

## **Use of Information Technology and Services in Medical College Libraries of A.P.**

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### **ABSTRACT**

*The speedy development of the information technology in this age has changed the functions and definition of librarianship. The e-resources have become the vital part of the every kind of library. Print format of documents are being changed into electronic form. E-resources have become a need of the library. E-resources have several advantages over the print counterparts. The enormous developments in Information and Communication Technology (ICT) have changed the world information scene. It has brought drastic changes in the way the information generated, stored, organized, accessed, retrieved and consumed. The present study was conducted on the use of Information Technology and Services in Medical College Libraries in Andhra Pradesh. The study shows that most of the 206 (26.93%) respondents spend their time 'more than 4 hours'. It was revealed from the survey that respondents were requested to indicate their opinion regarding on preferred information formats for accessing information. The first rank goes to the opinion of library materials, the majority 336(43.92%) of the respondents preferred in 'printed' material.*

**Keywords:** Information Technology, User studies, Internet, e-resources, Medical Websites, Online Databases, Information Communication Technology,

### **Introduction**

Young people today live in a world characterized by dramatic cultural, economic, social and educational differences; individual circumstances depend largely on where a person is born and raised. Medical Science is important for improvement of human life, lifespan and quality of human life. It helps prevent human suffering and also cures the diseases that are the result of advancing civilization. It helps to develop new drugs, new techniques and new equipment to study, analyse and cure the diseases. E-resources have exploded in popularity and use. They can and do enable innovation in teaching and they increase timeliness in research as well as increase discovery and creation of new field of enquiry. The electronic Library is committed to providing access to electronic and print resources to support the research and curricula as expressed in its mission statement: To provide world-class environment for learning, research and community service. To achieve that mission, the Library has

effectively and consciously utilized IT applications leading to the rise of e- library within the entity of its conventional libraries. Thus, library users are no longer obliged to visit the library at regular open hours to meet all their information needs. They may search the library online catalogue; use a subject guide or database to access a citation from the Internet or access a full text article from Web-based journals; they may browse an electronic journal; e-mail a reference question via the ask-a-librarian service or borrow an e-book all by remote access

### **ICT Based Library Services**

The libraries are also forced to adopt new technologies in the library to provide ICT based library services to satisfy the information requirements of the users. The following are a few of the merits of ICT based library services:

- Access to information sources
- Convenient access
- Digital Library Service
- E-Learning Service, and
- Electronic Document Delivery
- Information literacy
- Institutional Repository Service.
- Integration in access to information
- Methods of using information
- Quality of information and knowledge
- Speed in access
- Web-based Online Public Access Catalogues

### **Review of Literature**

**Baikadi (2010)** has conducted a study on “Faculty and students satisfaction with the web resources available at the Medical College Libraries in coastal Karnataka”. Questionnaire method was adopted by distributing 696 questionnaires and received only 472 filled in usable questionnaires with a response rate of 67.82%. The study revealed that majority of the faculty members and post graduate students expressed their satisfaction towards various web resources available at their libraries. It was also noted that a vast majority of the respondents were fully satisfied with PubMed/Medline bibliographic database service provided by the libraries. Majority of the respondents were also satisfied with the accessibility of online journals of various publishers, open access resources/databases and full text online databases such as ScienceDirect, MD consult and OvidSP at their libraries. The study suggested that training, guiding, creating an awareness on the web are long-standing alarming problems in the libraries. The study suggested that librarians should stress the need for compulsory user education programme at different levels of medical education system for promoting the proper utilization of web resources.

**Farahil and Gandhi (2011)** investigated and compared the current state of IT in medical libraries in Karnataka, India and Iran. It was found that the libraries in both countries have ICT facilities like hardware, software and communication facilities. However, only few medical libraries in both countries are fully automated the library

operations. The librarians in Iran are faced a number of problems including lack of institutional support, funds, trained and skilled professionals, and absence of planning and training courses in the implementation of ICT whereas the Indian medical librarians are not found any of the major problems faced by Iran librarians in implementing of ICT in the libraries.

