (20.75)

Note: Figures in parenthesis is percentage (n=53)

(iv) Awareness & use of search techniques

All the scholars (100%) are aware and make use of phrase searching technique (directly entering the phrase in search box (*e.g.* women in Asia) and more than 50% are aware and make use of field searching (54.72%) and keyword searching (52.63%) whereas only 28.30% of the scholars are aware and make use of Boolean Operators during online search and truncation method isn't used by any scholar at all.

Table 5: Awareness & use of search techniques

Search techniques	Aware	Use
Boolean Operators	15 (28.30)	15 (28.30)
Phrase searching	53 (100)	53 (100)
Keyword searching	28 (52.63)	28 (52.63)
Truncation	05 (09.43)	00 (00.00)
Field searching	29 (54.72)	29 (54.72)
Others	00 (00.00)	00 (00.00)

Note: Figures in parenthesis is percentage (n=53)

(v) Awareness & use of information archives/aggregators

The central library of the University of Kashmir, known as "Allama Iqbal Library" provides access to online information sources both subscribed and open access through different archives/consortia/directories like JSTOR, JCCC/UGC Consortium, Questia, Project Muse, Ebrary, EBSCOHOST, Directory of Open Access Journals (DOAJ), Directory of Open Access Repositories (OpenDOAR), and many others. The data depicts that majority of the scholars are aware of JSTOR (77.36%), UGC Consortium (64.15%) and Directory of Open Access Journals (DOAJ) (50.94%) respectively and highly make use of these archives during online search. The scholars aren't aware of other sources like Questia, Directory of Open Access Repositories (OpenDOAR), Project Muse, Ebrary, EBSCOHOST and aren't using them adequately (Table 4).

Table 4: Awareness & use of *information archives/aggregators*

Online sources	Aware	Use/Search
UGC Consortium	34 (64.15)	30 (56.60)
JSTOR	41 (77.36)	41 (77.36)
DELNET	04 (07.55)	02 (03.77)
Project Muse	12 (22.64)	10 (18.87)
Questia	22 (41.51)	10 (18.87)
Ebrary	10 (18.87)	05 (09.43)
EBSCOHOST	09 (16.98)	07 (13.21)
Directory of Open Access Journals (DOAJ)	27 (50.94)	22 (41.51)
OpenDOAR	18 (33.96)	12 (22.64)
Others	04 (07.55)	04 (07.55)

Note: Figures in parenthesis is percentage (n=53)

DISCUSSION

The overall results reflect that scholars aren't experts in online searching and needs a helping hand to become information literates. The findings are supported by the earlier studies which also confirm that students aren't fully well versed in information searching **(Chang and Perng, 2001)**, even at research (Ph.D.) level **(Barry, 1997; Hess, 1999)**.

The results reveal that majority of the scholars aren't only aware but make use of search engines and Web OPACs. Among all the search engines, Google and Yahoo are used by the majority whereas others like Altavista, Rediff, MSN and AOL aren't so popular and highly used by the scholars. The reasons for the supermacy of Google and Yahoo can be many like popularity, database size, harvesting capacity, qualitative search hits, high precision, advanced search features, up-to-date, and the like. However, the scholars should also search the Web using other search engines as no search engine is comprehensive that can index or search the entire Web. The online public access catalogues available on the Web popularly known as Web OPACs are also becoming famous tools of information searching. Library and information science managers must market the collection of libraries and search tools like OPACs using new tools especially Web 2.0 such as social networking sites, wikis, and blogs to aware users. Moreover, the scholars aren't aware about and don't use other search facilities like gateways (subject/regional), directories, meta-search engines and deep Web search tools upto expectations. The reasons for the less use of other search tools can be many; however, the lack of awareness is the major one as the results show that the scholars, who are aware of these search

facilities, make use of them in searching the online information. Therefore, the managers of these services should market their services and make their customers aware about their products. Moreover, to overcome other problems, administrators of these search tools must bench mark their services to improve them for competition.

