

Use of Internet and Electronic Information Resources by Teachers and Students of Physiotherapy Colleges of Punjab, India: A Case Study

Rajeev Manhas^{1,*}, Asha², Gurmeet Kaur³, Sapna Rani⁴

¹University Librarian, Baba Farid University of Health Sciences, Faridkot, Punjab, India

²State Institute of Nursing & Paramedical Sciences, Badal, Punjab, India

³Department of Health Sciences Library & Information System, BFUHS, Faridkot, Punjab, India

⁴Baba Farid Law College, Faridkot, Punjab, India

*Corresponding author: dr.rajeevmanhas@gmail.com

Received May 09, 2015; Revised May 18, 2015; Accepted June 16, 2015

Abstract Information is the key component of modern society and almost each and everything is based on the information and depends upon its resources. The emergence of national knowledge networks in some countries like India, National Knowledge Network exhibits the importance of information and its sharing among the stakeholders. The tools of Information and Communication Technology (ICT) like Internet and electronic information resources are their use, is the matter of daily concern now. These tools have also made tremendous impact on the academic activities of the faculty members, researchers, students and the other health sciences professionals. After the advent of these tools, a significant transition is seen in users' approach and the way they seek information and the methods they use in research and learning activities. In such an academic environment, institutions of higher learning such as physiotherapy colleges are also doing their best to provide their users access to this vast reservoir of information. The present survey is an attempt to assess the effectiveness of the Internet and electronic information resources as an educational tool and to explore what role they play in the educational system through an examination of the physiotherapy colleges of Punjab, India. The Internet and electronic information resources are inseparable part of today's medical education system. The present study also explores the satisfaction levels of the users with Internet and electronic information resources facilities provided by the physiotherapy colleges under study. The questionnaire was distributed to 200 respondents i.e. teachers and students of the physiotherapy colleges affiliated (upto December 2012) to Baba Farid University of Health Sciences, Faridkot, Punjab, India to get the responses relating to their use of Internet and electronic information resources. One hundred fifty seven questionnaires (64 teachers and 93 students) were received back. The overall response rate of the survey was 78.5%.

Keywords: internet, electronic information resources, teachers and students, physiotherapy colleges, user survey, Punjab, India

Cite This Article: Rajeev Manhas, Asha, Gurmeet Kaur, and Sapna Rani, "Use of Internet and Electronic Information Resources by Teachers and Students of Physiotherapy Colleges of Punjab, India: A Case Study." *American Journal of Educational Research*, vol. 3, no. 7 (2015): 886-892. doi: 10.12691/education-3-7-12.

1. Introduction

Information is the key component of modern society and almost each and everything is based on the information and depends upon its resources. The emergence of national knowledge networks in some countries like India, National Knowledge Network exhibits the importance of information and its sharing among the stakeholders. The tools of Information and Communication Technology (ICT) like Internet and electronic information resources are their use, is the matter of daily concern now. These tools have also made tremendous impact on the academic activities of the faculty members, researchers, students and the other health sciences professionals. After the advent of these

tools, a significant transition is seen in users' approach and the way they seek information and the methods they use in research and learning activities. In such an academic environment, institutions of higher learning such as physiotherapy colleges are also doing their best to provide their users access to this vast reservoir of information. Due to so many advantages like easy accessibility, availability at any time and at any place basis and searching facility of electronic information resources, most of the libraries of academic institutions like colleges and universities of the present day have added these resources in their convoy and provide access to their respective users.

2. Need of the Study

The present survey is an attempt to assess the effectiveness of the Internet and electronic information resources as an educational tool and to explore what role they play in the educational system through an examination of the physiotherapy colleges of Punjab, India. The Internet and electronic information resources are inseparable part of today's medical education system. The present study also explores the satisfaction levels of the users with Internet and electronic information resources facilities provided by the physiotherapy colleges under study.

