

Awareness and Use of E-resources among Science and Social Science Scholars of University of Kashmir: A Comparative Study

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Abstract

The present study is an attempt to determine the awareness and use of electronic resources by its users, provided by the University of Kashmir. A total of 100 questionnaires were distributed to collect the primary data from full time research scholars (M.Phil/ Ph.D.) of Science and Social Science faculties, University of Kashmir. The result shows that research scholars of science faculty are fully aware of e-resources and use e-resources adeptly in comparison to scholars of social science faculty. E-journals are most used by Science and Social science scholars while e-magazines find much attraction in the Social Science faculty. Also the study revealed that library staff and professionals did not play an active role in helping the research scholars with the problems they face while accessing e-resources. The findings could be helpful to know the different challenges and concerns faced by users while accessing and using e-resources. The study also highlights the current scenario of the Science and Social Science faculties in University of Kashmir with reference to the awareness and usage of electronic resources.

Keywords: Comparison, Databases, E-journals, E-resources, Frequency, Open Access

Introduction

Traditional libraries stored distinct types of information resources in distinct formats at their premises. Various tools and guides to locate these resources were available only when a user physically visited the library. The 20th century was shaped by sweeping changes in communication technologies. The emergence and use of information technology is the century's most significant development affecting scholarly communication (Egberongbe, 2011). With the advent of ICTs, libraries are capable of

providing access to such resources through workstations and terminals at various points (Muteshwa, 2000). The swift expansion of information communication and technology has given rise to evolution of various jargons like paperless society, electronic information resources, portals, digital libraries, and databases (Nazir, 2015). The astounding technological advancements have opened new horizons for information creation, duplication, access, storage, dissemination, and preservation. The gradual shift from print to electronic environment has given rise to various ways to access information to the academic society, thus moving towards a paperless society.

E-Resources

Electronic resources are crucial research tools that complement the print resources with advantages like access to information that might be restricted to the user due to geographical location or finances and also provide access to current information as these are updated frequently (Dadzie, 2005). Sudhier and Seethalekshmi (2011) comment that electronic environment facilitate enhancement in the speed of service, number of users served, the quantum and exhaustiveness of information provided. Electronic resources are a significant part of library collections as huge financial investment takes place for the development and management of e-resources in the libraries (Haridasan & Khan, 2009). According to Saye (2001), electronic resources are the resources that are generated through some electronic medium and made available to a wide range of viewers both on-site and off-site via some electronic transferring machine or internet. Lee (2002) states that e-resources refer to any electronic product that delivers a collection of data, be it text,

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numerical, or time based, as a commercially available title. Describes electronic formats of information sources as computer technology media in which information is retrieved. The electronic resources comprise e-databases, e-journals, e-magazines, e-books/ e-audio/ e-images, data/ GIS, digital library projects, electronic exhibitions, e-subject guide, e-newsletters, e-white papers, e-conferences proceedings, and so on. The e-resources are now having high prospects due to its multiple benefits like quick availability (the electronic format gets uploaded on the site before the print version is available like Early Cite & Articles in Press facility provided by Emerald and Elsevier respectively), less storage, ability to incorporate multiple media and formats (audio, video, graphs, images etc.), easy hyperlinking mechanism to other sources, easy to cite and quote, and avoiding duplication of research because of exhaustive survey of published research by the editorial desk. According to Olle and Borrego, electronic environment has changed the information-seeking behaviour of scholars and electronic resources have become most accepted preferences for researchers to abreast with new information in the field (as cited in Anam, Shamshad, & Salman, 2013).

The University of Jammu and Kashmir was founded in 1948. In 1969, it was bifurcated into two full-fledged Universities: University of Kashmir at Srinagar and University of Jammu at Jammu. The University of Kashmir is situated at Hazratbal in Srinagar. The University offers programmes in all the major faculties; arts, business & management studies, education, law, applied sciences & technology, biological sciences, physical & material sciences, social sciences, medicine, dentistry, engineering, oriental learning, and music & fine arts.

The history of Kashmir University Library dates back to 1949 with the inception of University of Jammu and Kashmir. It was established to cater to the academic and research needs of the scholars, students, and teachers of Jammu and Kashmir. In 1984, it was renamed as Iqbal Library and as Allama Iqbal Library in July 2002. The Library is presently the centre of the university library system, having 57 seminar libraries attached with different departments, centres, and the institutes of the University. The Allama Iqbal Library along with its network of libraries is the largest library system in the state and caters to the academic needs of the large number of university community consisting of faculty members,

research scholars, P.G. and diploma students in various disciplines (University of Kashmir, 2016).

The Allama Iqbal Library has 16 divisions in well-decorated and centrally heated halls (Ist floor only) managed by well-qualified professional staff. The library also provides useful and research oriented services to the reading community in calm and clean atmosphere. At present, it has a collection of above six lakh books. Allama Iqbal Library has developed a special collection for visually impaired students. The collection includes braille books, DVDs/CDs, DAISY-digital talking books etc. Various local, National and International newspapers are available to the users for keeping them up-to-date (University of Kashmir, 2016a).