The results further depict that the phrase searching technique (directly entering the phrase in search box *e.g.* women in Asia) is the most popular and highly used technique for searching the Internet among scholars followed by field searching and keyword searching respectively whereas Boolean operators and truncation techniques are not so popular and hence not used.

The findings also depict that more than half of the scholars are aware and make use of JSTOR and UGC Consortium whereas others DELNET, Project Muse, Questia, Ebrary, EBSCOHOST, Directory of Open Access Journals (DOAJ) and Directory of Open Access Repositories (OpenDOAR) are not so popular among scholars. To fully exploit the potential value of information, users especially research community must know precisely what, when, and where information is available and how to access it but unfortunately the majority of the scholars are not aware about the information resources, where they are available and how to access them. The problem, therefore, is that scholars do not have the knowledge and skills to locate the right information resources. The scholars need to get skills for searching the information on the Internet. The Web search needs a systematic training to gain the knowledge and skills in online information searching. The library and information managers must take initiatives immediately to improve the information and Web literacy of social scientists for optimum utilisation of resources. These initiatives can be in terms of formal short term training courses on the Internet literacy, Web literacy, information literacy, computer literacy and so on. The library websites can also be used as marketing tools for information sources as links to open and subscribed information sources on the library's homepage can increase the use of information. The current awareness services like new issue, content alert and selective dissemination of information can also help to connect right users to right information.

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OPAC AS DOCUMENT RETRIEVAL TOOL:
A CASE STUDY OF THE UNIVERSITY OF KASHMIR

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Abstract

The application of the information and communication technology has changed the entire environment of the library including cataloguing. Today, a number of libraries are providing Online Public Access Cataloguing service to their users to find out their documents and the *Allama Iqbal Library,* University of Kashmir isn't an exception. The main purpose of the study is to measure the faculty wise use of OPAC by the P G students of University of Kashmir. To accomplish the purpose of the study, survey method was adopted and questionnaire was used as data collection tool. The questionnaire was distributed among 260 students selecting 10 students from each department in the month of May 2012. However, only 241 students returned the filled questionnaire with response rate of 92.69 %. The results revealed that 60% of the respondents use OPAC to search the library collection whereas 40% don't use it at all. The students who use OPAC cite many features like time saving; fast response; remote access etc. and the students don't use OPAC mostly due to awareness problem. This study found that most of the student learn to operate OPAC from themselves followed by friends/colleagues and library staff. The students search the library material mostly through subject, author and title approach. At the end, the fruitful suggestions are provided for greater use of OPAC.

Introduction

The application of the information and communication technology has changed the entire environment of the library including cataloguing. The first article discussing the possibility of an automated catalogue, written by Don Swanson, was published in 1964 **(Su, 1994)**. The trend has changed from card catalogue where the documents were searched through endless drawers to the computerised catalogue that helps patrons in easy retrieval of documents. The computerised catalogue was gradually made accessible on networks outside the four walls of the library and was termed as On-line Public Access Catalogue (OPAC). Online Public Access Catalogue has brought revolution in the document retrieval system in libraries. Later on, OPAC was made available and accessible through the Internet and the Web popularly known as Web OPAC. According to **Hussain and Ansari (2006),** "Web OPAC is an OPAC, which is provided on the web and with the help of Internet anybody can access it from anywhere".

