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Use of Digital Resources among Medical Students in the age of Digital Technology: A Survey of BMCRI, Bangalore, India

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Abstract:

Purpose:

The purpose of the study is to investigate the use of the internet and digital information sources among the graduate and under graduate students in Bangalore Medical College and Research Institute Library, because most of medical students are exposed to personal tabs throughout their education.

Aim:

The study aimed at identifying the adequacy of digital information sources, purpose and frequency of using digital resources and dependency of the students on digital sources. Suggestion has been given to strengthen the digital sources and services. Internet evolution is injecting more competition into publishing and giving power back students working in colleges. It presents new challenges to the students of the archive and could yet spell the end for many print documents.

Design/Methodology/Approach

The Study uses a survey questionnaire to obtain data from the sample. The total sample consists of 300 students studying at Bangalore Medical College and Research Institute, Bangalore, India.

Findings:

Findings of the study shows that 100% of participant are using internet since last year (53%) for finding relevant information (94%). In addition to this highest of respondents use digital information sources are e-newspapers 94.66% greatest and the next place is for medical science e-articles available on the internet i.e., 87.33%.

Key words: Digital Information sources, impact –ICT Roles, Bangalore, Internet use, Medical College students, BMRCI Library

Introduction:

Internet is the gateway for libraries and information centers to electronic information era and different organizations/institutions, research centers and individual all over the world generate information in digital form on the internet. Creation of digital resources with the establishment of digital library is the need of the day.

About Bangalore Medical College and Research Institute:

The Bangalore Medical College and Research Institute was started as a private Medical college in the year 1955 by Mysore Education Society. The Founders of this Society were Dr. R. Shivaram, Dr. Mekhri, Dr. B.K. Narayana Rao and Dr. B.V. Ramaswamy. In the year 1957 it was handed over to the then Government of Mysore and was affiliated to Mysore University and then on to the Bangalore University. In the year 1996 it got affiliated to the Rajiv Gandhi University of Health Sciences.

Library and Information Centre has 2,270 Sq ft. of floor area spread over in two floors with provision for textbooks section, reference section, stock area, back volume area, periodical section, dissertation section, audio/video section, reprographic section, computer work station with internet with Wi-Fi facility and access to e-resources.

Objectives of the study

- To study the purpose of using the internet among the graduate and post graduate students of Bangalore Medical College and Research Institute
- To study the frequently access of digital information
- To study the frequency of use and awareness of digital information sources
- To know the purpose of use of digital information
- To know the satisfaction level of digital information provided by library
- To know the problems we come across in use of digital information.

Review of Related Literature

Kumar and Naik (2015) observe that information is the accumulated or cumulative knowledge obtained from different subjects in all forms and from all channels that can assist in rational decision-making. Information can also be used to solve problems arising from daily routines among professionals and make them more creative and innovative. Kumar and Naik, (2014) acknowledge that the knowledge of information needs and information-seeking behavior of users is vital for developing library collections, upgrading facilities, and improving services to effectively meet the information needs of users. Electronic information retrieval systems are an important aspect of information seeking and use (Paterson and Low, 2011).

Kaur and Verma (2009) posited that the primary focus of many nurses is patient care, a role that creates tasks requiring information deliverable in specific formats. Mahajan (2000) points out that the users of a medical library are predominantly people in the fields of medicine, dentistry, pharmacy, nursing, biomedical sciences, and public health. Medical practitioners, in order to work together, require digital and electronic information.

Books, journals, audiovisual media, and other electronic resources can be used to disseminate information to professionals (Kumar and Naik, 2016). Doctors' information needs, especially those related to patient care, may vary widely from one doctor to the other. Kumar and Naik, (2015) confirms that the use of the library increases with recently of training and consultation with colleagues and decreases as doctors grow older. The use of various information sources is as a result of factors that include types of practices, specialty, location of practice, professional age, and the size of hospitals, as confirmed in the studies by Mallya and Lakshminarayanan (2017).

