Use of Information Technology in Engineering College Libraries in Rayalseema Area of Andhra Pradesh

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Abstract

The aim of this paper is to analyze the use of Information Technology in engineering college libraries in Rayalaseema area of Andhra Pradesh in India. Engineering college libraries are facing a piquant situation and unforeseen challenges in this age of Information Technology. IT has brought in sweeping changes in the traditional way of libraries are functioning. Engineering college libraries need to evaluate and measure the impact of Information Technology on them. It was observed that the use of Information Technology is still inadequate among the engineering college libraries in Rayalaseema area of Andhra Pradesh. The author also discusses about the need of Information Technology to improve the condition of the engineering college libraries under study. This paper also mentioned the problems of Information Technology application and also suggested some solutions to overcome the problems.

Keywords: Engineering College Libraries, Information Technology (IT)

1. Introduction

Excellent engineering colleges are essential to prepare Engineers with good knowledge and skills. Teachers, laboratories and libraries are important components in providing effective engineering education (Chinna Balu and Reddy, 2011). In engineering college libraries, the latest technologies are increasingly used to collect, store, retrieve and disseminate a great amount of information to help engineering professionals in their day-to-day education. The advent of electronic computer, development in the telecommunications and audio-visual technologies has opened up new possibilities in information handling.

Information is an important resource, valuable input and power for societal development. The fully integrated online system has improved the operation of acquisition, cataloguing, serials handling and circulation services.

2. Meaning of Information Technology

In the domain of library and Information Science, the IT means, use of computers, telecommunications, Internet, application of software, micrographic, reprographic and other electronic devices for storage retrieval , reproduction and dissemination of information . The Information Technology with reference to library has been defined by Rajaraman as "the technology which is used to acquire, store, organize and process data, which can be used with specified applications and disseminate the processed data." American Library Association Glossary of Library and Information Science terms define Information Technology as "the application of computer and other technologies to the acquisition, organization, storage, retrieval and dissemination of information."

3. Need for the Study

It is an accepted fact that the Information Technology has influenced all the components of a library system, information sources, services, human resources and users (Kanamadi and Kumbar, 2007). National Board of Accreditation functioning under AICTE, while accrediting engineering colleges have been lying emphasize of computerization of library services and linking these with internet. As a result, the engineering college libraries started using computers for library functions. Andhra Pradesh has been one of the leading states in India in providing technical education. The number of engineering colleges available in 2001 in Andhra Pradesh is only 114 but during the year 2012 the number reached to 726. But very limited number of engineering college libraries are using full -fledged information technology in their library operations.

There is a lacuna between the demand for technology based information services and the supply of traditional based information services in engineering college libraries. In order to fill this lacuna , to explain the importance of use of Information Technology in engineering college libraries , so as to meet the ever changing technology demands and to offer suitable suggestions for effective utilization of networked information there is great need to take up this study .

4. Explanation of Rayalaseema Area

Rayalaseema area is a geographical region in the state of Andhra Pradesh in India. It consists of 4 districts, namely Kadapa, Kurnool, Anantapur and Chittoor. The great Emperor of South India Sri Krishnadevaraya had ruled this area during period of 16th century. He developed agriculture, constructed reservoirs and took steps to dig a number of tanks for rain water storage. He encouraged art, culture and literature during his regime. "Seema "means a "Region" or a geographical area in a state. As this region was ruled by Sri Krishnadevaraya , it is popularly known as "Rayalaseema Area."

5. Objectives of the Study

The study has been conducted with the following objectives;

1. To examine the use of Information Technology in selected engineering college libraries in Rayalaseema area of Andhra Pradesh.

2. To elicit the opinion of the users community on the availability of adequate Information technology infrastructure in their libraries.

3. To ascertain the purpose of application of Information technology in libraries from the Librarians point of view and from the users point of view.

4. To know the extent participation of engineering college libraries in Consortia networks.

5. To know the level of satisfaction of users with application of Information technology in engineering college libraries.

6. To identify the barriers in implementation of Information technology services in engineering college libraries.

7. To offer suggestions for effective implementation of Information technology in engineering college libraries.

6. Methodology and Sample Size

The universe of the study covers all the four districts of Rayalaseema area of Andhra Pradesh, namely Kadapa, Kurnool, Anantapur and Chittoor. As per the survey conducted there are 88 Engineering colleges are available in Rayalaseema area of Andhra Pradesh however the study is confined to representative sample of 22 engineering colleges in view of limitation of time and financial commitment . Further the Information Technology is a nascent area, only the colleges offering B.Tech/M.Tech courses are taken for study which is supposed to illuminate the Information Technology applications. The researcher also analyzes the awareness of faculty and students in selected engineering colleges on the application of Information technology in their libraries.

The present study covers the engineering college libraries in Rayalaseema area of Andhra Pradesh. Among them 22 (25%) colleges were covered under this study. Two types of questionnaires were framed to conduct the simple random sampling survey on selected engineering colleges, one is designed for the librarians and another one is designed for the faculty and students.   The first questionnaire was personally distributed among the librarians of 22 sample engineering colleges and all the 22 members were responded, hence the response rate is cent per cent.

