Access and Awareness of ICT Resources and Services in Medical College Libraries in Puducherry

S. Dhanavandan
Krishnasamy College of Engineering & Technology, Cuddalore, Tamil Nadu, India,
kdhana_kcet@yahoo.com

S. Mohammed Esmail
Krishnasamy College of Engineering & Technology

M. Nagarajan
Annamalai University

Access and Awareness of ICT Resources and Services in Medical College Libraries in Puducherry

S. Dhanavandan
Librarian (S.G) Krishnasamy College of Engineering & Technology
Cuddalore, Tamil Nadu, India

Dr. S. Mohammed Esmail
Associate Professor

Dr. M. Nagarajan
Professor & Head
Department of Library & Information Science
Annamalai University
Tamil Nadu, India

Introduction

Information and Communication Technology (ICT) is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable type printing techniques. A country's development depends on the extent of use, speed of access, and skilled application of ICT systems. Computer and communications technologies have drastically changed the entire human activities including library and information field. Now a days -libraries are deeply engaged to modernize operations & activities to provide fast, integrated, interactive and comprehensive services. In the same direction with IT thrust the concept of digital library has emerged substantially. Various universities and research institution have initiated to set-up digital library is getting fast momentum due to the application of new information and communication technology and the increased information thrust.

The advent of the modern information technology has facilitated in the electronic storage and transmission of recorded knowledge. Linking of computers with tale communication has revolutionized the expansion of information systems, commercial vendors of information and networks, new challenges and opportunities are emerging due to information explosions, financial crunch, and price like of the national and international journal, fluctuations in currency rate, and integrations of new information technologies and ever increasing user's demand.

Review of Literature

A huge amount of literature is available on the use of ICT in developed and

developing countries. Following is a brief overview of the most relevant studies of the subject.

Natarajan M (2003) found that developments in information technology facilitated the emergence of new electronic devices media and formats. The library and information scenario was changing and there was a paradigm shift from printed publications to formless data, from ownership of documents to access to information, intermediary to end user model of services, location specific libraries to virtual libraries.Nicholas et. al. (2003) conducted a study in the UK to examine the use of the web for health information and advice. More than 1300 people were surveyed. The study showed that 66% of the respondents accessed the Internet from home, 28% from work place and the remainder (6%) used a combination of both work place and home. Elizabeth Kiondo (2004) discussed the application of information technology in provision of information services and specifically the provision of electronic information services at this university. Then he identified emerging and challenging issues related to selection and acquisition of electronic information resources. The emerging issues included the information technology skills of staff and users, technology infrastructure, financial resources and collection, development and management policy.

Wijayasundara, N. (2005), identified in priority order, the barriers in the application of ICT in libraries are identified as technological, managerial, infrastructure, human, and political and social. Points are suggested to overcome these barriers. Samuel Olu Adeyoyin (2005) has analyzed to ascertain the levels of CIT literacy among library staff in a range of Nigerian libraries. Nigerian university library professionals and paraprofessionals should acquire an enhanced level of ICT literacy: both staff training and an adequate ICT infrastructure were recommended. Ron Houlihan (2005) has discussed to the critical importance of providing a comfortable and stimulating environment for students and the rewards for doing so are confirmed, with reference to various Canadian and US schools. Some of the almost – universal characteristics of today's academic research and communication. Barbara Susana Sanchez Vignau and Grizly Meneses (2005) have discusses to identify the necessary components in the formulation of collection development policies of height and technical education in Cuba. A model for a collection development policy for the system of university libraries is proposed.

John-Oswald Amekuedee (2005) has analyzed to find out which library processes have been automated in Ghana's three older public university libraries. The study found out that even though the university libraries realize the importance of library automation, they are hampered by lack of funds, lack of support from the university administrations, and lack of skilled staff to embark on automation of all library processes. Haneefa K (2007) presented the results of an investigation in the study "Use of ICT Based Resources and Services in Special Libraries in Kerala, India. The email service was used by the largest percentage of the users. WWW was being used by 60 per cent of the library users. A good no. of users were not satisfied with the application of ICT in the libraries and indicated 'inadequate ICT infrastructure' as their reason for dissatisfaction. Users proposed a variety of measures of formal orientation and training in ICT based resources and services.

Research Design

Need for the study

This study is confined to the information and communication technology based resource and services in medical college libraries in the union territory of Puducherry. The main aim of the study is to measure the success and failure of the reading habits and varying interest of the faculty members in their fields, such as general, subject and also it will be guidance to the librarians to procure the required documents.