Problem

The electronic resources have now become the necessity of the students, researchers and academicians all over the globe. They are progressing and growing not only in number but also in popularity among the user community and hence have become the first preference. The study endeavours to find the awareness and use of e-resources available through Allama Iqbal Library among the research scholars of the two faculties of University of Kashmir - Science and Social Science. The study further makes an effort to compare the usage of e-resources between the two faculties more critically.

Scope

The scope of the study was confined to M. Phil and Ph.D. research scholars from the Science and Social Science faculties of University of Kashmir.

Objectives

1. To study the awareness level of e-resources.
2. To find the use of e-resources on gender basis.
3. To find the use of e-resources on faculty basis.
4. To study frequency of use of e-resources.
5. To study format preferred in e-resources.
6. To study frequency of problems faced while accessing e-resources.

Literature Review

A survey on the use of e-databases at Ankara University indicated that the respondents were well aware of the existence of digital resources. The results of this survey indicated that the majority of the faculty members use electronic databases and the most preferred databases were Web of Science, Science Direct and EBSCO (Atilgan & Bayram, 2006). At the Indian Institute of Technology, Delhi, it was found out that the usage of e-journals is increasing due to awareness among the users about the library e-resources and owing to anywhere access the users visits to library have decreased (Baljinder & Verma, 2009). At the North Caribbean University, out of 163 respondents, 92 percent are aware about e-resources whereas only 8 percent are not aware (Knight, 2013). In the study conducted on use of e-journals by research scholars at Aligarh Muslim University and Banaras Hindu University, it was revealed that 89.84 percent respondents in AMU were aware of e-journals and similarly in BHU, 93.96 percent respondents were aware of e-journals (Khan & Naveed, 2009). At the University of Mysore, it was revealed that out of 180 respondents, 52.22 percent of the respondents were of the opinion that they had awareness in the EIR while 47.78 percent of respondents didn't have awareness in use of EIR (Khan & Raju, 2014). The survey that was conducted by means of a structured questionnaire circulated among 60 research scholars (PhD and MPhil) from different departments of Kurukshetra University revealed that 100 percent of the respondents knew about the e-resources (Madhusudhan, 2010). A survey conducted on the usage and impact of electronic resources on research scholars and lecturers in University of Lagos concluded that most of the academic staff and research scholars were keen to use electronic resources rather than other information resources. 55 percent research scholars were reported in the survey as being aware of e-resources whereas 21 percent scholars were not aware (Egberongbe, 2011). At the Indian Institute of Technology, Kharagpur, the survey conducted on utilisation of e-resources revealed that majority of the respondents 63.10 percent have stated that they know very well about what number of e-journals/database are available in the library concerned to their subject/discipline whereas 36.89 percent respondents specified that they do not know exactly about what number of e-journals/databases are available through the library (Garg & Tamrakar, 2014). At the Mbarara University

Library, 266 respondents who responded out of 348 target population, 244 (92%) respondents were aware of the e-resources provided by their library whereas 22(8%) respondents were found unaware (Okello-Obura & Magara, 2008).

Ph.D. students are often found to be heavy users of electronic journals (Rudner, Whitehead, & Gellman, 2002; Montgomery & King, 2002). In a study of faculty and students at the University of West England, the greatest indication for electronic use was whether or not the person was engaged in research. Researchers and academic staff were found to use electronic journals more (Nelson, 2001).

At University of Delhi, a study conducted on usage of e-resources in departments of History and Political Science consisting of 105 respondents revealed that e-journals are the most common e-resources consulted by the History department (67.70 percent) as well as the Political Science department (67.30 percent) (Bhatt, 2010). Bevilacqua (2005) indicated that only 31 percent of humanities professors and students use e-journals. Nicholas, Clark, Rowlands, and Jamali (2009) reported that e-journals in the field of life sciences are used more frequently than e-journals in economics and history. Niu and Hemminger (2010) also supported that researchers in the fields of natural science, engineering, and medical science strongly prefer using electronic versions rather printed formats, whereas Wu, Huang, and Chen (2006) concluded that humanities scholars prefer monographs to periodicals, and that they disagree that e-books will replace printed versions. It's suggested that research in social sciences often requires the collection of data through fieldwork, surveys and interviews and information sought from printed sources provided context and academic support for the research direction of findings (Leckie, 1996). A questionnaire-based survey to gather data from researchers of humanities, social science, and science disciplines in six universities of Karnataka, showed that the research scholars mainly prefer print resources and that a significant difference was seen in the preferences of print and electronic resources among various disciplines (Gowda & Shivalingaiah, 2009). In the study, nine basic science researchers strongly preferred online resources to print resources and respondents started their searches with either PubMed or Google, depending on the nature of their information needs, specifying subscription databases-Web of Science, SciFinder Scholar, UpToDate, PsycINFO, and Ovid MEDLINE (Haines, Light, O'Malley, & Delwiche, 2010).

