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**ICT Infrastructure and Its Use in Nursing College Libraries Affiliated To Rajiv Gandhi  
University of Health Science, Bangalore: A Study**

**By**

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**Abstract:**

Application of information and communication Technology in libraries has become inevitable in an era of information explosion and widespread use of digital information resources. Effective application of ICT in libraries helps in performing their operations and services most efficiently. Application of ICT in libraries of Nursing College Libraries affiliated to Rajiv Gandhi university of Health Science has increased in the recent years. But the automation work of nursing college libraries is very slow due to certain problems. This study investigates the status of 42 automation Nursing college libraries, current state of the art information and communication technology infrastructure and the extent of use of electronic information resources and problems faced by the librarians in implementing the ICT in Nursing college libraries affiliated to Rajiv Gandhi university of Health Science, Bangalore. It also makes an attempt to provide suggestions and strategies for improving ICT facilities and library automation in college libraries.

**Keywords:** Library automation, Academic library, Information communication Technology.

**Introduction:**

Application of ICT in libraries has become inevitable in an era of information explosion and widespread use of digital information resources. Effective application of ICT in libraries helps in performing their operations and services most efficiently. The modernization of libraries and information centers enabled information transfer and access meeting objectives and there by establishes a network of libraries and information centers. This initiative saw a major shift in resources development resources sharing and their utilization at various levels. They subscribe to

e-journals, CD ROM databases, online databases, web-based resources and a variety of other electronic resources. They participate in library consortia and build digital libraries.

An ideal college library with the advancement of information technology is becoming a hybrid library, a digital library or a virtual library the future librarian may be designated as cyber librarian as he has to provide information service form a large number of documents published in digital form and available thorough internet where a significant number of documents are available free of cost. It may not be for away when a large number of students will demand computerized service from a college library. So, libraries may think to reorient their activities with the help of information communication technologies.

### **Need and Purpose of Information Technology in Libraries**

The application of information technology in libraries results in increased operational efficiency. The IT increases productivity of library staff. It relieves professional staff form mundane jobs that involves a lot of duplication so that they can be fruitfully used for user oriented library services. It improves quality of services rendered by the library. Use of information technology ensures ease of functioning accuracy and economy in human labour with greater speed. The exponential growth of information has made manual system redundant giving way to computerized information strange and retrieval tools. Effective and efficient handling of huge quantum of information is only possible by using computers which have the added advantage of being highly accurate and efficient that adds value to information.

### **Review Literature**

Kannappanavar and Rajanikanta's (2008) paper highlights the use of e-learning resources in medical colleges. The study has found that Medical education was popularized only after the independence of the country. It is found that majority of the colleges under the study area have e-information resources, e-databases. Almost all colleges under study are also becoming members of a consortium. As far as the infrastructure facilities are concerned, almost all colleges under study have provided very good infrastructure facilities to their libraries to serve their clients effectively.

Sambasivan (1998) mentioned the sweeping changes brought about by information and communication technologies and discussed the phenomena of computer networking, emergence

of potentialities of internet, emergence of list or mail server, application of e-mail and websites. Also highlighted the hypermedia links, and other revolutionary innovations and technologies, and their impact on libraries and information centers.

Loan (2011) surveyed the Internet use among college students in Kashmir Valley and found that students of computer science make use of the Internet most of all followed by students of business and commerce, general science, social science and humanities students respectively. It was found that the students of business and commerce leads in using the Internet for information, students of computer science use it predominantly for communication purposes and students of social science and humanities use it for education purposes compared to others. Information overload was the most common problem faced by students of all faculties while searching the relevant information. The students of general science, social sciences and humanities found the Internet illiteracy as the major limitation in using the Internet. The students of general sciences, social sciences and humanities, and business and commerce faced intuitional curbs to the Internet access. It was needed to make students of all faculties aware about the information and communication technologies (ICTs) and to train them in using these technologies to bridge the gap.

Swain (2010) evaluated the level of electronic information services offered by the primary information reserves of the respective business schools with an opinion pool of sample respondents. The study found that students expressed keen interest in the use of e-journals, followed by e-books, e-newspapers, e-reports, and e-articles. Least interest was shown towards the use of electronic theses and dissertations. The study also revealed that the majority of students were aware of EBSCO, and Emerald Management Xtra. The study highlighted the practicality of the use of electronic resources, compared to print, among the students of business schools of Orissa (India)

Sampath Kumar and Biradar (2010) examined the use of information communication technology (ICT) in 31 college libraries in Karnataka, India by investigating the ICT infrastructure, current status of library automation, barriers to implementation of library automation and also librarians' attitudes towards the use of ICT. The findings revealed that lack of budget, lack of manpower, lack of skilled staff and lack of training were the main constraints for not automating library activities. Even though library professionals shown a positive attitude towards the use of ICT

applications and library automation, they needed extensive and appropriate training to make use of ICT tools.

