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Use of Libraries for Accessing the E-Resources by the Faculty Members of the Medical Colleges of the Deemed Universities in Karnataka

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Abstract **- The present study examines the existence of various e-resources and their use in Medical colleges of Deemed University Libraries in Karnataka. For this study the researcher has adopted questionnaire method and the collected data is analysed by simple statistics and is presented in tables consisting of frequencies and percentages. The Study also highlights the preference and importance of e-resources among the faculty members. Besides, it aims to highlights the problems encountered while using the e-resource and suggest some remedial measures for its improvements. It is observed from the study that class room/teaching work is the prime purpose of using e-resources, followed by curriculum design and reading/writing research paper.**
Keywords: **E-Resources, Library Services, Internet, Medical Libraries, ICT**

I. INTRODUCTION

The quality and accessibility of these E-Resources plays a vital role in medical sciences development. The libraries of medical colleges of deemed universities in Karnataka hold information generated in their universities as well as the information received from outside sources. These medical college libraries have subscribed to both print and E-resources of information in large amount to fulfil the requirement of faculty members and students of the institution for their academic purpose (Naik 2017). Academic libraries are changing in response to the changes in the learning and research environment and changes in the behaviour of library users. The changes are evolutionary. Libraries are adding new electronic information resources and services for the benefit of users. The advent of new format, especially electronic information resources, has given way to new methods of document delivery and access to information, which has caused the role of the academic library to change (Troll 2002). Users need not be physically present in the library to access the libraries' resources. Now they can do so without even stepping into the library building. They can also very conveniently access other libraries' resources such as online catalogues and freely available databases. The Internet has opened wide the resources of libraries to information seekers worldwide (Adeyinka 2011).

II. NEED AND PURPOSE OF THE STUDY

Universities having deemed university status are known and recognized for good quality education. Deemed Universities are concentrating more on promoting higher education in all the specialization. It is spending more money on Library and Information Centre to procure E-Resources viz. E-Books, E-Journals etc.

In recent years, E-Resources are common in scholarly communication and we can interpret this situation in various ways. (Khan 2016). Librarians are collecting data since beginning of librarianship for justifying the budget, manpower space requirement and keeping track of change in resource. All these examples have promoted the researcher to conduct a study on use pattern of e-resources by the faculty members of the medical colleges of the deemed universities in Karnataka.

III. REVIEW OF LITERATURE

Dadzie (2005) provided an overview of E-resources usage at Ashesi University College. The study found that general computer usage for information access was high because of the university's state-of-the-art IT Infrastructure.

Natarajan *et al.,* (2010) made a study on use and user perception of electronic resources of Annamalai University. The result of the study reveals that despite the availability of wide range of electronic information resources, the frequency of their use was low. The reasons identified for this are lack of time, lack of awareness, lack of subject coverage and slow downloading.

Ansari (2010) illustrated the use of E-resources among academics at the University of Karachi. The study explores about the facilities available for using resources at the University of Karachi. Some of the departments have fully-equipped computer labs while some others have a few computers.

Tahir & Zuberi (2010) opined that the users not only stick to the printed information sources but also pay good attention to electronic resources. Most of them have access to computer and internet at office and at home. They are regular users of a variety of electronic technologies.

Thanuskodi & Ravi (2011) opined that the awareness should be generated about the online journals to obtain current information and the university administration should

create programs and infrastructures to train its staff on ICT with particular reference to the use of digital resources facility.

Newmon & Sengar (2016) discussed about the knowledge of digital library and e-resources in engineering college of Rajasthan. They opined that digital library and e-resources in a library play an important role in academic libraries as they are mostly tuned for the promotion of academic excellence and research.

Manjula & Padmamma (2016) conducted a survey on "knowledge and practice of use of digital resources by faculty members at BLDE University" (Deemed University). The main objectives of the study are to know the awareness about e-resources, level of their use, purpose of their use, major digital resources and the satisfaction level of the readers. The study showed that the medical faculty has adopted electronic information resources and are using them moderately for their informative purpose.