Information seeking in the medical and health related fields has proved to be a fruitful area of research, with considerable attention to sources of information, both formal and informal. Patients or health-conscious citizens' use books, journals, Medline, video, and audio recordings. Mittal and Sharma (2015) assert that information which is presented pictorially improves learning in some circumstances, which can improve information use by medical practitioners. Mudawi, (2005). note that individual information seeking has become a critical element in determining health behaviours. Numerous studies have shown that various types of professionals

perceive their own collection to be the most accessible and will use those collections even if the information is rather limited, including Mtega, Dulle, and Malekani, (2014). Studies of medical practitioners by Natarajan, (2017). have shown that they prefer to seek information from personal or office collections of known books and journals before going elsewhere to look for information.

Many constraints prevent medical practitioners from obtaining needed information. Chiefly among them, as enumerated by Naik and Naik (2015), are the lack of academic challenges that require going to the library, time constraints, and lack of loan facility in the library? Perhaps the most dominant barrier in information seeking and use or its applicability is accessibility. The view of relative accessibility of information can be influenced by physical proximity and by considerations such as the language used to convey the information (Parvathamma and Pattar, 2013)

Methodology

The study was conducted through survey method using questionnaire, with different user group of Bangalore Medical College and Research Institute (BMCRI) include graduate and undergraduate students. Total questionnaire 300 were administered among the users of BMCRI under study. Out of which 300 questionnaire were received back dully filled in. The responses elicited through questionnaire have been processed, the data have been analyzed which resulted in significant findings from this study.

Results and Discussions

1. Use of computers: The researcher asked the question among the respondents about the use of computers. It is found that all of them are using the computers. Thus shows that all the students are computer literate.
2. Use of Internet: internet facility is the backbone to access digital information. So the researcher asked the question about the use of internet. It is found from the study that all the respondents are using Internet.

Data Analysis

Internet Use

Table 01: Gender-wise distribution of respondents

Gender	Yes	No
Male	262	87.34%
Female	38	12.67%

Above table shows that out of the total population male users 262 (87.34%) respondents were male respondents. 38 (12.67%) were Female respondents for the study.

Have you used Internet?

Table 02: Internet-use

S.N.	Internet-use	No of respondents	Percentage
1.	Yes	300	100%
2.	No	0	0%
	Total	300	100

It is clear from above table that out 300 respondents, 300 (100%) have stated they were using the internet

If "Yes", since How-long internet use

Table 03: How-long Internet-use

S.N.	Internet-use	No of respondents	Percentage
1	Less than 1 year	160	53.34%
2	More than 1 year and less than 2 years	64	21.33%
3	More than 2 years and less than 3 years	28	9.33%
4	More than 3 years and less than 4 years	38	12.67%
5	More than 4 years	10	3.33%

It is found from the table that highest number of respondents 160(53.34%) followed by 64(31.33%) were using the internet more than one year and less than 2 years and more than 4 years respectively. The next highest respondents 28(9.33%) have stated that they were using internet more than 2 years and less than 3 years and it is noted that only 38(12.67%) were using internet for less than one years.

Purpose(s) of using/browsing Internet

Table 04: Purpose(s) of using/browsing Internet

Sl. No.	Purpose/Internet-use	No of respondents	Percentage
1	Finding relevant information	284	94.66%
2	Accessing online journals	262	87.33%
3	E-mail	230	76.66%
4	Reading/writing research articles	184	61.33%
5	Searching Job opportunities	102	34.00%
6	General information	72	24.00%

It shows that out of 284 (94.66%) respondents were use internets for finding relevant information. Out of 300 respondents, 262 (87.33%) were use internet accessing online journals. Followed by 230 (76.66%) respondents will use internet to far searching e-mail. Whereas 184 (61.33%) and 102 (34%) respondents use internet for reading, writing research articles and searching job opportunities.