Kishor Kumar and Lokesha Naik (2014) has conducted the study was related to “use pattern of information resources by the users of public library: A case study of district central library, Tumkur (Karnataka).” He knew the frequency of visits of the users to the library and among the time spent and how they get information for their study. He found out use and adequacy of the reading material such as text books and periodicals non book materials etc. He observed whether the arrangements of books and other materials are helpful to the users in the city central library. He adopted Interview Method for the collection of data. After analyzing the data it is found that less no of the users visit the library occasionally. Majority of the user’s spending the time more than two hours. Majority of the users read the newspapers. Majority of the users locate the reading materials directly from the racks. Majority of the users do not use the catalogue cards. Majority of the users refers the information sources like newspapers, books, periodicals etc. Majority of the users are more satisfied with the arrangements of books. Majority of the users are satisfied with the cooperation of the staff were found out.

### **Present Study**

Information that is diverse in nature is increasing in tremendous way in order to fulfill the basic need of human beings. There is a great demand to provide such information quickly. So there is need of adoption of information quickly. So there is need of adoption of information technology. In order to provide efficient services to the users, even after a decade of automation process in college libraries in the country, it did not reach to the expectations of the user community. So considering this, the present study is entitled as “Availability of ICT Infrastructure and its use in Nursing College Libraries affiliated to Rajiv Gandhi university of Health Science, Bangalore: A Study”. The study is to analyze the utility of information and communication technology based services and to know users satisfaction.

### **Need for the Study**

Application of ICT in libraries involving creation of computerized database and information retrieval computerized library network and use of telecommunication for information handling. The work flow of the library may be more rapid, more systematic, and efficient with the help of

computer. The records in the computerized store are more accurate, more reliable than manually prepared records. This amazing growth of documents especially in the area of science and technology in the form of books and non-books materials forced the library planners to utilize new technology for the organization and dissemination of information.

### **Scope of the study**

The scope of the study is to examine the present status of college library automation and impact of ICT. The present study is confined only to 42 libraries of nursing colleges affiliated to Rajiv Gandhi university of Health Science, Bangalore, as well as study of library staff facilities and services in the library, so that we will come to know how the college libraries can meet the challenges of information dissemination in information era.

### **Objectives of the Study**

The main objectives of the study are as follows:

1. To find out the impact of information communication technology and automation on library operations and services.
2. To examine the information communication technology infrastructure facilities available in the libraries.
3. To know the present status of application of information communication technology and automation in the college libraries.
4. To find out the level of use and purpose using various information communication technology products and services.
5. To suggest measures to provide better services and up-to-date information by using modern information technology.

### **Methodology of the study**

A sample questionnaire was prepared keeping in view of the objectives of the study. Based on this the well-structured final questionnaire was designed to collect the data. The question were simple and open ended with ample number of options with the assurance that the data collected would be kept confidential and will be used for the study purpose only. Free and frank options were taken. The questions were asked to the college librarians to get data regarding the

availability of computers data regarding the availability of computers availability of internet automation of the library type of software used for automation, attitude of the library professionals towards the application of ICT and impact of information technology based services in the library on library staff and the end users. The researcher has e-mailed and visited some of college libraries. Totally 42 questionnaires were distributed to college libraries and all library professionals have responded positively by returning the duly filled questionnaires. These questionnaires were analyzed and the results were tabulated systematically.

### Analysis and findings

During the sense of the study the researcher has collected vast information relating to the problem of the study. The analysis of the data resulted in the information of certain number of findings as follows.

#### Basic Information about the Nursing College Libraries Surveyed:

The following table no.1 shows the number of nursing colleges all under Rajiv Gandhi university of Health Science, Bangalore region. The questionnaire were distributed throw online to all the 42 colleges and received duly filled in

Table 01 Details of Questionnaire distribution (N=42)

Type of Colleges	No. of questionnaire distributed	No. of questionnaire received	Percentage
Govt., Colleges	20	20	48
Private Aided Colleges	8	8	19
Private un-aided colleges	11	11	28
Constituent Colleges	3	3	5
	42	42	100

### ICT Infrastructure

The study reveals that, 40 college libraries having computers, UPS and CD-ROM writer facility, out of 42 colleges of our study, 23 college libraries having printers, 5 college libraries have barcode printer and 17 college libraries are having scanner/barcode scanner facility, 15 college libraries have Xerox machine, 24 college libraries have telephone connectivity, 03 colleges have television and 01 library is having web camera, DVD player, CD Player, 02 college libraries are having closed circuit television CCTV facility. Remaining colleges' libraries do not have any ICT equipment in their libraries.

Table 02 shows that availability of ICT Infrastructure and other accessories in the Colleges libraries.