3. Literature Review

There are number of studies conducted on use of Internet and electronic information resources, but no in-depth study has been carried out on use of Internet and electronic information resources by physiotherapy students and teachers. The present study is an attempt to find the usage level of Internet and electronic information resources among the physiotherapy colleges affiliated to Baba Farid University of Health Sciences, Faridkot, Punjab, India. To make this study more widen, a review of relevant literature has been done. Islam and Habiba [4] have conducted a study on 133 students and faculty members about using pattern of Internet and E-resources by the students and faculty members of a Private University in Bangladesh. The results of the study reveal that most of the respondents i.e. 116 use the Internet and e-resources for learning purposes and e-books were on the top in their choices about favourite types of e-resources with 90 responses. The results also show that the respondents were also satisfied with the e-resources. Shivraja [7] conducted a study on the use of Internet by students and faculty of nursing college libraries in selected five nursing colleges functioning within the territorial jurisdiction of the Bangalore city. The results of study reveal that 84.76% of the faculty members and 80.58% of the students used Internet for their teaching and study purposes respectively, whereas 91.29% of the students used it for their study purpose. 75.23% of faculty and 56.31% of student respondents reported that they faced the problem of slow access speed in using Internet. Ahmad and Panda [1] conducted a survey on awareness and use of electronic information resources by the faculty members of Indian institutes in Dubai International Academic City (DIAC). The results of survey show that majority of the faculty members are aware and use the electronic information resources. The study confirmed to some extent the lack of knowledge and use of libraries specific resources such as e-theses, patents and CD-ROM database. It is also found that 100% faculty members agreed that e-resources are very useful and important to their work. Tyagi [8], in his survey exhibits that data scanned and preserved in document management software play an important role to access relevant information. Awareness among the users about the availability of online journals was found highly satisfactory. Online journals were mostly used for research needs and similarly pharmacy and pharmacology discipline-based journals were used widely. Thanuskodi [6] conducted a study and elaborates that the Internet is also making substantial inroads in patient care and dissemination of health care information.

It is changing the way health sciences professionals obtain information. They use the Internet and electronic information resources to do things like accessing medical records, providing remote patient care through telemedicine facilities, and accessing health care literature. The study reveals that respondents have high problems in accessing e-resources in terms of virus, difficulty in using digital resources due to lack of Information Technology (IT) knowledge and limited access to computers. Mulla [5] conducted a survey on "use of electronic sources by faculty member in HKBK College of engineering". The study reveals that 100% of faculty members were using electronic information resources for research purposes. Kaur & Kumar (2008) conducted a survey on "Use of Internet Services and Resources in the Engineering Colleges of Punjab, Haryana and Himachal Pradesh: A Study. The survey revealed that the majority of the respondents, i.e. 65.6%, access the Internet from college or their workplace. More than 75% of the respondent's use the Internet services mainly for educational and research purposes. More than 70% of the respondents feel that the Internet is useful, informative, easy to use, inexpensive and time saving. Manhas [3] conducted a survey on "Use of the Internet and Electronic Resources for Dental Science Information: A Case study". The results of the study reveal that the dental teachers and students (73.7%) under study have their own personal computers or laptops. The most popular method of acquiring the necessary skills to use Internet electronic resources is via trial and error method and most of the respondents (i.e. 56.8%) used this method to learn the Internet, followed by guidance from colleagues and friends with 29.2% respondents. 42.6% of the respondents use the Internet and electronic resources for finding health/dental sciences information, followed by patient care with 26.5% responses. Majority of the respondents i.e. 71.3% feel fully satisfied with Internet services and electronic resources. A majority of the respondents (80.2%) feel that the Internet and electronic resources cannot replace the physical resources (print resources) that it only supplements the print resources.