Today, a number of libraries are providing OPAC service to their users to find out their documents and the *Allama Iqbal Library,* University of Kashmir isn't an exception. The Kashmir University Library was established in 1949 to cater to the academic and research needs of the academic community of the Jammu and Kashmir State. In 1984, it was renamed as IQBAL LIBRARY and ALLAMA IQBAL LIBRARY in July 2002. The *Allama Iqbal Library is the first ISO 9001:2008 certified university library.* The *Allama Iqbal Library* along with its network of libraries is the largest library system in the J&K state. The library collection includes- 6, 31,217 books, 56,513(approx.) journals (back volumes), 415 manuscripts, 1,442 theses & dissertations, 22 microfilms, 1,800 digitized books and 515 microfiche. The library is also subscribing one of the leading portal service of India known as J-Gate service where under the contents pages, abstract and full text articles (wherever available), appearing in more than eight thousand five hundred reputed scholarly Journals in sciences and social services are made available to the users on-line. Earlier, the library used *Software for University Libraries (SOUL)* to automate its operations. However, the library has recently shifted to *VIRTUA* software from the Virgina Tech Library System. To retrieve a relevant document from the huge collection, the library provides OPAC facilities for the users. The users can search documents through OPAC by author, title, subject, publisher, call number and journal title (http://ail.uok.edu.in/).

Literature Review

A number of studies have been carried out in various universities to measure the use of OPAC by the academic community. **Ansari and Amita (2008)** conducted a survey to determine the applicability and utility of OPACs in five libraries of New Delhi and the results revealed that a high percentage of respondents are utilizing the OPAC as a search tool for retrieving documents. **Mackoy (1998)** found that some of the Nigerian libraries, particularly university libraries have introduced On-line Public Access Catalogue (OPAC) services that have increased the proportion of subject searches performed by library users as well as increase in catalogue use **(Cited in Nwezeh, 2010)**. **Kumar and Vohra (2011)** conducted a questionnaire-based survey on use of OPAC by users of A.C. Joshi Library, University of Punjab and the results depicted that a significant number of users search information regarding the library material through OPAC despite encountering problems. **Mullah and Chandrashekara (2009)** conducted survey to determine the effective use of online public access catalogue (OPAC) at the libraries of engineering colleges in Karnataka and the results showed that mostly users didn't make much use of OPAC mostly because of lack of

awareness and some of them didn't find the software user friendly. **Wildemuth and O'Neil (l995)** found that the most common search element was the title (94%), followed by the publication date, especially for journals (70%) and the author (50%). **Rueda, Senso and Anegon (2007)** conducted a study about OPAC in the University of Granada and the results depict that library users have a strong preference for searching by title (49percent), followed by searches by author (37 percent), and finally by subject search (14 percent). **Babu and Naidu (2011)** revealed that less than half of the users (42.7%) searched for required information through author, about a third by title (32%) and over a quarter by subject (26%). It is clear that search by author is more popular to access to information from OPAC over other approaches. **Hunter (1991)** found that almost 14% of title searches failed because of the inclusion of an initial article and 15% of author searches failed because the first name was entered first. **Babu and Naidu (2011)** found that the majority of the respondents (63.7%) are either satisfied or highly satisfied in searching OPAC. At the same time, over a fifth (22%) of respondents is neutral, and the remaining one seventh of them (14.7%) is not satisfied in searching OPAC. **Kumar and Vohra (2011)** showed that 97.2 per cent of respondents expressed *lack of knowledge*, 72.2 per cent expressed *complication in use*, 38.8 per cent expressed *no output/null retrieval*, 63.8 per cent express *lack of on-screen help*, 38.8 per cent expressed *lack of assistance from library staff* and 30.5 per cent expressed *slow speed*'. Similarly, the present study is an attempt to assess the utility of OPAC by academic community of Allam Iqbal Library, University of Kashmir.

Purpose of the study

The main purpose of the study is to measure the faculty wise use of OPAC by the P G students of University of Kashmir.

Scope of the study

The study was conducted in the University of Kashmir, J&K state, India. The study was confined to the P.G Students of the Faculty of Applied Sciences & Technology, Biological Sciences, Physical & Material Sciences and Social Sciences consisted of 26 departments.