Frequency the Use of Digital Information Sources

Table 05 Frequency of use of e-Resources

Sl. No.	Frequency	No of respondents	Percentage
01	Daily	160	53.34%
02	Once in two days	64	21.33%
03	Thrice a week	28	9.33%
04	Once in a weak	38	12.67%
05	Occasionally	10	3.33%
Total		300	100%

Table 05 clearly shows that 53 percentages of respondents are using digital information daily, and 21 percentages of respondents using digital information once in two days and only 3 percentages of users are using digital information occasionally.

User Orientation

Table-06 formal training obtained in the use of digital information

Sl. No.	Formal training	No of respondents	Percentage
01	Obtained	262	87.34%
02	Not obtained	38	12.67%
	Total	300	100%

The table 6 shows that majority 262 of the respondents are of the opinion that they got training in the use of e-Resources. The remaining respondents did not get training in use of e-Resources.

Use of digital information sources

Table 07 Use of different types of digital information sources

Sl. No.	Types of information available	No of respondents	Percentage
01	e-newspapers	284	94.66%
02	Medical science e-articles	262	87.33%
03	e-journals	230	76.66%
04	e-databases	184	61.33%
05	Websites	102	34.00%
06	News groups/mailing lists	72	24.00%
07	E-books	28	9.33%
08	Blogs	04	1.33%

Above table shows that the demand for e-newspapers (94.66%) is greatest and the next place is for medical science e-articles available on the internet i.e., 87.33%. The e-journals, e-databases, websites, and news groups/mailing lists placed next order.

Purpose of Using Digital Information Sources

Further the investigators were asked the questions with the students as 'for what purpose do you use digital information?

Table 08 Purpose of use of digital information sources

Sl. No.	purpose	No of respondents	Percentage
01	To update subject knowledge	224	74.66
02	To prepare notes	88	29.33

03	To write assignments	88	29.33
04	To prepare seminar papers	48	16.00
05	To carry out project/dissertation work	36	12.00
06	To prepare for competitive exams	30	10.00

The above table shows that among the 300 respondents 74.67 percentages of respondents stated that they need digital resources to keep their knowledge up-to-date. Followed by this 88 respondents stated that they use digital information to prepare notes and write assignments. 48 respondents use digital information to prepare seminars papers.

Use of different search engines to get information through websites

Table 09 Use of different search engines to get information through websites

Sl. No.	Search engine	No of respondents	Percentage
01	Google	216	72.00%
02	Yahoo	40	13.33%
03	MSN	32	10.67%
04	Other	18	4.00%

The table 9 shows that among 300 respondents, 72% respondents use through Google search engine, 13.33 %(40) use yahoo search engine, MSN 10.67% and others are only 4 percentage.

Users preferred options to find the digital information on current

Users' preference on use of combination of words to find information on the topic 'the impact of television on the academic result of college students' in a database was asked by the investigators. The responses received are presented in the table 10.

Table 10 users preferred options to find the digital information on current.

Sl. No.	Options	Ranking					
		1	2	3	4	5	6
01	Reading news papers	132 (44%)	62 (20.66%)	64 (21.33%)	20 (6.66%)	12 (4%)	5 (3.33%)

02	Internet searching	52 (17.33%)	40 (13.33%)	40 (13.33%)	50 (16.66%)	46 (15.33%)	72 (24%)
03	Browsing electronic newspapers	38 (12.66%)	36(12%)	50 (16.66%)	62 (20.66%)	52 (17.33%)	62 (20.66%)
04	Watching TV	36 (12%)	64 (31.99%)	54 (11.33%)	34 (11.33%)	54 (11.33%)	58 (19.66%)
05	Reading journals	34 (11.33%)	56 (18.66%)	46 (15.33%)	86 (28.66%)	46 (15.33%)	32 (10.66%)

The table shows that users preferred options to get digital information on current developments in a field. 44 percentage of respondents are giving first preference to get the digital information on current topics is by reading newspapers and it placed first. The other options are internet searching, browsing e-electronic newspapers, watching television, reading journals.