**Dhanavandan, Esmail and Nagarajan (2012)** examined the “Access and awareness of ICT resources and services in medical college libraries in Puducherry”. The result revealed that majority of the respondents (87.33%) used electronic resources for research/study, followed by communication (54.66%), to find relevant information (34.66%) and career development (20.66%). Further, it is indicated that 50% of the respondents acquired skills from external course, learned guidance (48%) and trial and error (16%). Majority of the respondents are informed of the constraints like too much of information retrieved (73.33%), and limited access to computer terminals (66.66%).

### **Objectives of the Study**

- To study the respondents’ frequency of utilizing medical information
- To analyze the respondents’ extent of access to web-resources
- To examine the respondents’ purpose of gathering web-resources
- To study the respondents’ satisfaction and problems in utilizing the web-resources

### **Scope of the Study**

The scope of the study confines to only Medical Sciences College Libraries that fall within the limits of Rayalaseema districts of Andhra Pradesh State only. Dental and Ayurveda, and Unani College Libraries are exempted from the study. Andhra Pradesh is further, it confines to the selected Medical College Libraries that are as follows: The study deals with only Use of Information Technology and Services in Medical College Libraries of Andhra Pradesh.

### **Methodology**

Information technology (IT) is the application of computers to store, study, retrieve, transmit and manipulate data, or information, often in the context of a business or other enterprise. IT is considered a subset of information and communications technology (ICT). The questionnaire intended for the librarians was distributed to 9 librarians, to determine the present condition of their libraries. It consists of questions on physical facilities library services, library automation, and networking. The second questionnaire to medical students and faculty was distributed to UG and PG students of medical colleges to obtain their views on the library facilities and services. A total of 1000 questionnaire was distributed and 765 replied for the questionnaire, finally, a total number of 765 users at the rate of 76.5% users from each of the 9 Medical College Libraries were selected for the study.

### **List of Medical Colleges under the study**

1. Fathima Institute of Medical Sciences, Kadapa
2. Government Medical College, Anantapuram
3. Kurnool Medical College, Kurnool

4. P E S Institute Of Medical Sciences and Research, Kuppam
5. Rajiv Gandhi Institute of Medical Sciences, Kadapa
6. S V Medical College, Tirupati, Tirupati
7. Santhiram Medical College, Nandyal
8. SVIMS - Sri Padmavathi Medical College for Women, Tirupati
9. Viswabharathi Medical College, Kurnool

## Data Analysis

The data collected from the respondents of 9 selected medical college libraries of Andhra Pradesh is presented, analysed and interpreted in the following sections.

### Gender-wise distribution of the respondents

The gender-wise distribution of the respondents is presented in the below Table: 5.1, which shows that the male respondents are dominating with 76.47 % of total respondents and 23.53% of female respondents in sample data of Medical colleges.

**Table: 1 Gender-wise distribution of the respondents**

Gender	No. of Respondents	%
Male	585	76.47
Female	180	23.53
<b>Total</b>	<b>765</b>	<b>100</b>

### Age-wise distribution of the respondents

The age-wise distribution of the respondents is presented in the below Table: 5.2 It is observed from the table that the Age wise distribution is also almost proportionate. The above Table shows that 452 (55.56%) of the respondents belong to age group between 21-25 years followed by 132 (17.25%) belongs to 26-30 years of age group, 96 (12.55%) belongs to 31-35 years of age group, and followed by 70 (9.15%) of the respondents belong to the age groups of 36-40 years. Above 41 years of the age group respondents constitute 42(5.49%)

**Table: 2 Age-wise distribution of the respondents**

Age Group	No. of Respondents	%
21-25 Years	425	55.56
26-30 Years	132	17.25
31-35 Years	96	12.55
36-40 Years	70	9.15
Above 41 years	42	5.49
<b>Total</b>	<b>765</b>	<b>100</b>

### Frequency of visits to library

The Table: 2 indicates the frequency of visiting to the library by the respondents. It explains that around 352 (46.01%) of the users visit the library 'daily' and 229(29.93% '2-3 times in a week' following 102( 13.33%) of the users visit 'once a week', 48(6.27%) of the users visit the library '2-3 times a month' and 34(4.44%) of the user visit library 'once in a month'. This shows that most of the users are visiting the library on a daily basis. However, 34 (about

4.44%) of the respondents informed that they visit the library ‘once in a month’.