4. Objectives of the Study

The specific objectives included are:

- To study the use of the Internet and electronic information resources by the teachers and the students of the physiotherapy colleges under study;
- To observe the type of e-resources used by the teachers and the students;
- To find out the problems faced by the respondents while using the Internet and electronic information resources;
- To explore the impact of Internet and e-resources;
- To find out the satisfaction level with the Internet and e-resources;
- To suggest improvement measures based on the inferences drawn from the study

5. Research Methodology

In order to find out the use of Internet and electronic information resources, all of the physiotherapy colleges

under study, were visited personally by the researchers and data were collected from respondents. The study included the 9 physiotherapy colleges affiliated to Baba Farid University of Health Sciences, Faridkot, Punjab, India upto 2012 mentioned in Appendix – I given below. Teachers and students were the respondents of the study. Keeping in view of objectives of the study, a structured questionnaire given below as Appendix – II, was designed and it was pre-tested before using the same for the survey. The questionnaire was distributed to 180 respondents i.e. teachers and students of the physiotherapy colleges to get the responses relating to their use of Internet and electronic information resources. This survey was conducted during December 2012 to May 2013. Twenty respondents (ten teachers and ten students) were randomly selected for the survey from each college under study after discussion with statistical expert. Some respondents willingly filled out the questionnaire but some showed reluctance. The respondents were also interviewed to fill in any gaps in their responses. One hundred fifty seven questionnaires (64 teachers and 93 students) were received back. The overall response rate of the survey was 78.5%.

6. Data Analysis and Findings

1. Level of computer training or diploma in computer

Table 1. Computer training or diploma in computer attained by the respondents

Respondent	Yes	No
Teachers	12 (7.6%)	52 (33.1%)
Students	10 (6.4%)	83 (52.9%)
Total	22 (14%)	135 (86%)

Table 1 shows that only 14% of the physiotherapy teachers and students have computer diploma and certificates. It exhibits that majority of the respondents i.e. 86% did not have any formal training of computer and they have learnt it by other methods.

2. Experience of use of Internet and electronic information resources

Table 2 shows that out of total respondents, 28.7% was having 1-3 years of experience of use of Internet and electronic information resources from 1-3 years of internet experience, followed by 19.7% respondents with 3-5 years of experience. The data also shows that 37.6% of the respondents were having more than 5 years of experience of use of Internet and electronic information resources.

Table 2. Experience of use of Internet and electronic information resources

Respondent	Less than 1 year	1-3 years	3-5 years	More than 5 years
Teachers	13 (8.3%)	17 (10.8%)	9 (5.7%)	25 (15.9%)
Students	9 (5.7%)	28 (17.8%)	10 (6.4%)	83 (52.9%)
Total	22 (14%)	45 (28.7%)	22 (14%)	135 (86%)

3. Respondents owned a computer or laptop

Table 3. Respondents having a computer or laptop at home

Respondent	Yes	No
Teachers	64 (40.8%)	-
Students	88 (59.2%)	5 (3.2%)
Total	22 (96.8%)	135 (3.2%)

Table 3 shows that majority of the respondents i.e. 96.8% respondents have their own computer or laptop at home. Only meagre number of respondents i.e. 5 (3.2%) did not have any computer device or laptop at their home, it means they may use the Internet and electronic information resources from other places like college or cyber café etc.

4. Level of computer literacy

Table 4. Level of computer literacy of respondents

Respondent	Level of Computer Literacy		
	Expert	Average	Below average
Teachers	14 (8.9%)	49 (31.2%)	1 (0.6%)
Students	11 (7%)	74 (47.1%)	8 (5.1%)
Total	25 (15.9%)	123 (78.3%)	9 (5.7%)

Table 4 shows that majority of the respondents i.e. 78.3% have average level of computer literacy. The data also reflects that 15.9% of the respondents have expert level of computer literacy. Only 5.7% of the respondents have indicated that they have below average level of computer literacy.

5. Location of use of Internet and electronic information resources

Table 5. Location of use of Internet and electronic information resources

Respondent	Location of Use		
	Home	College	Cafe
Teachers	45 (28.6%)	19 (12.3%)	-
Students	78 (49.6%)	12 (7.6%)	3 (1.9%)
Total	123 (78.2%)	3 (19.9%)	3 (1.9%)

Table 5 highlights the location from where the respondents accessed the Internet and electronic information resources most. A majority of the respondents i.e. 78.2% access the Internet and electronic resources at their homes, followed by 19.9% of the respondents who have used college libraries to get the access and only meagre number of respondents 3 (1.9%) have indicated that they used cyber café to get the access.