Objectives of the study

1. To examine the library access and awareness of the faculty members in medical college libraries

2. To assess the information needs of the faculty members of medical college

3. To examine the different factors of information and communication technology by the faculty members of medical college libraries

4. To study the use of different types of electronic resources and ascertain the preference of search engine

5. To find out the hindrance and problem faced by the faculty members while accessing and using electronic resources

6. To observe the impact of electronic resources over traditional one

Data Collection and Methodology

An attempt has been made in the study to identify the access and awareness of Information Communication Technology resources and services by faculty members fron the Medical Libraries in Union territory of Puducherry. The questionnaire method was used to collect the data. The questionnaires were personally distributed to 200 faculty members of medical college libraries in the union territory of Puducherry. Out of which 150 questionnaires were received(75%). The data collected through the questionnaires and it was analyzed and tabulated through the statistical tools, such as average, simple percentages.

Limitations

This study is confined to the examination of self financing medical college libraries in the union territory of Puducherry .The data collected in the month of March 2009.

Area Profile in Union Territory Of Puducherry

Puducherry is the one of the Union Territory in India. It has four numbers self financing medical colleges. The self financing medical colleges names such as, Mahatma Gandhi Medical College, Sri Manakula Vinayagar Medical College, Aarupadai Veedu Medical College and Sri Venkateswara Medical Collge.

Analysis

Table 1. College and Gender Distribution of Respondents

College	Male	Female	Total
Mahatma Gandhi Medical College	32(66.67)	16(33.33)	48
Sri Manakula Vinayagar Medical College	22(78.58)	6(21.42)	28
Aarupadai Veedu Medical College	22(68.75)	10(31.25)	32
Sri Venkateswara Medical College	22(52.38)	20(47.62)	42

Total	98(65.33)	52(34.67)	150

Table 1 shows that sex wise distribution of faculty members of four medical college libraries in the union territory of Puducherry. Among the total number of 48 respondents of Mahatma Gandhi Medical College, 66.67 percent are male and 33.33 percent are female.Out of 28 respondents of Sri Manakula Vinayagar Medical College 78.58percent are male and 21.42 percent are female.The total number of 32 respondents Aarupadai Veedu Medical College68.75 percent are male and 31.25 percent are female.Among the total number of 42 respondents of Sri Venkateswara Medical College, 52.38 percent are male and 47.62 percent are female. From the above discussion it is inferred that out of 150 respondents, 98 (65.33%) respondents are male and remaining 52 (34.67%) respondents are female.

Table 2. College Distribution of Respondents Frequency of Library Visit

College	Every day	Once in a week	Once in a fortnight	Once in a month	Rarely	Total
Mahatma Gandhi Medical College	28(58.33)	5(10.41)	2(4.16)	8(16.69)	5(10.41)	48
Sri Manakula Vinayagar Medical College	12(42.85)	3(10.72)	4(14.28)	6(21.42)	3(10.73)	28
Aarupadai Veedu Medical College	16(50)	5(15.62)	6(18.76)	3(9.37)	2(6.25)	32
Sri Venkateswara Medical College	24(57.14)	5(11.90)	3(7.14)	6(14.28)	4(9.54)	42
Total	80 / 53.33%	18 / 12.00%	15 / 10.00%	23 / 15.33%	14 / 9.33%	150

Table 2 shows the frequency of library visited by the faculty members among the total number of 150 respondents from Mahatma Gandhi Medical College, 28 (58.33%) Sri Manakula Vinayagar Medical College, 12(42.85%) Aarupadai Veedu Medical College, 16(50.00%) Sri Venkateswara Medical College, 54(57.14%) respondents are visited the library daily

Table 3. College Distribution of Respondents Quantum of Time Spent

College	30 minutes to 1 hour	1 to 2 hours	2 to 4 hours	Total
Mahatma Gandhi Medical College	36 (75.00)	12 (25.00)	-	48
Sri Manakula Vinayagar Medical College	22 (78. 58)	6 (21.42)	-	28
	20	10	2	

Aarupadai Veedu Medical College	(62.5)	(31.25)	(6.25)	32
Sri Venkateswara Medical College	30 (71.42)	12 (28.58)	-	42
Total	108(72%)	40(26.67%)	2(1.33%)	150

Data presented in table 3 reveals that the quantum of time spent by the respondents. Out of 150 sample respondents, 108 (72.00%) faculty members spent half an hour to one hour; 40 (26.67%) respondents spent 1 to 2 hours and 2 (1.33%) respondent spent 2 to 4 hours. It is seen from the table that irrespective of college 108(72.00%) of the staffs spend 30 minutes to 1 hour, and 40(26.67%) faculty members spend one to two hours in the library.