At the Kurukshetra University, 90 percent of research scholars use e-journals, followed by web sites (48 percent), search engines (38 percent), and online databases (30 percent). Only 2 percent of respondents have shown their preference for using CD-ROM databases (Madhusudhan, 2010). At Mysore university, it was observed that e-journals (54.44%) and e-databases (42.22%) are the most used electronic information resources by social science research scholars followed by use of e-thesis 31.11 percent, e-books 26.67 percent, e-articles/e-reprints 21.11 percent, and e-newsgroups/magazines 11.11 percent of the total response. Also, it was revealed that 77.22 percent of the social science scholars use electronic information resources daily, 11.67 percent respondents are using it weekly, 6.67 percent using fortnightly, 2.78 percent respondents are using it monthly, and 1.67 percent using occasionally (Khan & Raju, 2014). The frequency with which research scholars use e-journals, 50 percent claimed to use them daily, 62 percent used them weekly, 9 percent used them monthly, and very few (4 percent) used e-journals occasionally (Ali & Nisha, 2011).

The studies on humanities and social science researchers reveal that they actively used full-text journals and newspapers, rare books, legal documents, digitised classical and literary texts (Jeevan & Tripathi, 2013). The research scholars of Shivaji University, Kolhapur use the e-resources for their research communication purposes and more awareness and training needs to be provided by library professionals (Sadanand, Bansode, & Pujar, 2008). In study at Utkal University and Sambalpur University, it was revealed that majority of research scholars use e-resources daily and the use on weekly, monthly and occasionally basis was found very less (Sahu, Patra, & Mahapatra, 2013). At the Annamalai University, majority of respondents used e-resources weekly (48.88%), daily (23.34%) and weekly twice (21.12%). Only few respondents (6.66) used e-resources monthly. (Thanuskodi, 2012). Most of the research scholars at Berhampur University use e-resources daily, followed by once in a week, each in a fortnight and rarely and maximum usage is on daily basis (Das & Maharana, 2013). In a study of research scholars of Indian Institute of Technology, Banaras Hindu University, it was found out that many users used e-resources daily while some used it monthly and only few used it occasionally (Shukla & Mishra, 2013). Swain (2010) finds that students express keen interest in the use of e-journals followed by e-books, e-newspapers, e-reports and e-articles and

least interest is shown towards the use of electronic thesis and dissertations. The findings of the study in University of Montana conclusively document that students and faculty use library e-resources to a statistically significant extent (Samson, 2014). At the Faculty of Arts, University of Karachi, one-third of the respondents use electronic resources for research, one quarter use it to prepare lectures and some of the users use it for gaining subject related knowledge (Ansari & Zuberi, 2010). Majority of the university science scholars preferred to use electronic databases and journals to search information in their fields (Adams, Hemminger, Lu, & Vaughan, 2007). In the survey at University of Delhi, it was revealed that Taylor & Francis (38.94%) is most used by social science scholars followed by Cambridge, Springer and Kluwer (36.86% each), Elsevier Science journals (31.57%), J-Store (24.21%), while 24.21 percent of respondents access the publication of Emerald Publishers, 10.52 percent access the journals of Project-Muse, 7.36% use ACS Publication, 6.34% make use of RSS Publication and few respondents (4.21%) use others (Ahmad, Basha & Fatima, 2012). Most of the Science scholars use Internet for 3-5 hours per week whereas few respondents use it for 8-10 hours per week. In Social Sciences, most of the researchers use it for 2-3 hours per week, while some use for an hour per week. The use of Internet by the majority of Humanities scholars is only about 1-2 hours a week (Mercado, 1999). The major advantages of e-journals perceived by respondents include easy accessibility, reading from desktop, hyperlinks, currency, home access, faster access inclusion of multiple formats, multiple user access, convenient search capabilities and the disadvantages include copyright concerns, fear of text altering, less prestigious and citation problems (Tenner & Yang, 1999; Dillon & Hahn, 2002; Kacherki & Thombare, 2010; Omotayo, 2010). At the Texas A&M University Libraries, in the Physical Sciences and Technology, the top ten Science e-books in NetLibrary were used over six times more than the print books, and the top then Chemistry e-books were used over three times more than their print counterparts. In Safari, the top ten Computer Science e-books were used 207 times more than the print versions (Ives, Jackson & Kimball, 2009).