Description	No of Colleges
Computers	40
Printers	23
Scanners	17
Others, like DVD players, CD players etc..	24

### Status of Library Automation

The information technology has touched almost all areas including libraries. A question was asked about the status library automation. Out of 42 college libraries only 06 college libraries are fully automated, 18 colleges library are partially automated and 18 library are not automated. The same has been presented in the below table.

Table 03 Status of Library Automation

Status of Library Automation	No. of Libraries (N=42)	Percentage
Fully Automated	6	14
Partially automated	18	43
Not Automated	18	43
	42	100

To introduce automation in the libraries, it is prerequisite to have separate software. Keeping in view, a question was asked to know the different software used in libraries. The collected data depicted in below table no.04.

Name of the software	No. of libraries	Percentage
Easylib	15	62
e-lib	04	17
Libsoft	01	4
NewGenlib	04	17

Data presented in the above table indicated that 62 percentage of library use Easylib software to automate their libraries. Whereas four libraries use elib, Newgenlib software, and one library was using libsoft to automate the library resource.

### Modules of Library Automation Software being used

The below table shows that acquisition module of library automation software is being used by all the 24 automated libraries cataloguing/technical module is used by 18 college libraries, circulation module of library automation software is being used by 20 college libraries, OPAC/Web OPAC, serial control, stock verification and administration module of library automation software is being used by 06 libraries.

Table no. 05 Modules of library Automation Software being used

Modules	No. of Libraries (N=24)
Acquisition	24
Cataloguing/technical	18
Circulation	20
Serial control	06
OPAC/Web OPAC	06
Stock verification	06
Administration	06



### Services offered through Information and Communication Technology

Computer based information services are better than manual services because they are accurate, consistent and time saving. In below table shows that, all the 24 automated libraries are offering document delivery service through information technology/computers, 18 libraries are providing CAS/SDI services, 15 libraries are providing OPAC facility, 14 libraries are providing CD-ROM search facility, 17 libraries are offering e-mail service, all the 24 automated libraries are providing Internet service, only 15 libraries are providing reprographic facility to the readers.

Services	No. of Libraries
Document delivery	24
CAS/SDI	18
OPAC	15
CD-ROM search	14
E-mail	17
Internet	24
Reprographic service	15

Table no. 6

### Use of Internet:

Internet is an indispensable tool provides the latest information as well as the facilities across the continent with in short span of time at a low cost. In order to find how many of the colleges using internet a question has been included and the result is given in the table no. 7.

Internet service	No of libraries N=42	Percentage
Providing	18	43
Not providing	24	57
Total	42	100

Above table no. 7 clearly indicated that, only 43 percentages of college libraries are providing internet facility to users and other majority of college libraries are not providing this services.

### Impact of Information and Communication technology on Library Staff

Use and application of ICT in the library has positive impact on the library staff. Majority of libraries agree computer based information services are better than manual services because they are accurate, consistent and time saving. The staff expressed that, through IT, the staff can provide better services to the readers.

Table shows that out of 24 automated library staff, 09 librarians have strongly agreed and 13 librarians have agreed and 02 libraries have dis-agreed that use of ICT enhances the knowledge and experience of library staff. 11 librarians strongly agree and 10 librarians agreed and 03 librarians have dis-agreed that, use of ICT enabled to improve the communication skills. Nearly 19 librarians strongly agreed and 5 librarians agree that application of ICT avoids the repetitive work of the library 9 librarian strongly agreed and 10 librarians' agreed and 5 librarians dis agreed the ICT helps for collection development of the library. 16 librarians strongly agreed and 6 librarians agreed and 02 librarians were disagreed that, use of ICT has positive effect and improves the image of the library. 16 librarians strongly agree and 8 librarians agree that, application of ICT in libraries has saves the time efforts of the library staff. Around 11 librarians strongly agree and 8 librarians agree and 5 librarians dis agree that ICT helps to attract the library users. Around 11 librarians strongly agree and 10 librarians agreed and 3 librarians disagree that use of ICT in library has improved the attitude of the library staff.

Table no 8 shows Impact of Information and Communication Technology on Library staff  
N=24

Sl. no.	Opinion	Strongly Agree	%	Agree	%	Disagree	%
01	Use of ICT enhances the knowledge and experience	09	38	13	54	02	83
02	Use of ICT is enabled to improve the communication skills	11	46	10	42	03	12
03	Avoids the repetitive work of the library	19	79	05	21	-	-

04	Helpful to collection development	09	37	10	42	05	21
05	Positive effect and improves the image of the library	16	67	06	25	02	8
06	Saves the time and efforts of the library staff	16	67	08	33	-	-
07	ICT helps to attract the library users	11	46	08	33	05	21
08	Attitude of the library staff has improved	11	46	10	42	03	12

### Problems of application of ICT in Libraries

All the 42 college libraries of our study have expressed that, improper supply of electricity is major problem for application of ICT in libraries. Almost all the college libraries of our study have expressed that, they are lacking of sufficient funds and lacking of trained manpower. Few colleges' libraries expressed lack of co-operation among the library staff and higher authority. Many government college librarians and un-aided college librarians have expressed lack of ICT equipment in their libraries. Few rural college librarians have expressed no demand form the library users. Some college librarians have expressed that, non-availability of standard library automation software for automating libraries.