Methodology

To accomplish the purpose of the study, survey method was adopted and questionnaire was used as data collection tool. The questionnaire was distributed among 260 students selecting 10 students from each department in the month of May 2012. However, only 241 students returned the filled questionnaire and the response rate was 92.69 %

Data Analysis

i) Library visit

Table 1: Frequency of Library Visit

Faculty	Frequently	Occasionally	Rarely	Never
Applied Sciences & Technology	22/50 (44.00)	16/50 (32.00)	12/50 (24.00)	00/50 (0.00)
Biological Sciences	19/57 (33.33)	26/57 (45.61)	12/57 (21.05)	00/57 (0.00)
Physical & Material Sciences	21/60 (35.00)	22/60 (36.66)	17/60 (28.33)	00/60 (0.00)
Social Sciences	27/74 (36.48)	36/74 (48.64)	10/74 (13.51)	01/74 (1.35)
Total	89/241 (36.92)	100/241 (41.49)	51/241 (21.16)	01/241 (0.41)

Note: Figures in parenthesis is percentage

Majority of the students (41.49%) visit the library occasionally followed by frequently (36.92%). Among selected faculties, the students of Applied Sciences & Technology visit library more than others.

ii) Purpose of library visit

The main purpose of library visit is to borrow books (73.33%) followed by consult reference sources (21.67%) irrespective of faculty differences. The faculty wise data also shows that Applied Sciences & Technology also visit library to work in a peaceful place (28.00%) mostly followed by Biological Sciences (21.05%).

Table 2: Purpose of Library Visit

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
Borrow books	31/50 (62.00)	46/57 (80.70)	46/70 (65.71)	53/73 (72.60)	176/240 (73.33)

Consult reference sources	13/50 (26.00)	12/57 (21.05)	12/70 (17.14)	15/73 (20.55)	52/240 (21.67)
Consult print journals	02/50 (04.00)	09/57 (15.78)	06/70 (8.57)	01/73 (01.37)	18/240 (07.50)
Read newspapers and magazines	08/50 (16.00)	06/57 (10.53)	09/70 (12.86)	09/73 (12.33)	32/240 (13.33)
Work in a peaceful place	14/50 (28.00)	12/57 (21.05)	08/70 (11.43)	06/73 (08.22)	40/240 (16.67)
Others	02/50 (04.00)	03/57 (5.27)	03/70 (04.29)	03/73 (04.11)	14/240 (05.83)

Note: i) Figures in parenthesis is percentage ii) Multiple options were allowed

iii) Use of search tools

It is observed that 74.58% of students search the library materials by searching the shelves themselves followed by 60% through OPAC. Furthermore, OPAC is mostly used by the faculties of Applied Sciences and Technology (64%) and Social Sciences (63.01%) than any other faculties.

Table3: Search tools used

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
Catalogue Card	05/50 (10.00)	02/57 (03.51)	01/60 (01.67)	04/73 (05.48)	12/240 (05.00)
Search the shelves myself	35/50 (70.00)	47/57 (82.46)	44/60 (73.33)	53/73 (72.60)	179/240 (74.58)
Ask the library staff	06/50 (12.00)	08/57 (14.04)	02/60 (03.33)	07/73 (09.59)	23/240 (09.58)
Through OPAC	32/50 (64.00)	33/57 (57.89)	33/60 (55.00)	46/73 (63.01)	144/240 (60.00)
Others	02/50 (04.00)	02/57 (03.51)	02/60 (03.33)	03/73 (04.11)	12/240 (05.00)

Note: i) Figures in parenthesis show percentage ii) Multiple options were allowed

iv). Use of OPAC

Table 4: Use of OPAC

Faculty	Frequently	Occasionally	Rarely	Never
Applied Sciences & Technology	08/50 (16.00)	08/50 (16.00)	16/50 (32.00)	18/50 (36.00)
Biological Sciences	06/57 (10.53)	14/57 (24.56)	13/57 (22.81)	24/57 (42.11)
Physical & Material Sciences	08/60 (13.33)	15/60 (25.00)	10/60 (16.67)	27/60 (45.00)
Social Sciences	06/73 (08.22)	24/73 (32.88)	16/73 (21.92)	27/73 (36.99)
Total	28/240 (11.67)	61/240 (25.42)	55/240 (22.92)	96/240 (40.00)