Adams and Bonk (1995) found that the most prevalent obstacle to the use of electronic information resources was the absence of information about specific databases and lack of training. The vast majority of the respondents prefer Google (92.68 percent of researchers of AMU

and 92.67 percent at BHU), followed by 73.17 percent at AMU and 75.86 percent at BHU who use Yahoo. Less than 50 percent at both universities use Alta Vista and only a quarter use MSN (Khan & Naveed, 2009). At the Islamia University of Bahawalpur, survey study on 169 research scholars in the faculty of Social Sciences established that 60.9 percent of respondents used the electronic information resources daily, 19.5 percent used it twice a week, 15 percent used it weekly, 3.8 percent respondents used monthly, and 8 percent used the electronic information resources fortnightly (Anam, Shamshad, & Salman, 2013).

Methodology

The descriptive survey method was adopted in order to achieve the laid down objectives and a structured questionnaire was used as instrument for data collection. The chosen population for the study was 100 research scholars derived using stratified random sampling technique consisting of 50 from Science faculty and 50 from Social Science faculty. In Science faculty, scholars from Botany, Bio-technology, Physics, and Chemistry were chosen due to their high dependence upon the e-resources for their research work and for the enhancement of their academic career. Likewise, from the Social Science faculty, scholars from Sociology, Political Science, MSW, and Centre for Central Asian Studies were selected for the study. Only those Ph.D. research scholars were entertained in the study who had completed their residency period and likewise only those M.Phil scholars were taken up for the study that had completed a year and a half in their research. The data collected was analysed in Microsoft Excel and presented in charts.

Data Analysis

E-resource Familiarity

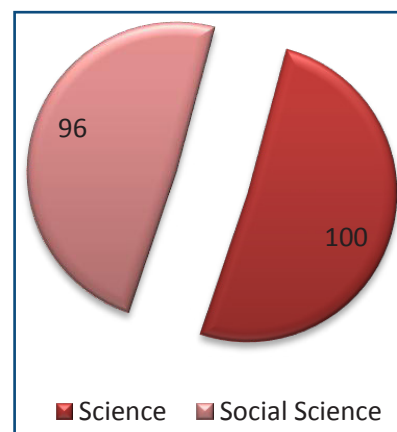


Fig 1: Faculty wise Familiarity of E-resources

In the Science faculty, all respondents (100%) have familiarity while familiarity is found slightly less (96%) among Social Science respondents (Fig. 1). Similar findings were depicted by earlier studies in which majority (more than 90%) of the population was found aware of e-resources (Baljinder & Verma, 2009; Gowda & Shivalingaiah, 2009; Knight, 2013; Okello-Obura & Magara, 2008). Madhusudhan, (2010) found a 100% e-resources awareness among the population hence supporting the present study.

Use of E-resources by Research Scholars: Faculty-wise

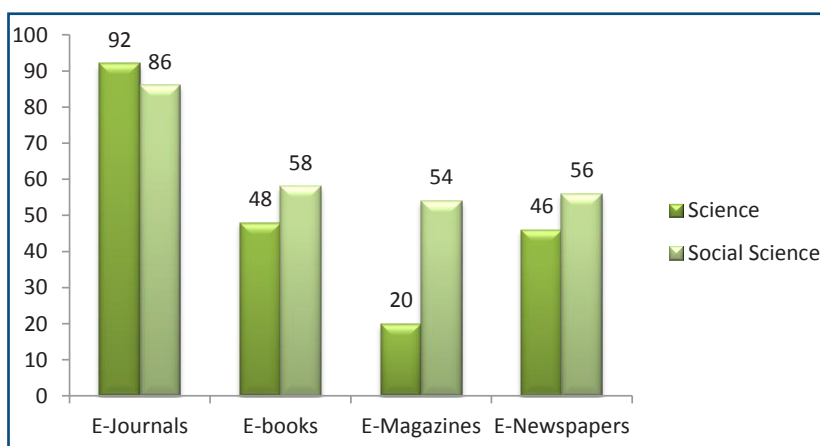


Fig 2: Faculty-wise Use of E-resources by Scholars

Data collected from respondents regarding the use of e-resources when analysed depicts that e-journal is mostly used both by Science and Social Science faculties with 92 and 86 percent respectively whereas e-magazine is least used (20%) by Science faculty (Fig. 2). Similar observations were revealed in which more than half (55%) of the population used e-journals and e-books more frequently (Khan & Raju, 2014; Rudner, Whitehead, &

Gellman 2002; Montgomery & King, 2002). The present study contradicts with the earlier findings of Ray and Day (1998) whose results depicted that less than half of the sample population used e-journals.