Rating of the features of digital information sources

To find out the rating of the features of digital information, the investigators posed a question with the students as 'How would you rate digital information on each following features as far your study?

Table 11 rating of the features of digital information sources

Feature	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**	**Total**
Accuracy	78 (26%)	36 (12%)	82 (27.33%)	54 (18%)	50 (16.67%)	300 (100%)
Authority	82 (27.33%)	76 (25.33%)	50 (16.67%)	44 (14.67%)	48 (16%)	300 (100%)
Accessibility	42 (14%)	66 (22%)	126 (42%)	26 (8.67%)	40 (13.33%)	300 (100%)
Coverage	198 (66%)	38 (12.67%)	38 (12.67%)	26 (8.66%)	0	300 (100%)
Usefulness	194 (64.67%)	44 (14.66%)	62 (20.67%)	0	0	300 (100%)

Currency	186 (62%)	78 (26%)	36 (12%)	0	0	300 (100%)
Consistency	202 (67.33%)	60 (20%)	38 (12.67%)	0	0	300 (100%)
Easy to use	214 (71.34%)	64 (21.33%)	22 (7.33%)	0	0	300 (100%)
Timeliness	238 (79.33%)	62 (20.67%)	0	0	0	300 (100%)

The above table shows that out of the many features given in the table for only few features such as accessibility, accuracy, authority and coverage the respondents rated as excellent and very good. Remaining all other features was rated as good, fair and poor. It is also found from the table that majority of the respondents poorly rated the different features of digital information.

Frequency of Problem Faced in the Use of Digital Information Sources

Table 12: Frequency of Problem Faced in the Use of Digital Information Sources

Frequency of Problem Faced in the Use of Digital Information.	**No of Respondents 300**	**percentages**
Slow access speed	90	30.00%
Overload of information on internet	76	25.33%
Habit of using the digital information	68	22.67%
Role of library staff	66	22.00%
Not to find out the authentic sources	24	8.00%
Non-availability of needed digital information	22	7.33%
Digital information are too expensive	20	6.67%

Table 12 shows that 90 (30%) of respondents face problems of slow access speed and followed by 76 (25.33%) overload of information in internet, 68 (22.67%) habit of using digital information, 66 (22.00%) role of library staff. Only 24 (8%), 22 (7.33%) and 20 (6.67%) of respondents faces the problem of not to find out the authentic sources, non-availability of needed digital information and digital information are too expensive.

Findings, Suggestions and Conclusion

Digital Information sources are plays an important role in any research. Today most of the sources are available in digital form and libraries also subscribe digital sources. There are 53% of respondents are use daily use digital information. The study shows that 87% respondents are obtained training to use of digital information.

The found that the highest of respondents use digital information sources are e-newspapers 94.66% greatest and the next place is for medical science e-articles available on the internet i.e., 87.33%. Again the purpose of study shows that 74.67% of respondents stated that they need digital resources to keep their knowledge up-to-date and only few features such as accessibility, accuracy, authority and coverage the respondents rated as excellent and very good.

The study also stated that 90 (30%) of respondents face problems of slow access speed and followed by 76 (25.33%) overload of information in internet. The investigator has given few suggestion is that internet speed should be improve. 79.33% of respondents stated that information has not provided with in timeliness. Hence concerned authority should provide with in time. Digital information literacy is need of an hour topic (Digital information literacy, 2009). Due to the technological advancement and covid-19 period, most of the information sources today are available in the form of digital. So all categories of people must know how to access, store, use and dissemination of information. They should be digitally literate. The present study is an attempt in this regards. There should be lot of studies should be conducted in this level to provide the effective services to the users community in the libraries. These types of studies also help much in any organization awhile taking important decision such as procuring the digital information resources to their library or organization.

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