7. Status of the use of Information Technology in engineering college libraries in Rayalaseema areas of Andhra Pradesh

An attempt has been made to know the status of library automation in engineering colleges under study. The librarians responded that some of sections were not yet automated; only the selected sections were automated. Table: 1 shows the automation status of the different sections.

7.1. Status of Library Automation

Table: 1 Automated sections in engineering college libraries

S.No.	Name of the Section	Yes	No
1	Acquisition	09 (40.90)	13 (59.10)
2	Cataloguing	10 (45.45)	12 (54.55)
3	Circulation	19 (86.36)	03 (13.64)
4	Serial Control	12 (54.55)	10 (45.45)
5	Stock Taking	15 (68.18)	07 (31.82)

The Table: 1 reveals that 40.90 percent of engineering colleges automated the acquisition section, 86.36 percent libraries were automated the circulation section, 68.18 percent libraries were automated the stock taking process and 54.55 percent were automated the serial control section.

7.2. Availability of Information Technology Related Hardware in Libraries

In order to implement the information technology in libraries the requisite hardware and software facilities are very essential. An attempt has been made to collect the information regarding availability of hardware and software from various engineering colleges. Table   describes the about the facilities available in engineering colleges.

Table 2: Librarians Response Towards Availability of Information Technology related Hardware Items in Their Libraries

S.No.	Name of the hardware	Yes	No
1	Computers	22 (100.00)	Nil
2	Printers	17 (77.27)	05 (22.73)
3	Scanners	16 (72.73)	06 (27.27)
4	UPS	17 (77.27)	05 (22.73)
5	OHP	07 (31.81)	15 (68.19)
6	TV with DVD player	06 (27.27)	16 (72.73)
7	Multi Media Kit	05 (22.73)	17 (77.27)
8	Bar-Code Technology	18 (81.81)	04 (18.19)
9	RFID System	02 (09.10)	20 (90.90)
10	CC cameras	04 (18.19)	18 (81.81)
11	Automated self check machine (Self issue of books)	01 (04.54)	21 (95.46)
12	Automated book-drop box (self return counter)	01 (4.54)	02 (95.46)
13	Lap Taps	02 (9.10)	20 (90.90)

The Table: 2 reveal that all the libraries under study are having computers. 77.27 percent libraries are having printers. 81.81 percent libraries are using barcode technology. Only 9.10 percent Libraries are using RFID technology. Only 4.54 percent libraries are using automated self check machine (self issue of books) and automated book drop box (self return counter).

7.3. Operating System used by the Engineering College Libraries

The selection of operating system is very important for computerization of libraries and application of information technology. The operating system is ever changing with latest technologies. The user friendly operating system is very essential to the libraries of engineering colleges.

Table 3: Name of the Operating System used in Engineering College Libraries

S.No.	Name of the OS	No. of libraries	Percent
1	Windows 2007	06	27.27
2	Windows Vista	03	13.63
3	Windows 2003/XP	19	86.36
4	UNIX	01	4.54
5	Windows NT	02	9.09
6	LINUX/UBUNTU	03	13.63

The Table: 3 depicts that 86.36 percent libraries are using windows 2003/XP operating system. Only 4.54 percent libraries are using UNIX operating system.

7.4. Library Software Used by the Engineering College Libraries

In order to provide the qualitative services to the users by using information technology the selection of library software is most important. INFLIBNET is providing SOUL software to the colleges and universities. There are number of library software developed by the commercial organizations and computer management institutions. On the basis of use and requirement of libraries, many engineering colleges preferred the private commercial software. Table :4 describes the different types of library software.

Table 4: Name of the Library Software used by the Engineering Colleges

S.No.	Name of the Software	No. of Colleges	Percent
1	SOUL	05	22.73
2	LIBSYS	02	09.09
3	Self Developed	02	09.09
5	Commercial Software	10	45.46
4	Not yet introducing any software	03	13.63
	Total	**22**	**100**

The Table: 4 reveals that 45.46 percent Libraries are using commercial software and 9.09 percent colleges are using self developed software in their Libraries. But still Libraries have not yet introduced any kind of Library Software in their Libraries.

7.5. Consortia services used by the Engineering College Libraries

To share the resources of other reputed libraries and information agencies the library consortia will be helpful. To maintain economy in library resources acquisition and to get the latest information from the resource centers, library consortia are essential. Table: 5 explains the different types of consortia services having by the libraries of engineering colleges.

Table 5: Name of the Consortia Service having by the Engineering College Libraries

S.No.	Consortia name	No. of libraries	Percent
1	AICTE-INDEST	10	45.45
2	UGC-INFONET	01	04.55
3	NIC-NET	01	04.55
4	DEL NET	01	04.55
5	INFLIB NET	02	09.09
6	No Membership in any Consortia	07	31.81
	Total	**22**	**100**

The table 5 reveals that 45.45 percent Libraries are having AICTE-INDEST consortia connectivity and 4.54 percent Libraries are having UGC-INFO NET connectivity. But 7 (31.8 percent) Engineering Colleges are not yet having Consortia connectivity.