Source of Knowledge for Use of E-resources: Faculty-wise

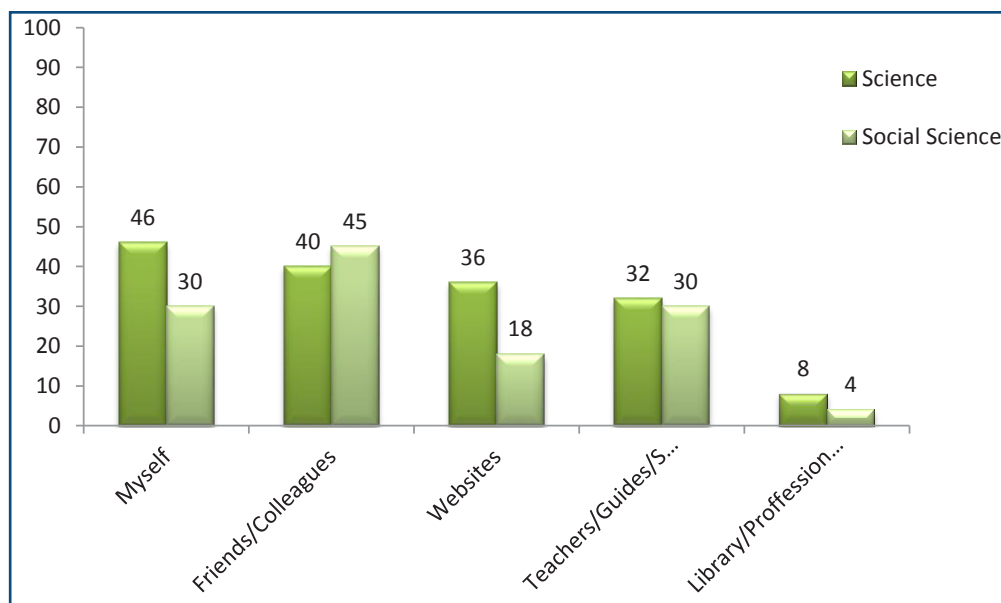


Fig. 3: Faculty-wise Sources of Knowledge for use of E-resources

In Fig. 3, among Science faculty, majority of the respondents (46%) have themselves learned the use of e-resources whereas least source of learning turned out to be of library/professional staff (8%). In the Social Science faculty, majority of the respondents (45%) mostly

learned the use through friends/colleagues whereas an insignificant proportion (4%) is getting guidance from the library/professional staff.

Frequency of using E-resources: Faculty-wise

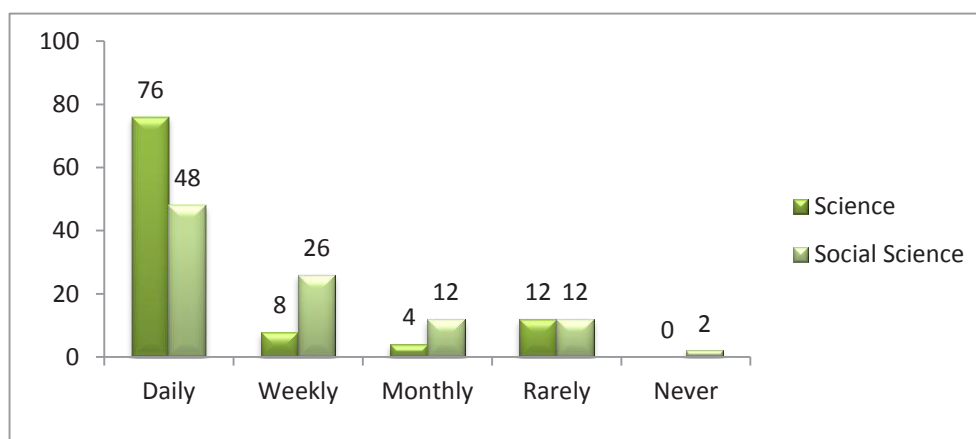


Fig. 4: Faculty-wise Frequency of Using E-resources

In the Science faculty, majority of respondents (76%) use e-resources daily against none of the respondents who never used e-resources. In the Social Science faculty, nearly half of the scholars (48%) use e-resources daily against a minor population (2%) who never use e-resources (Fig. 4). The findings are supported by the earlier findings

who depict the use of e-resources is mostly on daily basis (Sahu, Patra & Mahapatra, 2013; Das & Maharana, 2013).