**Table 3. Frequency of visits to library**

Frequency	No. of Respondents	%
Daily	352	46.01
2-3 times a week	229	29.93
Once a week	102	13.33
2-3 times a month	48	6.27
Once a month	34	4.44
<b>Total</b>	<b>765</b>	<b>100</b>

### **Purpose of Visiting to the Library**

Table 3 indicates that the purpose of visiting a library is concerned though 562 (26.52%) of the respondents have exclusively indicated that they visit library ‘study’ purpose, following 390(18.40%) respondents visit for ‘refer journals’, 380(17.93%) respondents visit for ‘research work’, 205(9.67%) respondents visit for ‘access the web resources’, 200(9.44%) respondents with little variance visit their library for ‘other purpose’, 150(7.08%) respondents visit library for ‘refer books’, 126(5.95%) respondents visit for ‘browsing internet’ and very fewer 106( 5%) respondents say that they visit library for ‘e-mail/chat’ purpose. The percentage of response amounts to 26.52%. Thus, majority of the respondents say that they visit library ‘study’ purpose.

**Table 4 Purpose of visiting to the library**

<b>Purpose</b>	<b>No. of Respondents</b>	<b>%</b>
Study	562	26.52
Research work	380	17.93
Refer books	150	7.08
Refer journals	390	18.40
Access the web resources	205	9.67
Browsing Internet	126	5.95
e-Mail/Chat	106	5.00
other purpose	200	9.44
<b>Total</b>	<b>2119</b>	<b>100</b>

### **Response on Use of Web Resources**

As the users, namely Students, Faculty, and other members of the medical research institutions mainly depend on web-resources to keep themselves updating the knowledge. Hence, From the above Table: 5 shows that highest number of the respondents i.e: 96.21% are using the Web Resources and remaining few 3.79% of the respondents are not using web resources.

**Table 5 Response on Use of Web Resources**

<b>Response</b>	<b>No. of Respondents</b>	<b>%</b>
Yes	736	96.21
No	29	3.79
<b>Total</b>	<b>765</b>	<b>100</b>

### Place where from Web resources are accessed

It can be observed from the Table: 6 that a majority of 289 (37.78%) of respondents are accessing web resources from their 'libraries' and 175 (22.88%) from their 'homes' 150(19.61%) respondents are accessing the web resources from 'department', 102 (13.3%) respondents are accessing the web resources from their ' hostels' and few 49(6.41%) of them accessing the 'Elsewhere' like internet cafes etc. It can be noted that majority of 289 (37.78%) respondents are accessing web resources from their 'libraries'.

**Table 6 Place where from Web resources are accessed**

Access Place	No. of Respondents	%
Home	175	22.88
Department	150	19.61
Library	289	37.78
Hostel	102	13.33
Elsewhere	49	6.41
<b>Total</b>	<b>765</b>	<b>100</b>

### Purpose of using Web resources

As per purpose of use of web resources is concerned though 197 (25.75%) of the respondents have exclusively indicated that they web resources for 'clinical practice; as shown in below Table 7. However, there are 160(20.92%) respondents who indicated that besides 'Support teaching activities', 156(20.39%) respondents indicated that they use web resources for 'study' purpose , 146(19.08%) respondents say that they use web resources for 'writing paper' purpose, 97 (12.29%) respondents use for 'Preparing for lectures' and the least 12(1.57%) of the respondents indicated that they use web resources for 'other' purpose.

**Table 7 Purpose of using Web resources**

Purpose	No. of Respondents	%
Support teaching activities	160	20.92
Clinical practice	197	25.75
Studies	156	20.39
Writing papers	146	19.08
Preparing for lectures	94	12.29
Others	12	1.57
<b>Total</b>	<b>765</b>	<b>100</b>

### Familiarity with Web Resources

Familiarity with web resources by users which is shown in Table 8. 685(89.54%) of respondents indicated that they 'NTRMEDNET Consortium' 655(85.62%) respondents indicated 'e-journals', 650(84.97%) respondents indicated 'e-books', and apart from 'other' category the least 182(23.79%) of the respondents indicated 'ProQuest Medical Library'