7.6. Response of the Librarians on Facing of Impediments in Introduction of IT

Many of the Engineering colleges are having interest to introduce Information technology in their libraries. But some of the institutions are facing certain impediments for introducing Information technology in their libraries. An attempt has been made to gather the opinions of librarians regarding the facing of the impediments/problems in the application of information technology.

Table 6: Response of the Librarians regarding Facing of Impediments in Introduction of Information Technology in their Libraries

S.No.	Impediment	Yes	No
1	Inadequate Finance	15 (68.18)	07 (31.82)
2	Lack of Management support	16 (72.72)	06 (27.27)
3	Lack of IT trained library professionals	14 (63.63)	08 (36.37)
4	Management is not deputing the Library professionals to the computer training	13 (59.09)	09 (40.91)
5	Non-availability of consultancy services on Information Technology products installation and maintenance	11 (50.0)	11 (50.0)

The Table 6 reveals that 72.72 percent managements are not supporting for introduction of Information Technology in their college libraries. 68.8 percent colleges are suffering with inadequate finances. In 63.63 percent of the library professionals are required training in handling of IT based products. 59.09 percent librarians stated that their managements are deputing for training programs. 50.0 percent of respondents spell out that the non–availability of consultancy services is a barrier to implement the IT in their libraries.

8. Findings

♦ The survey reveals that 40.91 percent of the libraries were fully automated and 45.45 percent were partially automated and in remaining 13.63 percent of the libraries the automation process is under

progress. All the libraries under study are having computers , CD-ROMs and DVDs. It is observed from the survey that the hardware and software facilities in majority of the libraries are encouraging.

♦ Majority of the engineering college libraries (86.36%) are using Windows2003/XP operating system and 54.54 percent of the libraries are using the commercial software designed by the private computer management Institutions.

♦ It was noticed from the survey that 45.45 percent libraries are linked with AICTE-INDEST consortia and the remaining are connected to UGC-INFONET, NICNET, DELNET and INFLIBNET. Still 7 libraries are not yet having membership in any consortia.

♦ Many of the Librarians expressed that inadequate finance, lack of training to library professionals, lack of management support and non-availability of consultancy services are impediments for effective implementation of Information Technology in Libraries.

9. Implied Suggestions

The views and comments offered by the users and librarians have enabled the investigator to offer some feasible suggestions for deriving maximum benefit from the application of the Information Technology in engineering college libraries.

These suggestions are mentioned below;

♦ Some of the librarians under the study are still limited to rudimentary services like providing circulation service on computer and Internet facility. It is suggested that they must go a step further and provide services like online database access, networked CD-ROM database services and access to E-journals.

♦ It is suggested that engineering college libraries should invest for developing of library web pages and provide services like Web – OPAC and access to digital resources. Many of the transactions like renewal, reservation of books can be carried out online via library webpage.

♦ Ever changing Information Technology environment demands the library professionals to acquire of update new skills of technology management regularly. Hence it is recommended that the college managements should depute their library professionals to the workshops / training programs on library automation and use of IT products in libraries.

♦ It is suggested that the engineering college libraries should use common library software. Now-a-days open source software is freely available, which allows altering the source code and customizing the software or adding functionality. KOHA is popular open source software and has the potential to use a larger development community dealing with similar users and issues.

♦ A comprehensive collection development policy for e-resources should be maintained by the libraries of engineering colleges, in order to follow a set of standard practices for acquisition and management of IT based resources. There should be specific budget for e-resources.

♦   A good number of students and faculty suggested that it is better to install few more computers in their library and in Internet browsing section to accommodate some more users. Hence it is suggested that engineering colleges need to procure more number of computers in their libraries.

♦   Many of the users opined that to retrieve the information from E- resources on various engineering subjects the websites should be known to users. Hence it is suggested that information regarding popular and latest websites with their addresses should be displayed on the website, notice boards of the library and college computer centre.

♦   It is suggested that all the engineering college libraries should be linked to AICTE- INDEST consortia to share the update knowledge on various subjects of engineering and technology.

♦   In order to increase optimum usage of e- resources such as e- journals, e-books, online databases and OPAC, the libraries should create awareness among the users by conducting periodical user orientation programs.

♦   In order to solve the slow access problem of Internet services, the colleges should acquire high speed Internet connection with maximum band width and the capacity of the server should be increased. Further the printer facility should be provided in Internet browsing section of the libraries.

10.   Conclusion

The application of Information Technology will help the engineering college libraries to overcome the barriers of distance, time and drudgery of repeated manual efforts in the library routines and provide better services to the users. The advancements in Information Technology will continue to improve the effectiveness and efficiencies of engineering college libraries in Rayalaseema area of Andhra Pradesh in India.

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