Factors Attracting the Use of e-Resources: Faculty-wise

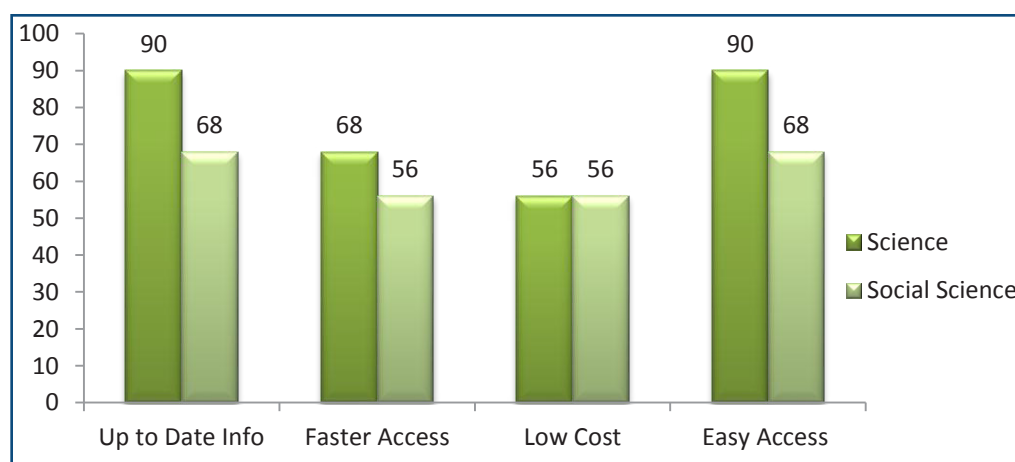


Fig. 5: Faculty-wise Factors Attracting the Use of E-resources

Majority of the Science faculty respondents (90%) prefer e-resources due to up to date information as compared to more than half of Social Science faculty (68%). Further, majority of the respondents (68%) of Science faculty

prefer e-resources due to faster access as compared to less percentage of respondents (56%) from Social Science faculty. Also, an equal percentage (56%) from both Science & Social Science faculties prefer e-resources due to low cost (Fig. 5).

Various forms Preferred by Research Scholars: Faculty-wise

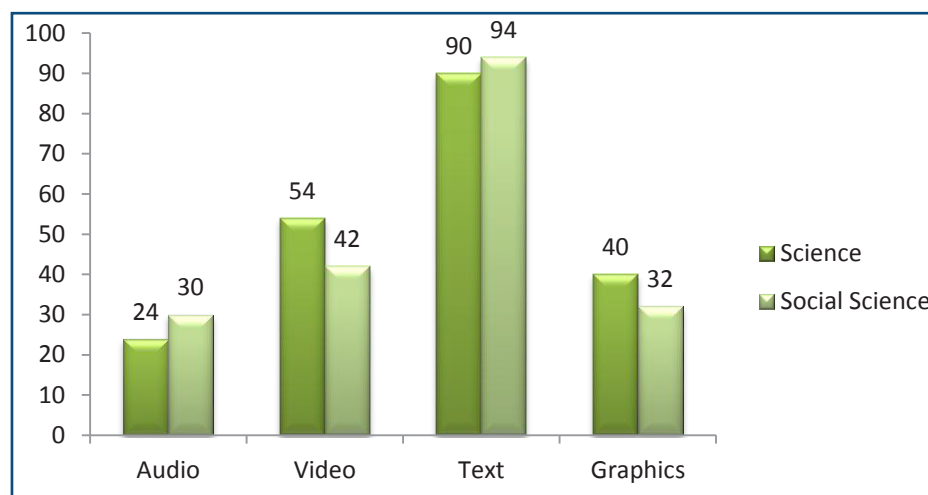


Fig. 6: Forms Preferred Faculty-wise

The majority of scholars (94%) from Social Science faculty prefer text form followed by Science faculty with slight variation (90%). Less research scholars (24%) from

Science faculty prefer audio form whereas slightly more scholars (30%) from Social Science faculty prefer audio (Fig 6).

Search Engines Used by Research Scholars: Faculty-wise

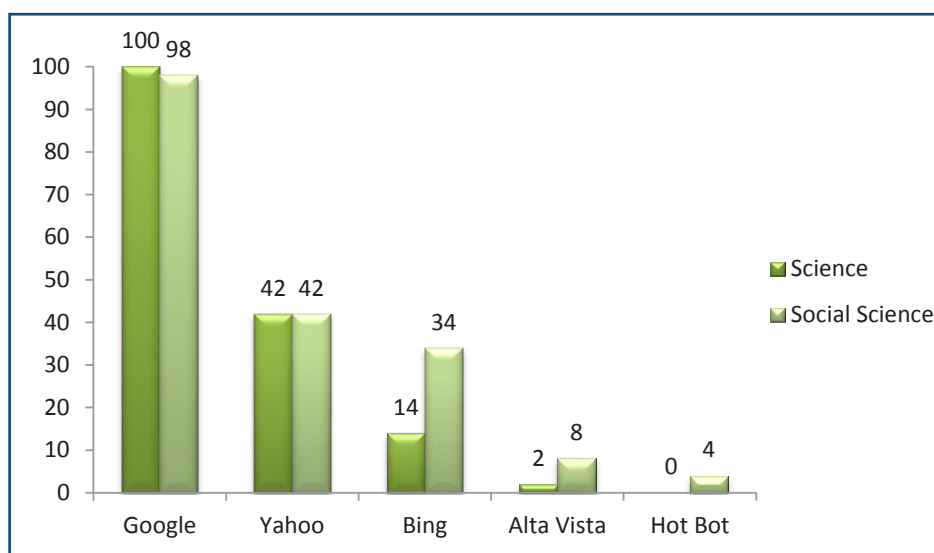


Fig. 7: Faculty-wise Search Engines Used

In the Science discipline, all research scholars make use of Google whereas a slightly less use (98%) is made by Social Science faculty. Alta Vista (2%) is least used search

engine by the Science faculty whereas Hot Bot is not used at all by the Science scholars (Fig. 7).