Table no.9 shows problems of application of ICT in libraries.

Sl. No.	Reasons	Number of colleges N=42	%
1	Lack of Funds	42	100
2	Lack of IT trained manpower	31	74
3	Lack of co-operation among the library staff	9	21
4	Lack of co-operation from the higher authority	37	88
5	Non-availability of ICT equipment's	39	93

6	No demand form the users	15	36
7	Non-availability of automation software	13	30.95
8	Improper supply of Electricity	42	100

Above table shows that out of 42 libraries of our study, all the librarians have expressed lack of funds is the main problems for application of ICT in libraries. Around 31 librarians expressed lack of IT trained manpower 9 librarians stated lack of co-operation among the library staff. Nearly 37 librarians have expressed lack of co-operation form the higher authority. Around 39 librarians have expressed non-availability of ICT equipment's in their libraries. Nearly 15 librarians have expressed there is no demand form users. Around 13 librarians have stated non-availability of standard library automation software. All the librarians of the college of our study stated that improper supply of electricity is the major problems for application ICT in the libraries.

### Findings

Many of the college libraries are in the opinion that, the application of information technology in the library is easier, flexible, time saving and quicker in providing good services to the end users and also some colleges have unawareness about the information technology based services. Based on the findings of the study an attempt has been made to suggest a few recommendations, which will help the librarians and management authorities successfully use ICT facilities as well as to automate the college libraries.

1. It is suggested that, many of the college libraries are not having good technological infrastructural facilities to adopt library automation activities. Hence, the concerned authorities should take appropriate steps to provide technological infrastructure facilities to their college libraries as per the latest configuration. The UGC is granting huge funds for the purchase of ICT equipment's to the colleges. So the library professionals are to make use of this grant.
2. Few college libraries are fully automated.
3. The automation of library activities will help to provide better services to the users. Some library automation software is open source and freely available on the web.

4. The study shows that, different library automation activities in the college libraries.
5. It is suggested that common and standard software library automation software should be used so that the resources sharing is made much easier.
6. Internet can play a very important role in providing the better services to the users. But majority of college libraries are not providing internet service to their users. It is suggest that, the concerned authority must take initiation to provide internet facility to the users.

### **Conclusion**

Application of information communication technologies in the college libraries are erupting and moving faster than ones imagination resulting in information explosion crossing geographical boundaries. Information communication technologies will help to remove barriers of distance and time. There will be no limit of variety of ways in which modern technology is applied in speedy retrieval of information most consistently. It is the power and capacity of modern technologies that helps every reader to get the information he or she seeks.

### **References:**

1. Swain, Dillip K. (2010) Students' keenness on use of e-resources. *The Electronic Library*, 28 (4): 580 –91.
2. Sampath Kumar, B. T., and Biradar, B. S. (2010) Use of ICT in college libraries in Karnataka, India: a survey. *Program: Electronic Library and Information Systems*, 44 (3), 271 - 82.
3. Kishor Kumar and Loksha Naik (2014) Use Pattern of Information Resources by citizens in public library: A case study of District central library, Tumkur, Karnataka: *International Journal of Library and Information Studies*, 4(4) Oct-Dec, 2014, 17-23.
4. Gaur, Ramesh C et. al. *The Institutional Repositories: An Alternative Model for Scholarly Publishing*. In. *Road Map to New Generation of Libraries using Emerging Technologies*. Ed. By T.A.V. Murthy et.al. INFLIBNET Centre, Ahmedabad, 2004.
5. Harnad, S. & Brody, T. (2004) Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals, *D-Lib Magazine* 10 (6) June.

6. Otto Harrassowitz K.G., Wiesbaden. Electronic Journals: A Selected Resource Guide – Wiesbaden Germany, Otto Harrassowitz KG. <http://www.harrassowitz.de>.
7. Shearer, Kathleen. Institutional Repositories: Towards the Identification of Critical Success Factors. Canadian Journal of Library and Information Studies, Vol. 27, No. 3, August 2003.
8. Shearer, Kathleen. “The CARL Institutional Repositories Pilot Project”. D-Lib Magazine. Vol. 9 No. 3: March 2003 (Online). Access from <http://www.dlib.org/dlib/march03/03inbrief.html> #SHEARER

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