Anusuya (2017) discussed in detail about the various issues in her study on usage of electronic resources by the Medical, Dental and Paramedical sciences profession in Karnataka. The study in its survey has the sample of 300 respondents. The investigator could collect questionnaires from only 230 out of 300. The study showed that the availability of E-resources in the college and university is almost sufficient for all the existing disciplines.

IV. METHODOLOGY

The study is restricted to the faculty members working in Medical Colleges of Deemed Universities in Karnataka. The researcher visited all the eight Deemed Medical Universities of Karnataka. The researcher has designed a structured questionnaire, covering almost all the major aspects, the copies of the questionnaire were distributed among faculty members of Medical Colleges of Deemed Universities of Karnataka. Questionnaires were distributed among the faculty members, and librarians. A total of 1260 questionnaires were distributed among the users and 1041 of the duly filled in questionnaires were received, thus resulting into a response rate of 82.62 %. While distributing questionnaires, care was taken to ensure that faculties of all medical colleges, different age groups and sex were represented adequately in the population.

V. OBJECTIVES OF THE STUDY

The specific objectives of the study are as follows.

1. To identify the various types of E-Resources available for use by the faculty members of the medical colleges of the deemed universities.
2. To know the awareness level of faculty members with response to different E-resources available in meeting the needs.
3. To ascertain the frequency of use of E-resources by the faculty members.
4. To find out the purpose for which the members of faculty search/use E-Resources and to examine difficulties faced by them.
5. To identify the type of document formats preferred while using e-resources.

VI. BACKGROUND INFORMATION

Background information such as discipline, designation, gender, educational qualification and age group are important for studying the use of E-Resources and Search Patterns of faculty. Therefore in this study it was attempted to obtain background information of the faculty. Analysis of obtained data in regard to background information of the faculty comes as follows in detail.

A. Distribution of Questionnaires: Table I represents that, institution-wise distribution of questionnaires. The highest response is from Manipal Academy of Higher Education, Manipal (Kasturba Medical College (KMC) Manipal) with 87.14%, followed by Sri Siddartha Academy of Higher Education, Tumkur (Sri Siddhartha Medical College, Tumkur) 85.71%, Manipal Academy of Higher Education, Manipal (Kasturba Medical College (KMC), Mangalore) 84.29%, Yenepoya University, Mangalore (Yenepoya Medical College, Mangalore) 84.29%, KLE Acadamy of Higher Education and Research , Belagaum (Jawaharlal Nehru Medical College, Belagaum) 82.86%, Nitte University, Mangalore (K S Hegde Medical College) 82.85 %, BLDE University, Bijapura (Shri B. M. Patil Medical college, Hospital & Research Centre, Vijaypur), 80.71%, Sri DevrajUrs Academy of Higher Education and Reasearch, Kolar (Sri DevrajUrs Medical College, Kolar) 78.57%, and JSS University, Mysore, (JSS Medical College) 77.14%.

Response is quite satisfactory; all these institutes have shown active interest in responding to the contents of the questionnaires.

B. Demographic Details of the Respondents: Table II indicates demographic details of respondents. Out of 1041 respondents surveyed, 695 (66.76%) are male and about 346 (33.24%) respondents are female. It can be inferred from the table that male respondents dominate over the female respondents.

With regard to the age, which reveals that the majority of the users belong to the age group between 41 to 45 (29.01%), followed by the age group 46 to 50 i.e. (21.81%). The next in line is the age group between 36 to 40 (15.18%), followed by the age group of 51 to 55 (11.43%), age group 31 to 35(10.47%), age group 25 to 30(6.15%) and age group 56 and above is (5.95%) The data clearly shows that the majority of respondents belong to the age group of 41 to 45.