Database Usage by Research Scholars: Faculty-wise

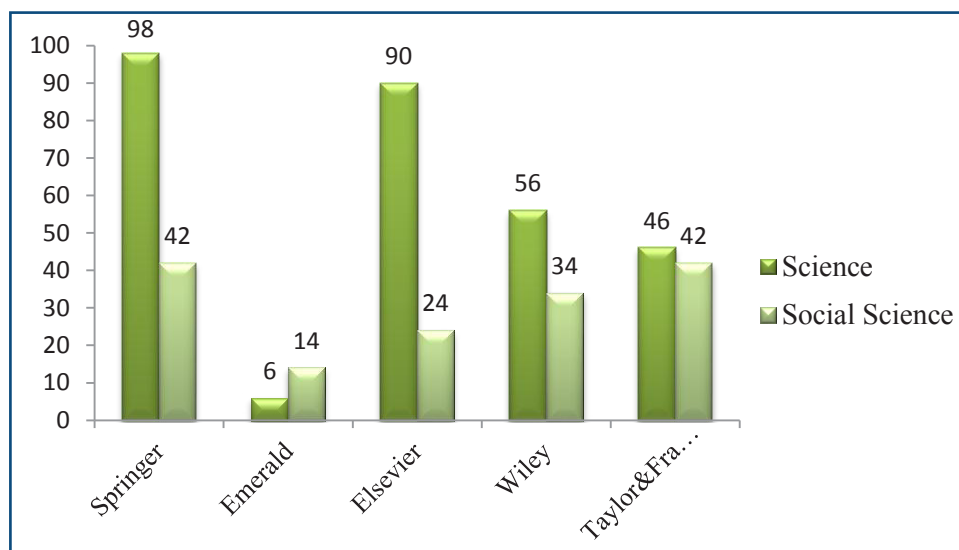


Fig. 8: Database Usage by Research Scholars

A majority of scholars (98%) from Science faculty use Springer whereas lesser use (42%) is done by scholars of Social Science. Majority of scholars (90%) of Science scholars use Elsevier while nearly quarter (24%) use

is made by Social Science scholars. An insignificant percentage of Science scholars (6%) make use of Emerald compared to very less use (14%) made by Social Science scholars (Fig. 8).

Use of Open Access Resources by Research Scholars: Faculty-wise

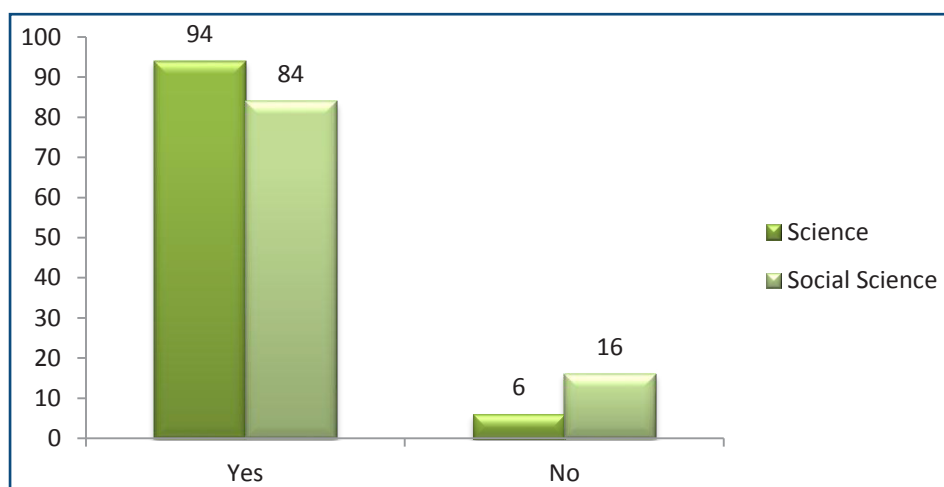


Fig. 9: Faculty-wise Use of Open Access Resources

In the Science faculty, majority of research scholars (94%) use Open Access resources compared to only a few (6%) that don't. In the Social Science Faculty, a major share

(84%) of scholars use Open Access resources while some of scholars (16%) do not use Open Access Resources (Fig.9).