Note: Figures in parenthesis is percentage

Most of the students (60%) use OPAC in which 25.42% use it occasionally, 22.92% rarely and 11.67% frequently whereas 40% of the students don't use it at all. The students of Social Sciences and Physical & Material Sciences use OPAC more frequently than Biological Sciences Applied Sciences & Technology students.

v). Reasons for not using OPAC

The students are not using OPAC due to lack of awareness (75%) problem followed by technical knowhow (14.58%). Lack of awareness is more common among the students of Physical & Material Sciences (85.19%) and Biological Sciences (83.33%).

Table 5: Reasons for not using OPAC

Faculty	Lack of awareness	Network problems	Lack of technical know how	Others
Applied Sciences & Technology	10/18 (55.56)	01/18 (05.56)	05/18 (27.78)	02/18 (11.11)
Biological Sciences	20/24 (83.33)	01/24 (04.17)	02/24 (08.33)	01/24 (04.17)
Physical & Material Sciences	23/27 (85.19)	00/27 (0.00)	03/27 (11.11)	01/27 (03.70)
Social Sciences	19/27 (70.37)	02/27 (07.41)	04/27 (14.81)	02/27 (07.41)
Total	72/96 (75.00)	04/96 (04.17)	14/96 (14.58)	06/96 (06.25)

Note: i) Figures in parenthesis is percentage ii) Multiple options were allowed

vi). OPAC features

As per as OPAC features are concerned, 69.44% of students believe that OPAC has highly saved their time where as 42.36% of students have the opinion that OPAC helps them in providing fast response. Majority of Applied Sciences & Technology (81.25%) and Physical & Material Sciences (72.73%) students consider that OPAC save their time followed by Biological Science (66.67%) and Social Sciences (60.87%).

Table 6: OPAC Features

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
Remote access	01/32 (03.12)	01/33 (03.03)	02/33 (06.06)	06/46 (13.04)	10/144 (06.94)
Fast response	13/32 (40.63)	16/33 (48.48)	16/33 (48.48)	16/46 (34.78)	61/144 (42.36)
Time saving	26/32	22/33	24/33	28/46	100/144

	(81.25)	(66.67)	(72.73)	(60.87)	(69.44)
Interactive	00/32 (0.00)	03/33 (09.09)	03/33 (09.09)	01/46 (02.17)	07/144 (04.86%)
Others	00/32 (0.00)	00/33 (0.00)	00/33 (0.00)	00/46 (0.00)	00/144 (0.00)

Note: i) Figures in parenthesis is percentage ii) Multiple options were allowed

vii). OPAC learning method

The result shows that maximum number of students (41.67%) learn to make use of OPAC from their friends/colleagues whereas 29.86% learnt by themselves. The 20.83% of students also report that library staff provides them assistance for the better use of OPAC. Most of the Physical & Material Sciences (48.48%) and Applied Sciences & Technology (31.25%) students learn about the OPAC by themselves while as maximum number of students of Social Sciences (56.52%) and Applied Sciences & Technology (40.63%) is taught about it by their friends/colleagues. Besides, students of Biological Sciences (48.48%) and Physical & Material Sciences (21.21%) take assistance from library staff mostly for its use.