Table 4. College Distribution of Respondents Visited to Other Libraries

College	Upto 2 libraries	3 to 4 libraries	5 to 6 libraries	7 to 8 libraries	Total
Mahatma Gandhi Medical College	20(41.67)	14(29.16)	8(16.67)	6(12.5)	48
Sri Manakula Vinayagar Medical College	15(53.58)	6(21.42)	3(10.72)	4(14.28)	28
Aarupadai Veedu Medical College	16(50.00)	8(25.00)	6(18.75)	2(6.25)	32
Sri Venkateswara Medical College	18(42.86)	12(28.58)	9(21.42)	3(7.14)	42
Total	69(46.00)	40(26.66)	26(17.33)	15(10.00)	150

The table 4 reveals that the visited of the other librares.Out of 48 respondents from Mahatma Gandhi Medical College 20(41.67%), 14(29.16%) respondents visited up to 2 libraries and 3 to 4 other libraries respectively.Among the total number of 28 respondents from Sri Manakula Vinayagar Medical College, 15(53.58%) per cent and 6(21.42%) respondents visited up to 2 libraries and 3 to 4 other libraries respectively. It is evident from the table that 69(46.00%) respondents visited up to 2 other libraries, 40(26.66%) respondents visited 3 to 4 other libraries, 26(17.33%) respondents visited 5 to 6 other libraries and 15(10.00%) respondents visited 7 to 8 other libraries.

Table 5. Frequency of Using Electronic Resources

Frequency	CD-Rom	Internet	OPAC	Online data base	E-journal	E-books
Every day	10(6.66%)	60(40.00%)	2(1.33%)	8 (5.33%)	20(26.66%)	7(4.66%)
2-3 times in a week	55(36.66%)	40(26.66%)	20(13.33%)	12(8.00%)	30(20.00%)	8(5.33%)

Once in a week	42(28.00%)	20(13.33%)	15(10.00%)	15(10.00%)	35(23.33%)	5(3.33%)
Once in a month	10(6.66%)	10(6.66%)	8(5.33%)	15(10.00%)	30(20.00%)	6(4.00%)
Never	33(22.00%)	20(26.66%)	105(70.00%)	100(66.66%)	35(23.33%)	124(82.66%)
Total	150	150	150	150	150	150

The frequency of using electronic resources is shown in the table 5 of total respondents, 55 (36.66%) respondents use CD-Rom 2-3 times in a week, followed by 42 (28.00%) respondents use once in a week and 10 (6.66%) respondents us every day and once in a month respectively. 60 (40.00%) respondents use Internet almost every day and 40 (26.66%) respondents use 2-3 times in a week. 105 (70.00%) respondents do not use OPAC. 100 (66.66%) respondents do not use online data base. 35 (23.33%) respondents use E-Journals once in a month and 30 (20.00%) respondents use 2-3 times in a week. 124 (82.66%) respondents do not use E-books.

Table 6. Use of Electronic Resource

E-resources	No. of respondents	Percentage
CD-Rom	72	48
Internet	132	88
OPAC	5	3.33
Online data base	29	19.33
E-Journals	70	46.66
E-Books	42	28

Note: Because of multiple choice options the percentage is proceed to more then 100%.

Table 6 shows the use of Electronic resources. The maximum number of 132 (88.00%) respondents are using Internet, followed by 72 (48.00%) respondents use CD-Rom, 70 (46.66%) respondents use E-Journals, 42 (28.00%) respondents use E-books, 29 (19.33%) respondents use online data base and 5 (3.33%) respondents use OPAC.

Table 7. Purpose of Using Electronic Resource

No	Purpose	No. of respondents	%
1	For research/study	131	87.33
2	For communication	92	61.33

3	Finding relevant information	82	54.66
4	For career development	52	34.66
5	other activities	31	20.66

Note: Because of multiple choice options the percentage is exceeded to more than 100%.

From the table 7, it is clear that 131 (87.33%) respondents are using electronic resources for the purpose of their research/study, while 92 (61.33%) respondents are using for communication purpose, 82 (54.66%) respondents are using electronic resources for finding relevant information, 52 (34.66%) respondents are using electronic resources for career development and 31 (20.66%) respondents are using electronic resources for other activities.