TABLE I DISTRIBUTION OF QUESTIONNAIRES

S. No.	Name of the University	Name of the Medical College	No. of questionnaires distributed	No. of questionnaires received	Rate of response
1	BLDE University, Bijapura	Shri B. M. Patil Medical college, Hospital & Research Centre, Vijaypur	140	113	80.71
2	KLE Acadamy of Higher Education and Research, Belgum	Jawaharlal Nehru Medical College, Belagum	140	116	82.86
3	JSS University, Mysore	JSS Medical College	140	108	77.14
4	Manipal Academy of Higher Education, Manipal	Kasturba Medical College (KMC) Manipal	140	122	87.14
		Kasturba Medical College (KMC) Mangalore	140	118	84.29
5	Sri DevrajUrs Academy of Higher Education and Reasearch, Kolar	Sri DevrajUrs Medical College, Kolar	140	110	78.57
6	Sri Siddartha Academy of Higher Education, Tumkur	Sri Siddhartha Medical College, Tumkur	140	120	85.71
7	Yenepoya University, Mangalore	Yenepoya Medical College, Mangalore	140	118	84.29
8	Nitte University, Mangalore	K. S. Hegde Medical College	140	116	82.85
	Total		1260	1041	82.62

TABLE II DEMOGRAPHIC DETAILS OF THE RESPONDENTS

Demographic Details		No. of Respondents	Percentage (%)
Gender	Male	695	66.76
	Female	346	33.24
Age	25-30	64	6.15
	31-35	109	10.47
	36-40	158	15.18
	41-45	302	29.01
	46-50	227	21.81
	51-55	119	11.43
	56 and above	62	5.95

C. Library Visit by the Respondents: Table III shows that out of the total of 1041 respondents, 983 (94.43%) of the respondents visit library to get needed information and 58 (5.57%) of the respondents have not responded whether or not they visit the library.

TABLE III LIBRARY VISIT BY THE RESPONDENTS

Visit to Library	Frequency	Percentage %
Yes	983	94.43
Not responded	58	5.57
Total	1041	100

TABLE IV FREQUENCY OF LIBRARY VISIT MADE BY THE RESPONDENTS

S. No.	Visit of Library	Frequency	Percentage (%)
1	Daily	358	34.39%
2	Twice a week	248	23.82%
3	Once in a week	178	17.10%
4	Fortnightly	112	10.76%
5	Occasionally in a month	145	13.93%
	Total	1041	100

D. Frequency of Library Visit Made by the Respondents: Table IV describes the frequency of library visit made by the respondents. Among the total of 1041 respondents, 358 (34.39%) of the respondents visit library daily, 248 (23.82%) of the respondents visit twice a week, 178 (17.10%) of the respondents visit once in a week and 112 (10.76%) of the respondents visit fortnightly and 145 (13.93%) of the respondents visit occasionally in a month for getting the information they need.

E. The Purposes of Using E-Resources: A multiple choice question was asked to the respondents on the purposes of using e-resources. It is observed from the table V that 512 (49.18%) respondents used e-resources for class room/teaching work, whereas, 467 (44.86%) respondents used for curriculum design, 459 (44.09%) respondents used it for reading/writing research paper and good number of respondents used e-resources for other purposes like, to prepare for seminar/conference/workshop, to locate the audio/visual materials, for studying cases, reading/writing research proposal/projects and other research related aspects. It is observed from the study that class room/teaching work is the prime purpose of using e-resources, followed by curriculum design and reading/writing research paper.

F. Usage of E-resources in the Library: A multiple choice question was asked to the respondents about awareness of e-resources, frequency of use and place of usage. It is observed from the table VI that 925 (88.86%) respondents used e-books daily, 893 (85.78%) respondents used e-journals daily (37.08%), 734 (70.51%) respondents used e-conference proceedings and 381 (36.60%) respondents are used 2-3 times a week, 863 (82.90%) respondents used e-thesis and dissertation, 658 (63.21%) respondents used e-annual reviews. 431 (41.40%), 422 (40.54%) and 415 (39.87%) of the respondents used e-thesis and dissertation, e-tutorials and e-reference works (e.g. dictionaries, encyclopaedias etc.) daily and more than 45.00% of the respondents accessed in library.