6. Types of electronic information resources

Table 6. Types of electronic information resources

Types of Resources	Respondent		
	Teachers	Students	Total
E-books	44 (28%)	18 (11.5%)	62 (39.5%)
CD-ROM	18 (11.5%)	20 (12.7%)	38 (24.2%)
Conference Proceeding	1 (0.6%)	-	1 (0.6%)
E-databases	6 (3.8%)	5 (3.2%)	11 (7%)
Technical Report	15 (9.6%)	6 (3.8%)	21 (13.4%)
Theses and Dissertations	29 (18.5%)	26 (16.6%)	55 (35%)

Table 6 indicates that 39.5% of the respondents use e-books regularly, followed by 35% theses and dissertations, 24.2% CD-ROMs, 13.4% technical reports, 7% e-databases and 0.6% conference proceedings respectively.

7. Favourite sources of e-resources

Table 7. Favourite locations of e-resources

Resources	Teachers	Students	Total
Medline/Pub Med	49 (23.7%)	53 (25.5%)	102 (49.2%)
Ebsco Sport Discus Database	40 (19.3%)	21 (10.2%)	61 (29.5%)
HSLIBNET Consortium	22 (10.6%)	22 (10.7%)	44 (21.3%)
Total	111 (53.6%)	96 (46.4%)	207 (100%)

The Table 7 exhibits that 49.2% of the respondents use Medline/Pub Med to access the e-resources, followed by Ebsco Sport Discus Database with 29.5% responses. There were 21.3% of respondents who used the Health Sciences Library Network (an e-resources consortium) of Baba Farid University of Health Sciences, Faridkot, Punjab, India to get the access of e-resources.

8. Usefulness of e-resources

Table 8. Usefulness of e-resources

Resources	Very useful	Quite useful	Occasionally useful	Useless
Medline/Pub Med	34 (21.6%)	22 (14%)	8 (5.1%)	-
Ebsco SportDiscus Database	27 (17.2%)	41 (26.1%)	24 (15.3%)	1 (0.6%)
Total	61 (38.9%)	63 (40.1%)	32 (20.4%)	1 (0.6%)

Table 8 shows that majority of the respondents i.e. 79% found the electronic information resources useful. 20.4% of the respondents were of opinion that the e-resources are occasionally useful and only 0.6% of the respondents found it useless.

9. Hindrances in access of Internet and e-resources

Table 9. Major hindrances in access of Internet and e-resources

Hindrance	Teacher	Students	Total
Too much information Retrieved	12 (6.3%)	16 (8.4%)	28 (14.7%)
Time consuming	21 (11%)	44 (23.2%)	65 (34.2%)
Lack of IT knowledge to effectively utilize the services	38 (20%)	26 (13.7%)	64 (33.7%)
Using electronic resources and Internet detracts from doing work often detracts from doing work	10 (5.3%)	23 (12.1%)	33 (17.4%)
Total	81 (42.6%)	109 (57.4%)	190 (100%)

Table 9 shows that 34.2% of respondents found it time consuming to use of Internet and electronic information resources. The other major hindrance is lack of IT knowledge to effectively utilize the services with 33.7% responses. 17.4% of the respondents also found it as detracting factor for doing their work. 14.7% found that too much information is retrieved while accessing the Internet and electronic information resources.

10. Can Internet and electronic information resources replace the physical print resources print?

Table 10. Can Internet and electronic information resources replace the physical print resources print?

Respondent	Yes	No
Teachers	12 (7.7%)	52 (33.1%)
Students	1 (0.6%)	92 (58.6%)
Total	13 (8.3%)	144 (91.7%)

Table 10 shows that only 8.3% of the respondents were of opinion that the Internet and e-resources can replace the print medias of information. But majority of the respondents i.e. 91.7% indicated that though Internet and electronic information resources have so many advantages but they cannot replace the print sources of information rather they can only supplement to the print information resources.

