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Information and Communication Technology in Textile Engineering College Libraries of Haryana, India

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Abstract

At present application of information and communication technologies (ICT) has become gradually more important in textile college libraries. In the digital age endurance of libraries lacking ICT is in risk. The paper describes the current position of textile libraries in ICT environment in Haryana state. It explains the indication of available ICT infrastructure and e- resources with these libraries. The data collected with the help of questionnaire have been interpreted and output results have given in this paper. Both institutes libraries are making an endeavor to do well in collection development, services, and infrastructure. Both the institute have the well ICT infrastructure in their library and giving more importance to different aspect of ICT such as internet, e-mail, online journals etc. Keeping in the view of better internet facility both the libraries have the Wi-Fi connectivity library campus. Both the librarians expressed that their individual initiatives lead them for automation.

Keywords: Library automation, Networking; Internet, PIET, TITS

1. Introduction

Since the invention of the computer by Charles Babbage in 1837, major information centres have tried to make use of this technology. In Indian context this technology was first used by Indian Statistical Institute (ISI) Calcutta in 1957. Till then as its many generations emerged, the broad use of this technology had been made in every part of our life. Now at the present age each intellectual human being has come into the clutch of this technology. Today the internet is providing access to a continuous collection of information resources existing world wide. In India the information and communication technologies (computer technology) have boomed in the field of library and information/documentation centres in 1990s. Now use of information technology in library and information centres has becomes common. Computer technology is the most popular and widely used technology in library and information centres. Computers are used for collection, organization, storage, analysis and dissemination of information. (Helaluddin 2010)

Information and Communication Technology (ICT) comprises a diverse set of technological tools to identify, collect, organize, create and disseminate data and information. The ICT encompasses a wide range of technologies including telecommunication technologies, such as telephony, cable, satellite, TV and radio, Computer-mediated conferencing and video-conferencing, as well as digital technologies, such as computers, information networks (internet, World Wide Web and intranet) and software application. In other words, ICT has emerged as a result of the digital convergence of computer technologies, telecommunication technologies and other media communication technologies. ICT has altered the ways in which the academic activities – teaching, learning, research and extension activities – are carried out at higher education level. ICT has helped to overcome the barriers of time and space and reduced the time-lag between the generation of information and its consumption by the end user. University library, as a sub-system of higher education, should act as a trend-setter in adopting ICT in its activities. (Walmiki 2009)

Textile engineering is not a new field, but still it is only one of its kinds. Collection development in textile libraries is a challenge for librarians, due to inadequate resources. Today a librarian and other library professional in any institution must have the knowledge of digitization and computerization of library.

2. Background

Textile engineering (TE) or textile technology deals with the application of scientific and engineering principles to the design and control of all aspects of fibre, textile, and Apparel processes, products, and machinery. These include natural and man-made materials, interaction of materials with machines, safety and health, energy conservation, and waste and pollution control. Additionally, textile engineers are given training and experience in plant design and layout, machine and wet process design and improvement, and designing and creating textile products. Throughout the Textile Engineering curriculum, students take classes from other engineering and disciplines including: Mechanical, Chemical, Materials and Industrial Engineering Disciplines. The curriculum provides a broad base of fundamental engineering courses as a foundation for studies in textile engineering. Students also learn such fundamental courses as Thermodynamics, Materials Science, Industrial Management, Applied Mechanics, and Engineering Drawing and Design.

Haryana happens to be one of the smallest state of India. It has a various number of educational institutes, but a small number of of textile. There are only two textile engineering institutes in Haryana. Merely Technological Institute of Textile and Sciences (TITS) and Panipat Institute of Textile and Engineering (PIET) were found worthy to conduct the study as per there ICT resources and services.

The great visionary Padma Vibhushan Dr. G D Birla established the institute in the year 1943 under the auspices of the Birla Education Trust. With a modest beginning the institute has grown into a premier technical institute of the country drawing to its portal students from all over India and abroad. Technological Institute of Textiles & Sciences, Bhiwani was established in the year 1943. Its administration vests in a Managing Committee called 'TITS College Managing Committee' which is constituted according to the constitution prescribed by the All India Council for Technical Education. The institute has a textile factory for training students under actual mil working conditions. In 1943, the institute started functioning with a Diploma in Textile Manufacturing (DTM). In 1952, it introduced a B. Tech in Textile Technology (TT).

Panipat Institute of Textile and Engineering is run by Vidhyapeeth Education Trust and was founded in 2005. It is the second engineering college in Haryana and the 17th in India to have textile engineering as a trade. It is situated in NCR region at Samalkha, Panipat. All the courses in the institution are approved by the Kurukshetra University and All India Council for Technical Education (AICTE). (Sharma & Kumar 2010)

3. Need of the Study

There have already been done many studies on the ICT applications in academic libraries in India. But in case of Textile libraries with regarding ICT in Haryana no work has been done yet. The investigator wants to find out the status of textile engineering college libraries in ICT environment. The study will be the landmark and a foundation for further researcher.