Table 8. Ways of Learning to Use Electronic Resources

Learned to use E-Resources	No. of respondents	%
Trail and error	72	48
Guidance from others	74	49.33
Self thought	72	48
Guidance from library staff	18	12
Course offered by institution	15	10
Guidance from (computer) staff	24	16
External course	75	50

Note: Because of multiple choice options the percentage is exceeded to more than 100%.

Table 8 shows the most popular method of acquiring the necessary skill to use electronic resources, 75 (50.00%) respondents each acquired skill from external course, while 74 (49.33%) respondents are learned Guidance from others, 72 (48.00%) respondents are learned through trail and error and self thought, 24 (16.00%) respondents are learned from computer staff, 18 (12.00%) respondents and learned from library staff and 15 (10.00%) respondents are learned from course offered by institution.

Table 9. Preference for Using Search Engines

Sl. No	Search engines	No. of respondents	%
1	Google	72	(48.00)
2	Yahoo	57	(38.00)

3	AltaVista	10	(6.66)
4	MSN	7	(4.66)
5	Ask.com	4	(2.66)

Note: Because of multiple choice options the percentage is exceeded to more than 100%.

Table 9 indicates that preference of using search engines. It could be noted that 72 (48.00%) respondents are using Google, followed by 57 (38.00) respondents use yahoo, 10 (6.66%) respondents use AltaVista, 7 (4.66%) respondents use MSN and 4 (2.66%) respondents use Ask.com to access the information in the internet.

Table 10. Impact of Electronic Resources on Academic Development

Impact of E-Resources	No. of respondents	Percentage
Access to current information	120	(80.00)
Easier access to information	98	(65.33)
Faster access to information	94	(62.66)
Access to wider range	56	(37.33)

Note: Because of multiple choice options the percentage is exceeded to more than 100%.

Table 10 shows the 120 (80.00%) respondents stated that access to current information as a benefit of using electronic resources, followed by 98 (65.33%) and 94 (62.66%) respondents stated that electronic resources helps easier access to information and faster access to in formation respectively and 56 (37.33%) respondents found that access to a wider range of information an advantage of using electronic resources.

Table 11. Hindrance of Access Electronic Resources

Hindrance	No. of respondents	Percentage
Too much information retrieved	110	73.33
Time consuming	90	60
Limited access to a computer terminal	100	66.66
Lack of IT knowledge to effectively utilize the service	75	50
Using electronic resources often detracts from doing work	48	32

Note: Because of multiple choice options the percentage is exceeded to more than 100%.

It is noted that in the table 11 reveals that 110 (73.33%) respondents stated that too much information retrieved is the main barrier to access electronic resources, 100 (66.66%) opined that limited access to a computer terminal hindered to access electronic resources, 90 (60.00%) stated that it is time consuming to use, 75 (50.00%) and 48 (32.00%) respondents stated that lack of IT knowledge and electronic resources detracts from their work respectively.

Table 12. College Distribution of Respondents' Preference for Library Material

College	Prescribed text books	Reference books	Journals	Reports	News papers	CDs	Total
Mahatma Gandhi Medical College	16(33.33)	13(27.08)	4(8.33)	2(4.16)	9(18.77)	4(8.33)	48
Sri Manakula Vinayagar Medical College	9(32.14)	7(25.00)	2(7.14)	3(10.72)	5(17.86)	2(7.14)	28
Aarupadai Veedu Medical College	10(31.25)	7(21.89)	4(12.5)	4(12.5)	5(15.61)	2(6.25)	32
Sri Venkateswara Medical College	10(23.80)	11(26.19)	5(11.90)	2(4.77)	13(30.96)	1(2.38)	42
Total	45(30.00)	38(25.33)	15(10.00)	11(7.33)	32(21.33)	9(6.00)	150

Table 12 shows that preference of library material by the respondents. Among the total number of 48 respondents from Mahatma Gandhi Medical College, 16(33.33%) respondents preferred prescribed text books, 13(27.08%) respondents preferred reference book, 4(8.33%) respondents preferred journal, 2(1.16%) respondents preferred report, 9(18.77%) respondents preferred newspaper and 4(8.33%) respondents preferred CDs. Out of 28 respondents from Sri Manakula Vinayagar Medical College, 9(32.14%) respondents preferred prescribed text books, 7(25.00%) respondents preferred reference book, 2(7.14%) respondents preferred journal, 3(10.72%) respondents preferred report, 5(17.86%) respondents preferred newspaper and 2(7.14%) respondents preferred CDs.