Problems Faced by Research Scholars: Faculty-wise

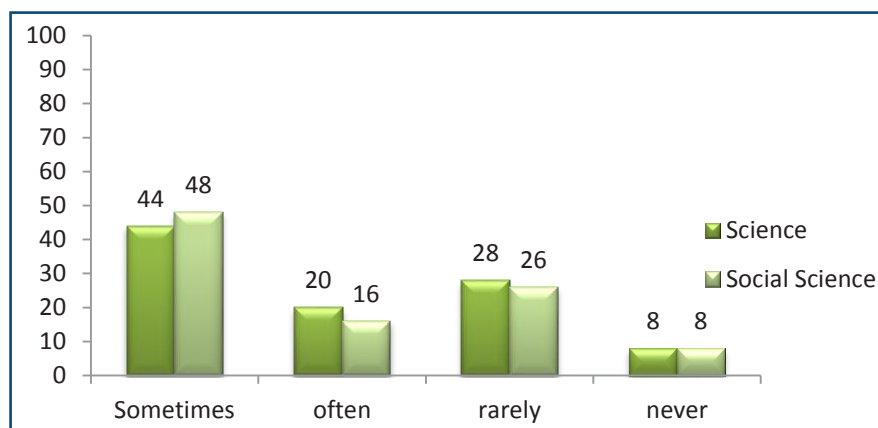


Fig. 10: Problems Faced by Respondents

A majority of research scholars (48%) of Social Science sometimes face problems compared to slightly less scholars (44%) of Science faculty. Only a few research scholars (8%) from both Science and Social Science faculty never face problems while using e-resources (Fig. 10).

Findings

E-Resource Familiarity

The research scholars of the Science faculty were fully familiar about the e-resources whereas the research

scholars of the Social Science faculty did lack some familiarity.

E-Resources Used

- Research scholars of Science faculty lead in the use of e-journals whereas scholars of Social Science faculty use less, but e-magazines were more used by scholars of Social Science faculty whereas e-magazines were not found so popular among the Science faculty

- Apart from these e-resources, respondents also mentioned other resources like e-articles and e-research papers.

Sources of Knowledge for use of E-resources

- In the Science faculty, majority of the respondents have themselves learned the use of e-resources and least source of learning turned out to be of library/professional staff which is very disappointing.
- In the Social Science faculty, respondents mostly learned the use through friends/ colleagues while library/professional staff did not play a convincing role.

Frequency for Usage of E-Resources

- In the Science faculty, majority of scholars used e-resources daily whereas nearly half of the scholars from the Social Science faculty used e-resources daily.
- All the research scholars of the Science faculty used e-resources whereas only a meagre proportion (2%) of scholars belonging to Social Science faculty never used e-resources.

Factors Attracting the Use of E-resources

- Majority of the scholars from the Science faculty used e-resources due to two factors: easy access and up-to-date information while more than half of the scholars of Social Science believed the two factors easy access and up to date information a reason to use e-resources.
- The scholars from both the faculties equally believed low cost as a factor attracting the use of e-resources.
- Only one respondent was found to be unaware of the reasons of preference for using e-resources.

Form of E-Resources Preferred

- Text form was found more popular among Social Science scholars, which was not the case with Science scholars.
- Most of the population heavily depends upon text form in e-resources.

Search Engines Used

- The most widely used search engine was found to be Google with 100 percent responses received from Science faculty whereas scholars of Social Science faculty used Google slightly less.
- Yahoo was second heavily used search engine, equally used by both the faculties.
- Alta Vista and Hot Bot were least used by Science faculty.

Databases Used

- Majority of the science scholars used Springer to retrieve information whereas only less than half of the scholars from Social Science faculty used Springer.
- After Springer, majority of the scholars of Science used Elsevier whereas only around a quarter of scholars from Social Science used Elsevier.
- A few scholars of Science scholars made use of Emerald compared to less use made by Social Science Scholars
- JSTOR, PubMed, ScienceDirect, Nature, American Chemical Society & PlosOne were few other resources used by scholars.

Use of Open Access Resources

- Majority of open access resources were used by Science faculty, less were used by Social Science faculty.

Problems Faced

- The scholars of both the faculties faced problems sometimes while accessing e-resources with a slight variation.
- Less research scholars from both Science and Social Science faculty never faced problems while using e-resources.

In today's technology driven era, information dissemination for research scholars has to be fast and precise which is possible only through providing quality e-resources through university library network. To maximise research output and enhance quality research, it becomes important that every scholar, irrespective of

their background, should be made aware about the know-how of e-resources. In this context, the responsibility falls on the shoulders of the library staff and library professionals. The library professionals and the staff should be proactive in organising various orientation and awareness programmes aimed at enabling the use of e-resources. For a quality research to be carried out, it is necessary to provide uninterrupted access to e-resources. During the study, it was noted that most of the scholars faced problems frequently while accessing e-resources due to poor internet connectivity, less duration of browsing time provided by the library, non-availability of subscription to quality journals (like Nature) and frequent log in expiry through the library portal. A strong network connectivity in this context needs to be installed which will enable the research scholars utilise the e-resources through any corner of the campus. It will definitely save the precious time of the scholars as they will be having access to e-resources in their laboratories, seminar halls etc. hence not restricting the use to the central library of the campus.

Research is the backbone of a university. The research scholars should be provided with uninterrupted internet connectivity for better use and the log-in period for research scholars which is wasted because of poor connectivity, thus the browsing time ends without any proper utilisation. The study stresses on providing research scholars with a greater log-in browsing period to maximise the research and bring the University of Kashmir a step higher.

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