DESIDOC Journal of Library & Information Technology, Vol. 34, No. 1, January 2014, pp. 28-34

Use of E-resources by Faculty Members and Students of Sher-E-Kashmir Institute of Medical Science (SKIMS)

Iqbal Bhat and Mahesh V. Mudhol

Department of Library & Information Science, Mangalore University, Mangalore, Karnataka-574 119
E-mail: iqbalnabi23@yahoo.com

ABSTRACT

Electronic information sources are computer-based information sources. There are several forms and types of electronic resources which are available on the internet. Some of the popular ones that are gaining ground are the electronic journals, standards, technical specifications, reports, patents, full-text articles, trade reports, and hosts of other document sources. This paper presents the findings of a survey about the awareness and use of electronic resources by medical students available in the medical institute libraries. The subjects chosen for this study were faculty members and medical students of Sher-E-Kashmir Institute of Medical Science (SKIMS), Jammu and Kashmir, India. For evaluating study questions and data collection, the questionnaire was distributed to a random sample of 300 faculty members, MD/MS (i.e., PG) and MBB final year (i.e., UG) students. The results of this survey are presented and discussed in this paper.

Keywords: Medical institute libraries, e-resources, search engines, internet, OPAC

1. INTRODUCTION

The advent of information technology has resulted in reducing the size of libraries. In fact, these small modern libraries have rich potential of information. It has been possible due to the digitisation of information. The digital and electronic information is based on digitised data/information, which has gradually replaced paper-based records. As the visual information system in comparison to text-based information system is getting more and more popular these days, the traditional libraries are becoming hybrid libraries as they are in the process of doing digitisation of their documents and moving towards to become digital libraries. Internet has become an unavoidable requirement for every institution of higher learning. The medical and technical education is important for the development of any country. The medical institutes are very much needed to provide disease free society in the country. Use of the internet is a part of university students' daily routine, because they have grown up with computers. It is integrated into their daily communication habits and has become a technology as ordinary as the telephone or television. Medical college students use the internet nearly as much for social communication as they do for their education. But just as they use the internet to supplement the formal parts of their education, they go online to enhance their social lives. The internet facility in India has grown tremendously grown over the years. The use of internet is rapidly increasing owing to its efficiency and capability in providing right information to the right person at the right time. Internet has become an unavoidable necessasity for every institution of higher learning. The medical institutes are very much needed for the scientific advancement of the country. An attempt has been made to determine the present status and use of electronic resources (e- resources) at Sher-E-Kashmir Institute of Medical Science (SKIMS) by faculty members, PG (MD/MS) and UG (MBBS) final year students. Medical faculty, MD/MS (PG) students and MBBS (UG) students more accomplished and innovative in the work force, information plays vital role, for accessing information and keeping abreast with the new developments, and internet is becoming an essential human need with all its facets.

2. BACKGROUND

The SKIMS, Srinagar is one among the foremost of the institutes of national importance in higher and advanced medical education. This institute has a prestige of being one of the great medical universities in basic and higher applied medical research. The institute was established under State Legislature Act in the year 1982. The library of SKIMS known as SKIMS library was commissioned in the year 1982 and this hospital library is taken to be regarded as active service-oriented library as

Received 16 April 2013, Online published 17 January 2014

it effectively contributes to the hospitals' primary mission of providing patients with the best possible care and by supporting the delivery of patient care by providing physicians, health care professionals, nurses, technologists, etc., with library services to meet their informational, educational and research-related needs. The SKIMS is a big institute with large faculty, executive officers, PG's research scholars, post doctoral scholars and other supporting staff in hundreds. To serve the objectives of patient care, education and research, the skims is developing its library as an effective information center. The SKIMS Library is located on the faculty block (3rd floor), centrally accessible location. The collection of SKIMS Library is currently 19,200 books, 16000 bound volumes, 200 current journals and 1400 thesis. SKIMS library subscribed 4585 online journals and 3322 digital resources for library users in the year 2012. It also provide OPAC service to its users. The study was carried out between April 2012 to March 2013.