TABLE V THE PURPOSES OF USING E-RESOURCES

S. No.	Purpose	No. of Respondents	Percentage %
1	Reading/Writing research paper	459	44.09
2	Reading/Writing research proposal/projects	287	27.57
3	For class Room/Teaching Work	512	49.18
4	For studying cases	348	33.43
5	For curriculum design	467	44.86
6	Preparation for Seminar/Conference/Workshop	391	37.56
7	For basic scientific and technical information	175	16.81
8	For regular browsing and updating	147	14.12
9	To locate the audio/visual materials	384	36.89
10	Any other (please specify)	112	10.76

TABLE VI USAGE OF E-RESOURCES IN THE LIBRARY

S. No.	E-Resources	Frequency of usage				
		5	4	3	2	1
1	E-Journals	358 (34.39%)	248 (23.82%)	178 (17.10%)	112 (10.76%)	145 (13.93%)
2	E-Books	386 (37.08%)	287 (27.57%)	117 (11.24%)	130 (12.49%)	121 (11.62%)
3	E-Conference Proceedings	256 (24.59%)	381 (36.60%)	202 (19.40%)	107 (10.28%)	95 (9.13%)
4	E-Reference Works (e.g. Dictionaries, Encyclopedias etc.)	415 (39.87%)	236 (22.67%)	134 (12.87%)	81 (7.78%)	175 (16.81%)
5	E-Reports	354 (34.01%)	187 (17.96%)	215 (20.65%)	172 (16.52%)	113 (10.85%)
6	E-Thesis and Dissertation	431 (41.40%)	219 (21.04%)	124 (11.91%)	141 (13.54%)	126 (12.10%)
7	E-Annual Reviews	281 (26.99%)	191 (18.35%)	219 (21.04%)	193 (18.54%)	157 (15.08%)
8	E-Subject gateways/ E-portal	324 (31.12%)	218 (20.94%)	184 (17.68%)	194 (18.64%)	121 11.62%)
9	E-tutorials	422 (40.54%)	227 (21.81%)	116 (11.14%)	134 (12.87%)	142 (13.64%)

Figures in parenthesis indicate percentage

Note: 5: Daily, 4: 2-3 times a week, 3: Once in a week, 2: 2-3 time a month, 1: Once a month

G. Sources preferred by the Respondents: The faculty members were asked the question regarding the sources they preferred to use. Their responses in this regard are presented in table VII. It reveals that the majority of the faculty members, that is, 445 (42.75%) opined that they preferred to use the information in electronic versions, 355 (34.10%) of the respondents expressed their opinion that they prefer to use only print versions of information sources, about 241 (23.15%) of the respondents opined that they use both print and electronic version.

And the respondents were also asked to give their opinion about the file format preferred for downloading the required information; the data reveals that majority i.e. 488 (46.88%) of the respondents download the PDF file format from different browsers and search engines, followed by 235 (22.57%) the MS-Word, 161 (15.47%) of the respondents opines to download information in HTML format, 102 (9.80%) of the respondents opines to download information in Image (jpg, tiff, gif) format, 117 (11.24%) of the respondents opines to download information in PPT/PPS format, 87 (8.36%) of the respondents opines to download information in Txt, 81 (7.78%) of the respondents opines to download information in Rich Text Format, 11 (1.06%) of the respondents prefer post script and 9 (0.86%) of the respondents prefer.

H. Frequency of Usage of E-Resources by the Respondents: The table VIII examines the frequency of use of following E-resources by the respondents, it is observed that 291 (37.65%), 283 (32.61%), 280 (36.22%) and 277 (35.83%) of the respondents always use PubMed (Medline, Premedline, and HealthSTAR), ProQuest Nursing & Allied Health Source, Psychiatry online and Embase (Elsevier) resources respectively. About 284 (27.28%), 268 (25.74%) and 264 (25.36%) of the respondents using most of the time Web of Science (SCI, SSCI and AHCI), Up-to-date and Medline Plus sources respectively. 281 (26.99%), 278 (26.71%) and 259 (24.88%) of the respondents often used Micromedex, access medicine and ovid SP respectively. 297 (28.53%), 275 (26.42%), 273 (26.22%) and 267 (255%) of the respondents rarely used Dyna Med, MIMS Drug Alert, Lexi-Comp and BMJ Best Practice and week respectively. And 277 (26.61%), 184 (17.68%), 178 (17.10%), 176 (16.91%), 175 (16.81%) and 167 (16.04%) of the respondents never used the following e-resources- Scopus, Dyna Med, Psyc Articles (Full-text Database), Lexi-Comp, Embase (Elsevier) and e-Medicine MedScape Reference respectively.