Table 7: Learning Methods

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
Myself	10/32 (31.25)	04/33 (12.12)	16/33 (48.48)	13/46 (28.26)	43/144 (29.86)
library staff	04/32 (12.50)	16/33 (48.48)	07/33 (21.21)	03/46 (06.52)	30/144 (20.83)
friends/colleagues	13/32 (40.63)	11/33 (33.33)	10/33 (30.30)	26/46 (56.52)	60/144 (41.67)
Online Tutorials	04/32 (12.50)	01/33 (03.03)	00/33 (0.00)	02/46 (04.35)	07/144 (04.86)
teachers/guides	01/32 (03.13)	01/33 (03.03)	00/33 (0.00)	02/46 (04.35)	04/144 (02.78)

Note: Figures in parenthesis is percentage

viii). Access places

Most of the students access OPAC in the university library (96.53%) followed in respective departments (08.33%). Cent percent (100%) Biological Sciences and 96.97 % Physical & Material Sciences students make use of OPAC in the library. Moreover majority of students from Social Sciences (13%) and Biological Sciences (06.06%) access OPAC also from their homes.

Table 8: OPAC Access Places

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
Library	31/32 (96.88)	33/33 (100)	32/33 (96.97)	43/46 (93.48)	139/144 (96.53)
Department	02/32 (06.25)	03/33 (09.09)	04/33 (12.12)	03/46 (06.52)	12/144 (08.33)
Cyber Café	01/32 (03.13)	00/33 (0.00)	01/33 (03.03)	02/46 (04.35)	04/144 (02.78)
Home	01/32 (03.13)	02/33 (06.06)	00/33 (0.00)	06/46 (13.00)	09/144 (06.25)

Note: i) Figures in parenthesis is percentage ii) Multiple options were allowed

ix). Access points/options

The most common search strategy adopted by the students is by author (54.86%) while as 48.61% is searching the documents by title and 47.92% by subject. Most of the students from Applied Sciences & Technology (59.36%) and Physical & Material Sciences (51.5%) are searching the documents through subject approach followed by Biological Sciences (45.45) and Social Sciences (39.13). The document seeking through author approach is most common in Physical & Material Sciences (66.67%) and Social Sciences (56.53%) followed by Biological Sciences (48.48) and Applied Sciences & Technology (46.89%). Similarly, maximum number of students from Social Sciences (50%), Physical & Material Sciences (48.48) and Biological Sciences (48.48) followed by Applied Sciences & Technology (46.89%) are using title approach for finding library material.

Table 9: OPAC Access Options

Faculty	Applied Sciences & Technology	Biological Sciences	Physical & Material Sciences	Social Sciences	Total
By subject	19/32 (59.36)	15/33 (45.45)	17/33 (51.5%)	18/46 (39.13)	69/144 (47.92)
By author	15/32 (46.89)	16/33 (48.48)	22/33 (66.67)	26/46 (56.52)	79/144 (54.86)
By title	15/32 (46.89)	16/33 (48.48)	16/33 (48.48)	23/46 (50.00)	70/144 (48.61)
By publisher	02/32 (06.25)	01/33 (03.03)	02/33 (06.06)	01/46 (02.17)	06/144 (04.17)

Note: i) Figures in parenthesis is percentage ii) Multiple options were allowed

Discussion

The present study examined the utility of OPAC among the four faculties of University of Kashmir. The results revealed that 60% of the respondents use OPAC to search the library collection whereas 40% don't use it at all. The students cite many features for using OPAC like time saving; fast response; remote access etc. and the students don't use OPAC mostly due to awareness problem. The orientation programmes should be conducted to aware and train users in using OPAC. This study found that most of the student learn to operate OPAC from themselves followed by friends/colleagues and library staff. A library professional should be deputed at the OPAC counter to help users in retrieving documents from the library. In addition, the help module should be available on the screen to guide users. The students search the library material mostly through subject, author and title approach. The OPAC should accommodate spell check mechanism, suggested spellings, proper relevance ranking and case sensitive help. To deal with the problem of "No results found". "Try again" and "Did you mean?" suggestions should also be accommodated in OPAC. The efforts should also be taken to convert the Web OPAC into social OPAC by introducing Web 2.0 technologies (such as RSS and alerts) to improve the search capacities.

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