7. Major findings

- A majority of the respondents i.e. 86% did not have any formal training of computer and they have learnt it by other methods.
- 57.3% of the respondents were having more than 3 years of experience of use of Internet and electronic information resources.
- A majority of the respondents i.e. 96.8% respondents have their own computer or laptop at home.
- A majority of the respondents i.e. 78.2% access the Internet and electronic resources from their homes, followed by 19.9% at college libraries.
- A majority of the respondents i.e. 78.3% have good level of computer literacy.
- 39.5% of the respondents use e-books regularly, followed by 35% theses and dissertations.
- 49.2% of the respondents use Medline/Pub Med to access the e-resources, followed by CINAHAL Plus with 29.5% responses.
- 21.3% of respondents also use HSLIBNET e-journals consortium (Health Sciences Library Network).
- A majority of the respondents i.e. 79% found the electronic information resources useful.
- The other major hindrances of use of Internet and electronic information resources are time consuming and lack of IT knowledge to effectively utilize the services with 34.2% and 33.7% responses respectively.
- A majority of the respondents i.e. 91.7% were of opinion that though Internet and electronic information resources have so many advantages but they cannot replace the print sources of information rather they can only supplement to the print information resources.

8. Suggestions

Based on the findings of the study, the following suggestions are put forward to improve the usage of Internet and electronic information resources among the physiotherapists in all the physiotherapy colleges and hospitals of Punjab state of India:

i. The subject of physiotherapy informatics should be included in the curriculum of the Bachelor and Masters programs of Physiotherapy.

ii. The libraries of the physiotherapy colleges should start the information literacy programmes to raise the awareness among the stakeholders.

iii. The college informatics centre should be upgraded with all the modern gadgets of information technology wi-fi access, printer, scanner, webcam etc., so that the users can maximum utilize the facilities available.

iv. More e-sources should be subscribed by the college libraries.

v. All the colleges should have their own websites, so that users can easily get the academic news and other relevant information and it should be regularly updated.

vi. The college libraries should start bulletin board services to inform the users about the arrival of current printed as well as online journals and other related information to enhance the use of these resources.

vii. The colleges should appoint qualified IT staff to provide the expert guidance to the users about e-resources and Internet.

9. Conclusion

The Internet as medium of communication is useful in physiotherapy, and has become an important means of delivering patient care. The use of the Internet is an evolving phenomenon at this stage. Its use in the physiotherapy colleges and hospitals under study is still in a state of infancy or early maturation. We can very well visualize a situation when all users will have achieved near perfection in the use of and full dependency on the Internet and electronic information resources for their information needs. So still there is a vast scope of future research in different types of users' behaviour and comparison of users' behaviour towards the Internet and electronic information resources [3].

Appendix – I

List of Affiliated Physiotherapy Colleges affiliated to Baba Farid University of Health Sciences, Faridkot, Punjab, India (upto 2012):

1. DAV Institute of Physiotherapy & Rehabilitation, MHRM, G.T. Road, Jalandhar, Punjab, India
2. College of Physiotherapy, Adesh Institute of Medical Sciences & Research, Kotkapura Road, Muktsar, Punjab, India
3. All Saints Institute of Medical Sciences & Research, on Sidhwan Canal, P.O. Jaspal Bangar, Ludhiana, Punjab, India
4. College of Physiotherapy, Adesh Institute of Medical Sciences & Research, Bathinda, Punjab, India
5. College of Physiotherapy, Christian Medical College, Ludhiana, Punjab, India
6. Gian Sagar College of Physiotherapy, Ram Nagar, VPO Banur, District Patiala, Punjab, India
7. University College of Physiotherapy, Faridkot, Punjab, India
8. State Institute of Nursing & Paramedical Sciences, Badal, District Muktsar, Punjab, India
9. Dashmesh College of Physiotherapy, Talwandi Road, Faridkot, Punjab, India

Acknowledgement

We are highly thankful to the students and faculty members of all the physiotherapy colleges (included in the study) affiliated to Baba Farid University of Health Sciences, Punjab, India, who have actively participated in this study.