TABLE VII SOURCES PREFERRED BY THE RESPONDENTS

	Preferred sources	No. of Respondents	Percentage (%)
Types of resources	Print version	355	34.10
	Electronic Version	445	42.75
	Both print and electronic version	241	23.15
Preferred formats	PDF	488	46.88
	HTML	161	15.47
	MS-Word	235	22.57
	Rich Text Format	81	7.78
	PPT/PPS	117	11.24
	Txt	87	8.36
	Post Script	11	1.06
	Latex	9	0.86
	Image(jpg, tiff, gif)	102	9.80

TABLE VIII FREQUENCY OF USAGE OF E-RESOURCES BY THE RESPONDENTS

S. No.	E-Resources	1	2	3	4	5
1	A.D.A.M. Interactive Anatomy	268 (25.74%)	256 (24.59%)	144 (13.83%)	241 (23.15%)	132 (12.68%)
2	Access Medicine	184 (17.68%)	216 (20.75%)	278 (26.71%)	205 (19.69%)	158 (15.8%)
3	BMJ Best Practice	242 (31.31%)	218 (20.94%)	165 (15.85%)	267 (255%)	149 (1.31%)
4	CINAHL(Ebsco)	227 (29.37%)	273 (26.22%)	183 (17.58%)	239 (22.96%)	119 (11.43%)
5	Cochrane Library (Wiley)	254 (32.86%)	261 (25.07%)	215 (20.65%)	236 (22.67%)	75 (7.20%)
6	Dyna Med	188 (24.32%)	249 (23.92%)	123 (11.82%)	297 (28.53%)	184 (17.68%)
7	Embase (Elsevier)	277 (35.83%)	241 (23.15%)	204 (19.63%)	144 (13.83%)	175 (16.81%)
8	eMedicine--MedScapeReferenc	234 (30.27%)	145 (13.93%)	227 (21.81%)	268 (25.74%)	167 (16.04%)
9	Lexi-Comp	219 (28.33%)	117 (11.24%)	256 (24.59%)	273 (26.22%)	176 (16.91%)
10	MD Consult	257 (33.25%)	260 (24.98%)	247 (23.73%)	159 (15.27%)	118 (11.34%)
11	Medline Plus	233 (30.14%)	264 (25.36%)	137 (13.16%)	246 (23.63%)	161 (15.47%)
12	Micromedex	212 (27.43%)	227 21.81%)	281 (26.99%)	215 (20.65%)	106 (10.18%)
13	MIMS DrugAlert	244 (31.57%)	206 (19.79%)	219 (21.04%)	275 (26.42%)	97 (9.32%)
14	Ovid SP	194 (25.10%)	258 (24.78%)	259 (24.88%)	168 (16.14%)	162 (15.56%)
15	ProQuest Nursing & Allied Health Source	283 (32.61%)	248 (23.82%)	224 (21.52%)	206 (19.79%)	80 (7.68%)
16	PsycArticles (Full-text Database)	251 (32.47%)	219 (21.04%)	233 (22.38%)	160 (15.37%)	178 (17.10%)
17	Psychiatry online	280 (36.22%)	273 (26.22%)	212 (20.37%)	165 (15.85%)	111 (10.66%)
18	PsycInfo (EBSCO)	221 (28.59%)	248 (23.82%)	254 (24.40%)	217 (20.85%)	101 (9.70%)
19	PubMed (Medline, Premedline, and HealthSTAR)	291 (37.65%)	267 (25.65%)	218 (20.94%)	184 (17.68%)	81 (7.78%)
20	Scopus	178 (23.03%)	207 (19.88%)	212 (20.37%)	167 (16.04%)	277 (26.61%)
21	UpToDate	184 (23.80%)	268 (25.74%)	240 (23.05%)	194 (18.64%)	155 (14.89%)
22	Web of Science (SCI, SSCI and AHCI)	261 (33.76%)	284 (27.28%)	189 (18.16%)	212 (20.37%)	95 (9.13%)