3. OBJECTIVES

- To assess the contemporary use of e-resources.
- To analyse the respondents' extent of access to e-resources.
- To examine the attitude of the faculty members and students towards use of e-resources.
- To find out the main reason(s) behind the usage of e-resources.
- To study the respondents' satisfaction and problems in utilising the e-resources

4. LITERATURE REVIEW

There are numbers of studies on use of e-resources by students and faculty members. Achonna[1] in his research found, use of e-journal resources were low. Lack of skills, inadequate provision of computers and power outrage etc. were the problems faced in use of e-resources. Study concluded the need for the training skills, provision of adequate computers, need to popularise the IT and its usage and to motivate the students to use e-journal resources. Joteen Singh[2], *et al*. executed a study on use of internet-based e-resources at Manipur University to examine the use of e-information focusing on the internet services by post graduate students, research scholars, teachers and non-teaching staff members. Users were using the internet mainly to download the information from web-based resources and web-sites. Lack of power supply and the low speed internet access were general problems faced by users in accessing information from web-based resources. Baikady & Mudhol[3] explored use of web resources in learning, teaching, clinical practice, and patient care and found that users prefer web-based resources over traditional library and users perceive that web contains exhaustive information and is easy to use. Baskaran[4] revealed that maximum use of library is by faculty of science particularly scientific e-journals for repairing seminars, conferences and other assignments. Bashorun[5], *et al.,* found that the frequency of use of e-resources by teaching staff was low, as most of the faculty time is spent on teaching. The study also pointed out some of the problems like lack of awareness to users about electronic resources provided by the library, lack of electricity supply to use computer, slow speed of network, and inadequate searching skills. Kumar & Kumar[6] found, in his study of medical and management colleges in Bangalore that the users are well aware of e-resources and prefer to use internet.

5. METHODOLOGY

The questionnaire tool was used for collecting the data from the faculty members and students of SKIMS. A total number of 300 questionnaires were distributed among the faculty members and students. This constitutes 80% (240/300) of the total response. The present study, in its survey of medical professionals about the use of e-resources, has the sample of 300 (120 UG students, 70 PG students and 110 faculty members) respondents, selected from SKIMS library. The investigator could collect questionnaires from only 240 out of 300 medical faculty members and students among.

6. DATA ANALYSIS

6.1 Subject-wise Distribution of Respondents

Table 1 indicates the subject-wise distribution of respondents. It could be noted that out of the total 240 respondents, 20 % are general medicine and 23.33 are gastroenterology; 29.16 % of the respondents are anesthesiology; and 15.84 % are general surgery professionals. It is observed that 11.67 % of the respondents are neurology. It is concluded that more anesthesiology medical faculty members and students followed by gastroenterology are the respondents in the study.

Table 1. Subject-wise distribution of respondents

Subject	No. of respondents (%)
General medicine	48 (20 %)
Gastroenterology	56 (23.33 %)
Anesthesiology	70 (29.16 %)
General surgery	38 (15.84 %)
Neurology	28 (11.67 %)
Total	**240**

Table 2 indicates the age-wise distribution of respondents. It could be noted that out of the total 240 respondents, 32.91 % of them belong to the age group of below 30 years and 20.00 % of them come under the age group of 31-35 years. It is concluded from the above table that majority of the respondents are found to be with the age group of below 30 years.

Table 2. Age-wise distribution of respondents

Age group	No. of respondents (%)
Below 30	79 (32.91 %)
31-35	48 (20 %)
36-40	32 (13.33 %)
41-45	20 (8.33 %)
46-50	28 (11.67 %)
Above 50	33 (13.76 %)
Total	**240**

6.3 Gender-wise Distribution of Respondents

Out of the total 240 respondents, majority of the respondents (60.83 %) belong to the male group and (39.17 %) are females. It is concluded that male respondents constitute more in number than female respondents.

6.4 Frequency of Access to Internet

Table 3 indicates the subject-wise respondents' frequency of access to internet. It could be noted that majority of the general surgery faculty and student respondents (42.11 %) have below 2 hours of access to internet. Majority of the anesthesiology (40 %) have 3-4 hours of access to internet. Around one third of the gastroenterology faculty and student respondents (28.58 %) have above 5 hours of access to Internet. It could be seen clearly from the above discussion that 2-3 hours of access to internet is quite common among the gastroenterology and general medicine faculties and students.