Table 13. College Distribution of Respondents' Purpose of Library Visit

College	To collect material in their subject field	To know the latest arrival	To collect current information	To use Internet	Total
Mahatma Gandhi Medical College	20(41.67)	9(18.76)	14(29.16)	5(10.41)	48
Sri Manakula Vinayagar Medical College	12(42.86)	6(21.42)	8(28.58)	2(7.14)	28
Aarupadai Veedu	15(46.87)	7(21.87)	6(18.76)	4(12.5)	32

Medical College					
Sri Venkateswara Medical College	14(33.33)	5(11.91)	16(38.09)	7(16.67)	42
Total	61	27	44	18	150

Table 13 shows that purpose of library visited by the respondents. Among the total number of 48 respondents from Mahatma Gandhi Medical College, 20(41.67%) respondents visited the library for the purpose of collecting in material for their subject, 9(18.76%) respondents visited the library to know the latest arrival in the library, 14(29.16%) respondents visited the library to collect current and general information and the 5(10.41%) respondents visited to library to use internet. It is evident from the above discussion that irrespective of the respondents majority of the respondents visited to the library for the purpose of collecting material for their subject and it is followed by to collect current and general information, to know latest arrival in the library and to use internet.

Table 14. College Distribution of Respondents Opinion about Library Collection

College	Excellent	Satisfactory	Poor	Total
Mahatma Gandhi Medical College	10(20.84)	38(79.16)	-	48
Sri Manakula Vinayagar Medical College	14(50.00)	9(32.14)	5(17.86)	28
Aarupadai Veedu Medical College	10(31.25)	17(53.12)	5(15.63)	32
Sri Venkateswara Medical College	18(42.86)	14(33.33)	10(23.81)	42
Total	52(34.67)	78(52.00)	20(13.33)	150

Table 14 shows that opinion about library collection by the respondents. Among the total number of 48 respondents from Mahatma Gandhi Medical College, 10(20.84%) respondents stated that the collection of the library is excellent and 38(79.16%) respondents stated that satisfactory. Out of 48 respondents from Sri Manakula Vinayagar Medical College, 14(50%) respondents stated that the collection of the library is excellent and 9(32.14%) respondents stated that satisfactory. Among the total number 48 respondents from Aarupadai Veedu Medical College, 10(31.25%) respondents stated that the collection of the library is excellent and 17(53.12%) respondents stated that satisfactory. Among the total number 48 respondents from Sri Venkateswara Medical College, 18(42.86%) respondents. stated that the collection of the library is excellent and 14(33.33%) respondents stated that satisfactory level

Conclusion

It is found that majority of the faculty members of all four colleges visited the library daily and maximum number of reveals spent half an hour to one hour. The respondents visited up to two libraries for their information needs and also they wants use internet almost every day. A maximum number of faculty members use Internet. The respondents using electronic resources for their research/ study and communication purpose respectively. A maximum number of respondents are learned use electronic resources through external course and Guidance from others. The respondents are using Google to access the information in the Internet

and stated that access to current up to date information as a benefit of using electronic resources. The respondents stated that too much information retrieved is the main barrier to access electronic resources and they preferred text books.. The respondents are visited to the library for the purpose of collecting material for their subject. The respondents stated that the arrangement of reading material in the library is easy to access and satisfied.

References

Adeyoyin, S.O. (2005). Information and Communication technology (ICT) literacy among the staff of Nigerian university libraries. *Library Review* 54(4): 257-266.

Amekuedee, J.O. (2005). An evaluation of library automation in some Ghanaian university libraries. *The Electronic Library* 23(4): 442-542.

Haneefa, K. (2007). Use of ICT-based resources and services in special libraries in Kerala. *Annals of Library and Information Studies* 54(1): 23-31.

Houlihan, R. (2005). The academic library adds congenial space: More on the Saint Mary's experience. *New Library World* 106(1208/1209): 43-57.

Kiondo, E. (2004). Around the world to: The University of Dar es Salaam Library: Collection development in the electronic information environment. *Library Hi Tech News* 21 (6): 19-24

Natarajan, M. (2003). Selection and evaluation criteria for electronic resources. *ILA Bulletin*, 38(3): 15-21.

Nicholas, D., Huntington, P., Gunter, B., Russell, C., & Withey, R. (2003). The British and their use of the web for health information and advice: A survey. *Aslib Proceedings*, 55 (5-6): 258-260

Vignau, B.S.S., & Meneses, G. (2005).Collection development policies in university libraries: A space for reflection. *Collection Building* 24(1): 35-43.

Wijayasundara, N. (2005). ICT in libraries: A Sri Lankan Perspective. *SRELS Journal of Information Management* 42(2): 139-54.