**Table 8 Familiarity with Web Resources**

S.No.	Web Resources	No. of Respondents (N=765)	%
1	British Medical Journal (BMJ)	436	56.99
2	e-Books	650	84.97
3	ebrary	389	50.85
4	EBSCO Medical	275	35.95
5	e-Journals	655	85.62
6	Electronic Resources in Medicine (ERMED)	240	31.37
7	Elsevier- Clinical Learning	316	41.31
8	Information Network (INFONET)	220	28.76
9	MD Consult	245	32.03
10	NTRMEDNET Consortium	685	89.54
11	Open access (free) resources	322	42.09
12	ProQuest Medical Library	182	23.79
13	PubMed/MEDLINE	521	68.10
14	Science Direct	360	47.06
15	Other	150	19.61

### Types of problems while accessing e-resources

From the Table: 9 it can be observed that Poor Speed of internet /network connectivity is number one problem as the rate of response is 189 (24.71%) when responses under 156 (20.39%) that is 'Limited number of Computers' and 150(19.61%) respondents were there is a 'Power failure'. This is followed by Power failure as the response for this problem is 102 (13.33%) and 'Lack of trained library staff who can't help the users' that amount to 70 (9.15%) respondents were there is a 'Lack of knowledge of how to access e-resources', 60 (7.84%) respondents says it is a 'Lack of awareness of available resources ' and 38 (4.9%) respondents says it is 'other' kind problems.

**Table 9 Types of problems while accessing e-resources**

Types of Problems	No. of Respondents	%
Lack of knowledge of how to access e-resources	70	9.15
Poor Speed of internet /network connectivity	189	24.71
Limited number of Computers	156	20.39
Lack of awareness of available resources	60	7.84
Lack of trained library staff who can't help the users	102	13.33
Power failure	150	19.61
Others	38	4.97
<b>Total</b>	<b>765</b>	<b>100</b>

### Satisfaction on application of Information Technology

Table: 10 shows the opinion on satisfaction on application of Information Technology in your library, 260 (33.99%) of the respondents expressed their opinion 'strongly agreed' that they are satisfied with Information technology, 194(25.36%) of the respondents expressed 'agree' with IT, 12(15.69%) of the respondents expressed 'uncertain' with IT, 99(12.94%) of the respondents expressed their opinion 'disagree' and 92(12.03%) of the respondent

expressed 'strongly disagree' with IT because that their libraries do not have adequate IT infrastructure. More over the majority 33.99% of the respondents expressed their opinion IT.

**Table 10 Satisfaction on application of Information Technology**

<b>Rating</b>	<b>No. of Respondents</b>	<b>%</b>
Strongly Agree	194	25.36
Agree	260	33.99
Uncertain	120	15.69
Disagree	99	12.94
Strongly disagree	92	12.03
<b>Total</b>	<b>765</b>	<b>100</b>

### **Findings:**

- It was found from study around 352 (46.01%) majority of the users visit the library 'daily'
- The majority 26.52%. of the respondents say that they visit library 'study' purpose.
- It was found that the highest number of the respondents i.e: 96.21% are using the Web Resources and remaining few 3.79% of the respondents are not using web resources
- It can be noted that majority of 289 (37.78%) respondents are accessing web resources from their 'libraries'.
- It was found the study that the purpose of use of web resources is concerned though 197 (25.75%) of the respondents have exclusively indicated that they web resources for 'clinical practice';
- Study reveals that familiarity with web resources by users which is highest percentage of 89.54% of respondents indicated that they 'NTRMEDNET Consortium' using.
- It was found from the survey that respondents pinion of poor speed of internet /network connectivity is number one problem as the rate of response is 189 (24.71
- It was found that the majority 33.99% of the respondents 'agree' with satisfactory level of Information Technology in their libraries.

### **Conclusion**

The emerging technologies have dynamically changed the way information is gathered, organized, accessed, stored and consumed. Study is focused on the an evaluation of web resources in medical college libraries of Andhra Pradesh. Nine Medical college Libraries were taken as a sample for the study. The study revealed that all the very few libraries covered under the study are fully computerized and other are not automated. However, many of them has said that updating oneself has high impact of e-resources. The findings of the study indicate a positive situation prevailing in the medical college libraries and the amounts spent by these libraries towards the development of e-resources and subscribing to access e-resources online are justified. This indicates that there is a positive result in the functioning of the research and development organization in the country. Development of any nation depends on the qualitative and standard output of their medical colleges and the quality of the output in turn depends on the efficient and effective services of their medical college libraries. In the digital era usage of web resources will have a greater impact on the research output of the medical colleges in the Andhra Pradesh State.

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