6.5 Frequency of Library Visits

Table 4 indicates the subject-wise respondents' frequency of library visits. It could be noted that majority of the general surgery and neurology faculty and students make library visit daily. Majority of the general medicine faculty and student respondents (33.34 %) make library visit once in a week. One third of anesthesiology faculty and student respondents (31.44 %) visit library once in a fortnight. Around one fourth the gastroenterology faculty and student respondents (28.58 %) visit library as and when required.

6.6 Mode of Searching Documents in the Library

Table 5 indicates the respondents' mode of searching documents in the library. It could be noted that majority of the general surgery faculty and students (42.11 %) and also neurology faculty and student respondents (35.72 %) search library documents with the help of library catalogue. A considerable number of anesthesiology faculty and student respondents (40 %) directly search library documents. Around one third of the gastroenterology faculty and student respondents (28.58 %) make

Table 3. Frequency of access to internet

Subject	Less than 2 hours	2-3 hours	3-4 hours	4-5 hours	Above 5 hours	Total
General medicine	18 (37.50 %)	10 (20.84 %)	6 (12.50 %)	8 (16.66 %)	6 (12.50 %)	**48**
Gastroenterology	10 (17.86 %)	12 (21.42 %)	8 (14.28 %)	10 (17.86 %)	16 (28.58 %)	**56**
Anesthesiology	6 (8.57 %)	8 (11.43 %)	28 (40 %)	22 (31.43)	6 (8.57 %)	**70**
General surgery	16 (42.11 %)	4 (10.53 %)	8 (21.05 %)	6 (15.78 %)	4 (10.53 %)	**38**
Neurology	7 (25 %)	5 (17.86 %)	7 (25 %)	5 (17.86 %)	4 (14.28 %)	**28**
Total	**57 (23.75 %)**	**39 (16.25 %)**	**57 (23.75 %)**	**51 (21.25 %)**	**36 (15 %)**	**240**

Table 4. Frequency of library visits

Subject	Daily	Thrice a week	Once in a week	Once in a fortnight	As and when required	Total
Gen. medicine	6 (12.50 %)	12 (25.00 %)	16 (33.34 %)	8 (16.66 %)	6 (12.50 %)	**48**
Gastroenterology	10 (17.86 %)	6 (10.70 %)	14 (25.00 %)	10 (17.86 %)	16 (28.58 %)	**56**
Anesthesiology	18 (25.71 %)	18 (25.71 %)	6 (8.57 %)	22 (31.44 %)	6 (8.57 %)	**70**
General surgery	14 (36.85 %)	4 (10.53 %)	10 (26.31 %)	6 (15.78 %)	4 (10.53 %)	**38**
Neurology	10 (35.72 %)	5 (17.86 %)	4 (14.28 %)	5 (17.86 %)	4 (14.28 %)	**28**
Total	**58 (24.16 %)**	**45 (18.75 %)**	**50 (20.83 %)**	**51 (21.26 %)**	**36 (15 %)**	**240**

Table 5. Mode of searching documents in the library

Subject	Library catalogue	Library staff	Directly search in the stack	OPAC	Online database	Total
General medicine	18 (37.50 %)	10 (20.84 %)	6 (12.50 %)	8 (16.66 %)	6 (12.50 %)	**48**
Gastroenterology	10 (17.86 %)	6 (10.70 %)	14 (25 %)	10 (17.86 %)	16 (28.58 %)	**56**
Anesthesiology	6 (8.57 %)	8 (11.43 %)	28 (40 %)	22 (31.43 %)	6 (8.57 %)	**70**
General surgery	16 (42.11 %)	4 (10.53 %)	8 (21.05 %)	6 (15.78 %)	4 (10.53 %)	**38**
Neurology	10 (35.72 %)	5 (17.86 %)	4 (14.28 %)	5 (17.86 %)	4 (14.28 %)	**28**
Total	**60 (25 %)**	**33 (13.75 %)**	**60 (25 %)**	**51 (21.25 %)**	**36 (15 %)**	**240**

use of online database to search library documents. It could be seen clearly from the above discussion that anesthesiology faculty and students make use of OPAC to search documents in the library and gastroenterology faculty and students make use of online database to search library mainly.