References

- [1] Ahmad and Panda. (2013), "Awareness and use of electronic information resources by the faculty members of Indian institutes in Dubai international academic city (diac): A survey", *International Journal of Computer Science and Information Systems (IRJCSIS)*, vol. 2, no. 1, pp. 8-17.
- [2] Amritpal Kaur and Rajeev Kumar (2008), "Internet Use by Teachers and Students in Engineering Colleges of Punjab, Haryana, and Himachal Pradesh States of India: A Study", *The International Information & Library Review*, vol. 40, pp. 10-20.
- [3] Manhas, Rajeev (2008), "Use of the Internet and Electronic Resources for Dental Science Information: A Case Study", *Library Philosophy and Practice*, available at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1214&context=libphilprac> (accessed 15 January, 2014).
- [4] Md. Maidul Islam, and Umme Habiba (2015), "Using Pattern of Internet and E-resources by the Students and Faculty Members of a Private University in Bangladesh." *American Journal of Education Research*, vol. 3, no.5, pp. 541-546.
- [5] Mulla, K.R. (2011), "Use of Electronic Resources by Faculty Member in HKBK College of Engineering: A survey", *Library Philosophy and Practice*, available at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1625&context=libphilprac>. (accessed 14 December, 2014).
- [6] Thanuskodi, S. (2010), "Use of Internet and electronic resources for medical science information: A case study", *Journal of Communication*, vol. 1, no. 1, pp. 27-44.
- [7] Shivaraja, O. (2014), "Use of internet by the students and faculty members in nursing college libraries: An analysis", *Indian Journal of Library and Information Science*, vol. 8, no. 2.
- [8] Tyagi, S. (2012), "Use of Electronic Information Resources at the Indian pharmacopoeia Commission", *DESIDOC Journal of library and Information Technology*, vol. 32, no. 2, pp. 171-78.

Appendix – II

Questionnaire

BABA FARID UNIVERSITY OF HEALTH SCIENCES, FARIDKOT
(Department of Health Sciences Library & Information System)

Dear Sir/ Madam,

We are conducting a user survey for on the topic “Use of Internet and Electronic Information Sources by Teachers and Students of Physiotherapy Colleges of Punjab: A Case Study”. Please spare your valuable time to fill this questionnaire.

We assure your good self that your responses will be kept confidential and will be used for research purposes only.

We shall be highly thankful to you and oblige.

Yours faithfully,

Researchers

Please tick mark (✓) at appropriate place or where applicable.

General Information:

Name First _____ Middle _____ Last _____

Sex: Male Female

Age Group (Years)

15-20

21-25

26-30

31-35

More than 35

Academic Qualifications: _____

E-mail Address: _____

Status: Teacher Student

College name and address: _____

1. Do you have attained computer training/ certificate/ diploma course in computer?
Yes No
2. Please indicate your experience of use of Internet and electronic information resources
Less than 1 year 1-3 years 3-5 years More than 5 years
3. Do you have computer/ laptop at your home? Yes No
4. Please give level of computer literacy?
Expert Average Below average
5. Please indicate the place from where most of the time you are using the Internet and electronic information resources?
Home Cafe College Other place
6. Please indicate the type of electronic resources used by yourself. (Please tick all that apply)

Types of Resources	Responses
E-books	
CD-ROMs	
Conference Proceedings	
E-databases	
Technical Reports	
Theses and Dissertations	

7. Please indicate your favourite database and electronic resource. (Please tick all that apply)

Database	Responses
Medline/Pub Med	
CINAHAL Plus	
HSLIBNET Consortium	

8. Please indicate the level of usefulness of e-resources. (Please tick that apply)

Database	Very useful	Quite useful	Occasionally useful	Useless
Medline/Pub Med				
CINAHAL Plus				
HSLIBNET				

9. Please indicate the major hindrances in Access of e-resources. (Please tick all that apply)

Hindrance	Response
Too much information retrieved	
Time consuming	
Lack of IT knowledge to effectively utilize the services	
Using electronic resources often detracts from doing work	

10. Does Internet and electronic information resources can replace the print resources?

Yes No

10. Does Internet and electronic information resources can replace the print resources?

Yes No

11. Please give suggestions for improvement use of Internet and electronic resources.

Thank you for your time and participation.

Signature