Figures in parenthesis indicate percentage
Note: 1-Always, 2-Most of the time, 3-Often, 4-Rarely, 5-Never

I. Opinion about Comparison of Print Documents and E-Resources: The faculty members were asked the questions regarding their opinion about comparison of print documents and e-resources. Their responses in this regard are presented in table IX. It reveals that the majority of the faculty members, that is, 723 (69.45%) of them opined that e-resources have given a platform to access to up-to-date information, followed by 684 (65.71%) of the respondents opined that e-resources have saved their time , about 679 (65.23%) of the respondents opined that it's because of e-

resources that they got improvement in the quality of professional work, 647 (62.15%) of the respondents opined the ease of portability, 527 (50.62%) of the respondents opined that the e-resources provide quality of information and 462 (44.38%) of the respondents opined that from e-resources we can get information available in various formats as per the need and requirements.

TABLE IX OPINION ABOUT COMPARISON OF PRINT DOCUMENTS AND E-RESOURCES

S. No	Benefits	No. of Respondents
1	Time saving	684 (65.71%)
2	Better quality of information	527 (50.62%)
3	Access to up-to-date information	723 (69.45%)
4	Improvement in the quality of professional work	679 (65.23%)
5	Information available in various formats as per the need	462 (44.38%)
6	Easy portability of e-resources	647 (62.15%)
7	Anywhere and anytime access	387 (37.18%)
8	Just copy and paste facility	418 (40.15%)
9	Any other (please specify)	148 (14.22%)

Figures in parenthesis indicate percentage

TABLE X PROBLEMS FACED BY THE RESPONDENTS WHILE ACCESSING E-RESOURCES

S. No.	Problems	No. of Respondents
1	Poor connectivity (Low bandwidth)	545 (52.35%)
2	Retrieval of irrelevant/junk information	657 (63.11%)
3	Server down or system problem	621 (59.65%)
4	Unfamiliar file formats	467 (44.86%)
5	Change in URL/Web site address	349 (33.53%)
6	Change of the content/information	267 (25.65%)
7	Unorganised information content	164 (15.75%)
8	Lack of assistance from library staff	382 (36.70%)
9	Lack of IT knowledge to effectively utilise the service/e-resources	268 (25.74%)
10	Any other (please specify)	73 (7.01%)

Figures in parenthesis indicate percentage

J. Problems Faced By the Respondents While Accessing E-Resources: The respondents have faced certain problems while accessing information through e-resources. The majority, i.e., 657 (63.11%) of the respondents have faced problem in finding the retrieval of irrelevant/junk information, followed by, 621 (59.65%) of the respondents have found the problem of server down or system problem, 545 (52.35%) of the respondents have faced the problem like poor connectivity (Low bandwidth), 467 (44.86%) of the respondents have seen unfamiliar file formats, 382 (36.70%) of the respondents have faced lack of assistance from library staff, 349 (33.53%) of the respondents have faced problem of change in URL/Web site address, 268 (25.74%) of the respondents have faced lack of IT knowledge to effectively utilize the service/e-resources, 267 (25.65%) of the respondents have faced the problem like change of the content/information and 164 (15.75%) of the respondents have seen an unorganised information content while accessing the e-resources (Table X).

VII. CONCLUSION

E-Resources have ushered in a variety of media that can help library information management systems in efficient and effective acquisition, organization and dissemination of information. E-resources have found increasing acceptance in library and information centres. Multimedia has shown much potential for libraries, and information networks have broken down time and space barriers. By virtue of using a variety of E-Resources and its tools and techniques, academic libraries are now able to generate various kinds of information products and services.

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