6.7 Satisfaction on Search Engines

Table 6 indicates the respondents' satisfaction on search engines. The anesthesiology faculty and student respondents occupy the first position with respect to their overall satisfaction on all search engines as their secured mean score is 3.52 on a 5 point rating scale. The general medicine faculty and student respondents take the second position in their overall satisfaction on all search engines as their secured mean score is 3.38 on a 5 point rating scale. The general surgery faculty members and students rank in the third position in their overall satisfaction on all search engines as their secured mean score is 3.24 on a 5 point rating scale. The neurology faculty and student respondents take the fourth position in their overall satisfaction on all search engines as their secured mean score is 3.22 on a 5 point rating scale. The gastroenterology faculty and student respondents occupy the fifth position in their overall satisfaction on all search engines as their secured mean score is 3.03 on a 5 point rating scale.

6.8 Purpose of Using E-resources

Table 7 indicates the subject-wise respondents' purpose of gathering e-resources. The general

Table 6. Satisfaction on search engines

Name of search engines	General medicine	Gastroenterology	Anesthesiology	General surgery	Neurology	Total
Google.com	3.81	2.52	4.11	2.96	3.96	**4.01**
Yahoo.com	4.11	2.96	4.12	3.14	4.10	**3.90**
msn.com	3.77	2.26	3.90	2.56	3.76	**3.51**
sanook.com	2.77	3.11	3.44	3.15	3.52	**3.16**
hunsa.com	3.52	3.15	2.90	2.85	2.44	**2.96**
Altavista	2.81	3.52	3.71	3.81	2.52	**3.18**
Excite	3.85	3.79	2.36	4.11	3.36	**3.85**
Euroseek	2.36	2.96	3.65	3.36	2.12	**2.52**
Total	**3.38**	**3.03**	**3.52**	**3.24**	**3.22**	**3.39**

Table 7. Purpose of using e-resources

Purpose for using e-resources	General medicine	Gastroenterology	Anesthesiology	General surgery	Neurology	Total
For research	3.55	3.14	2.76	3.01	2.96	**3.09**
For improving area of specialisation	3.48	3.65	2.53	2.42	2.14	**3.23**
E-books	3.99	3.49	3.72	3.89	3.59	**3.80**
Career Information	3.36	3.42	2.18	2.26	3.26	**2.92**
Preparation for class teaching	4.21	3.11	3.85	3.14	2.96	**4.02**
MEDLINE	4.14	4.21	3.55	3.26	3.12	**3.90**
E-journals	4.10	4.05	3.62	3.56	3.44	**3.85**
General information	3.52	3.10	2.36	2.49	2.16	**2.78**
Sending and receiving e-mail	4.21	4.21	3.81	3.78	3.57	**4.00**
Entertainment	3.33	2.42	2.21	2.56	2.89	**2.65**
Total	**3.85**	**3.59**	**3.16**	**3.09**	**3.00**	**3.49**

medicine faculty and student respondents top the position with respect to their overall purpose of e-resources as their secured mean score is 3.85 on a 5 point rating scale. The gastroenterology faculty and student respondents take the second position in their overall purpose of gathering e-resources as their secured mean score is 3.59 on a 5 point rating scale. The anesthesiology faculty members and student respondents rank in the third position in their overall purpose of gathering e-resources as their secured mean score is 3.16 on a 5 point rating scale. The general surgery faculty and student respondents take the fourth position in their overall purpose of gathering e-resources as their secured mean score is 3.09 on a 5 point rating scale. The neurology faculty and student respondents occupy the fifth position in their overall purpose of gathering e-resources as their secured mean score is 3.00 on a 5 point rating scale.

6.9 Barriers in Accessing E-Resources

Table 8 indicates the subject-wise respondents' barriers in accessing e-resources. The neurology respondents top the position with respect to their overall barriers in accessing e-resources as their secured mean score is 3.94 on a 5 point rating scale. The general surgery respondents take the second position in their overall barriers in accessing e-resources as their secured mean score is 3.85 on a 5 point rating scale. The anesthesiology respondents rank in the third position in their overall barriers as their secured mean score is 3.44 on a 5 point rating scale. The gastroenterology respondents take the fourth position in their overall barriers as their secured mean score is 3.11 on a 5 point rating scale. The general medicine respondents occupy the fifth position in their overall barriers in accessing e-resources as their secured mean score is 3.02 on a 5 point rating scale.

6.10 Views on Library Services

Table 9 presents data on the respondents' views on library services. It could be noted that more than one third of the general surgery respondents (42.11 %) and general medicine respondents (37.5 %) observe that library services are excellent. Around one fourth of the general medicine and anesthesiology respondents view mainly that they have no opinion about library services. A considerable number of anesthesiology respondents (31.44 %) perceive about the poor performance of library service. Around one third of the gastroenterology faculty members and students have very poor opinion about library services.

7. RESULTS AND DISSCUSSIONS

The survey launched in April 2012 at the SKIMS Library revealed that 2-3 hours of access to internet is quite common among the gastroenterology and general medicine faculties and students. Neurology and general surgery faculty members and students mainly make library visit daily and general medicine faculty and student respondents make high level of library visit at once in a week. Majority of the general

Table 8. Barriers in accessing e-resources

Barriers	General medicine	Gastroenterology	Anesthesiology	General surgery	Neurology	Total
Difficulty in finding relevant information	3.55	2.98	3.44	4.02	3.98	3.55
Virus	4.05	3.66	3.69	4.11	4.16	4.00
Limited access to computers	3.34	3.52	3.96	4.10	4.05	3.65
Lack of time	2.26	2.79	3.10	3.50	3.62	2.80
Too much information retrieved	2.65	3.16	3.10	3.41	3.52	2.75
Longtime to view	2.42	2.79	3.21	4.01	4.11	3.20
Slow accessibility	2.49	2.39	2.99	3.65	3.96	2.90
Total (overall)	**3.02**	**3.11**	**3.44**	**3.85**	**3.94**	**3.33**

Table 9. Views on library services

Subject	Excellent	Good	No opinion	Poor	Very poor	Total
General medicine	18 (37.5 %)	10 (20.84 %)	6 (12.5 %)	8 (16.66 %)	6 (12.5 %)	**48**
Gastroenterology	10 (17.86 %)	6 (10.7 %)	14 (25 %)	10 (17.86 %)	16 (28.58 %)	**56**
Anesthesiology	18 (25.71 %)	18 (25.71 %)	6 (8.57 %)	22 (31.44 %)	6 (8.57 %)	**70**
General surgery	16 (42.11 %)	4 (10.53 %)	8 (21.05 %)	6 (15.78 %)	4 (10.53 %)	**38**
Neurology	7 (25 %)	5 (17.86 %)	7 (25 %)	5 (17.86 %)	4 (14.28 %)	**28**
Total	**69 (28.75 %)**	**43 (17.92 %)**	**41 (17.08 %)**	**51 (21.25 %)**	**36 (15 %)**	**240**

surgery faculty and student respondents (42.11%) and neurology faculty and student respondents (35.72 %) search library documents with the help of library catalogue. Anesthesiology faculty and student respondents occupy the first position with respect to their overall satisfaction on all search engines, the general medicine faculty and student respondents top the position with respect to their overall purpose of using e-resources as their secured mean score is 3.85 on a 5 point rating scale. Neurology respondents take the first position with respect to their overall barriers in accessing e-resources, more than one third of the general surgery respondents (42.11 %) and general medicine respondents (37.5 %) observe that library services are excellent. The advantages of e-resources have drawn attention of the library users to a great extent. Accordingly, these resources have occupied a significant place in the collection and budget of almost all libraries.

Medical Faculty members and students' attitudes seem to be very positive towards e-resources for their study and research and the role of libraries as gateway to provide assistance in accessing these resources. Faculty members and students heavily depend on e-resources for their required information and to keep themselves up-to-date in their subject area. Though some expects that the role of libraries as a gateway to the e-resources will have less importance in future as faculty members and medical students access more and more e-resources in their respective departments or personal desktop/laptops, it seems to be more hypothetical. Rather the role of libraries in the age of e-resources will increase tremendously, particularly in providing training and guidance to use authentic and relevant information. The libraries should develop necessary tools to provide such services to their users satisfactorily. The speed of internet needs to be increased for quick access to the available e-resources. The SKIMS Central Library needs to arrange various orientation and training programmes for faculty members and students for the optimum use of available e-resources. In this context, the SKIMS Library may arrange orientation programmes and subscribe more databases for its users.

8. SUGGESTIONS

Based on the various observations of the study the following suggestions are made:

- More computer terminals should be installed in the library for easy access to faculty members and students.
- Problems of slow access speed can be overcome by increasing the bandwidth.
- Increasing resources should be allocated for enriching digital resources for the benefit of users.
- Awareness should be generated on the e-resources to obtain current information.
- Qualified medical staff should be appointed to provide the expert guidance to users about e-resources.

Some orientation training programmes should be organised by the SKIMS Library at regular intervals so that the maximum users can improve their excellence or proficiency in the use of computers and e-resources.

9. CONCLUSIONS

The development of medical e-resources grossly depends on the application of ICT technologies. Librarians have a better role to play in the process. They have to coordinate the efforts of all sections of medical or health system. Librarians are better professionals to coordinate different sections of the communication system, as they are familiar with the information work as information workers. For this, the governments and the management of the concerned medical institutions should support and encourage the libraries and librarians by framing necessary policies, developing standards and procedures and encouraging specialisation, with an emphasis on E-resource organisation and control, so that the medical librarians will be enabled to render more productive and efficient services. The library environment has currently undergone drastic change in terms of collections and services. The proliferation of e-resources has had a significant impact on the way the academic community uses, stores and preserves information. Technology is in a position now to offer great potential for teaching and learning medicine. The challenge is to combine the expertise of technologists with the expertise of medical educators, clinicians and basic scientists in efforts to design and develop innovative approaches towards medical education that utilise IT to its full potential for maximum educational value.

REFERENCES

1. Achonna. Awareness, access and usage of e-journal resources of the library by the students of Yaba College of Technology, Yaba, Lagos Nigeria. *Samaru J. Inf. Stud.*, 2008, **8**(1), 26-34.
2. Joteen, K.; Singh, A. & Chandel, A.S. Use of internet based e-resources at Manipur University. *DESIDOC J. Lib. Inf. Technol.*, 2009, **29**(6), 13-20.

3. Baikady, M.R., *et al*. Web as a learning resource at the medical college libraries in coastal Karnataka: Perception of faculty and students. *DESIDOC J. Lib. Inf. Technol.*, 2011, **31**(2), 121-35.
4. Baskaran, C. User perception of library services in academic institutions in the southern districts of Tamil Nadu, India: A case study. *Lib. Phil. Pract.*, 2011. http://unllib.unl.edu/LPP/ (accessed on 15 August 2012).
5. Bashorun, M., *et al*. User perception of electronic resources in the university of Ilorin, Nigeria (UNILORIN). *J. Emerg. Trend. Comp. Inf. Sci.*, 2011, **2**(11), 554-62.
6. Kumar, Sampath B.Y. & Kumar, G.T. Perception and usage of e-resources and the internet by Indian academics. *The Electronic Library,* 2010, **28**(1), 137–56.

About the Authors

Mohd Iqbal Bhat obtained his MLIS from Kashmir University and Diploma in Information Technology from CEDTI, New Delhi. He is pursuing PhD from Mangalore University, Kanataka. His area of research include: Impact of e-resources on medical professionals. Presently, he is working as Asst. Librarian in Jammu and Kashmir Academy of Art Culture and Languages since last 5 years.

Dr Mahesh V. Mudhol is a Professor and chairman of Department of Library and Iformation Science, Mangalore University, Kanataka. He has published more than 40 papers on different topics of library science. He has produced 5 PhDs and 7 MPhils.