4. Objectives of the Study

- To evaluate the ICT infrastructure available in Textile libraries of the Haryana;
- To study the existing status of textile Colleges libraries;
- To identify ICT based services ;
- To identify ICT based resources ;
- To analyze imminent of the suitability of different IT tools among library personnel.

5. Review of Literature

A number of relevant studies have been carried out on various aspects of ICT in libraries in different parts of the world. Only a small number of studies have been reviewed here.

A study in Kerala (Haneefa 2007) regarding the ICT investigates the current state-of-the-art ICT infrastructure and the extent of use of electronic information resources in special libraries in Kerala. He found the special libraries in Kerala have hardware, software and communication facilities to some extent. ICT based resources and services are not reaching the users to the expected extent. The findings of this study would assist special libraries in India to develop strategies and policies that could make better use of ICT based resources and services. A research study in Nigerian University Libraries (Adeyoyin 2005) shows out of about 268 professional librarians, only 87 (approximately 32 per cent) were ICT-literate, implying that the remaining 181 (approximately 68 per cent) of professional librarians were ICT-illiterate. Of the 358 paraprofessionals in those libraries, only 28 (approximately 8 per cent) were ICT-literate, while the vast majority, some 330 (approximately 92 per cent), were ICT-illiterate. The conclusion reached was that Nigerian university library professionals and paraprofessionals should acquire an enhanced level of ICT literacy: both staff training and an adequate ICT infrastructure were recommended. A research study in university of Nigeria. (Hyden 2005) found that the library environment was well- maintained and usable, but still had shortcomings in comfort and infrastructure. (Ani 2005) reveals that only six university libraries are fully “computerized”, nine are “about to be computerized”; seven of the surveyed libraries have installed local area networks, five have online public access catalogue and only four libraries provide internet service. The major obstacles that influence effective adoption of ICT in university libraries are inadequate funds and the poor state of electricity in Nigeria. A study on People's network libraries: comparative case studies of old and new ICT learning centres (Schofield 2004) suggests that the people's network (PN) aims to ensure the provision of free and open access to Information Communication Technologies (ICTs) through public libraries. It compares the usage of a PN converted library to an original learning centre. It was found that a wide range of people from different age groups and backgrounds use the ICT facilities. The results also indicated that both libraries had been successful in providing access to ICTs for people who would otherwise have had no access, although the age of the technology available in the more established learning centre had a negative impact on users, and the take-up of online learning opportunities had not been as prominent as would be expected. A study regarding Use of information and communication technology in libraries and information centres: an Indian scenario (Gulati 2004) discusses that the status of information and communication technologies usage in Indian libraries with special reference to special libraries and the efforts made by various institutions to propagate e-information products and services. This paper highlights the consortia efforts in India like JCCC Consortium, INDEST Consortium, CSIR E-journal Consortia, and UGC Infonet. It further discusses digitization efforts in India at NISCAIR, New Delhi, IITM, Kerala, C-DAC Pune, and the Digital Library of India. In addition it incorporates details on major information systems in India (such as NISSAT) and major library networks in India (such as INFLIBNET, DELNET, CALIBNET etc.). A study in Victoria (Fitzgerald 2004) explores the impact on public libraries in Victoria, Australia, as they become increasingly reliant upon information communications technology (ICT) to manage access and deliver information services. Aligned critically to the actual ICT models and implementations is the capacity of the 44 individual public library services to understand and meet the ongoing issues. A study in UK Public libraries (Spacey 2003) reveals that recent developments affecting the growth of information and communication technology (ICT) in public libraries provide a context against which research into the effects of automation, the introduction of ICT in a variety of library environments and into society generally, are explored. (Al-Habashi 1996) stated that the collections available in the school libraries of Oman are not sufficiently used and are unable to enrich the curricula.

6. Research Methodology

The current study is a status survey of textile engineering institute libraries of the Haryana state of India. Survey method is the best way to know the present situation. Hence a survey was conducted with the help of questionnaire designed for this purpose. A structured questionnaire was designed to collect the primary

data. Both Librarians of the concerned libraries were consulted a number of times. The study is limited to the two textile college libraries of Haryana, which are listed in table A

7. Discussion

7.1 Information about E-Resources

Table-1A reveals both the libraries have the E-Journals and not have any other E-Resources (i.e. e-books, e-thesis and e-newspapers). In today's scenario the availability of e-books, e-thesis and e-newspapers is the need of time, without the availability of such materials ICT is not strengthen in a proper manner.

Table-1B shows that both the libraries subscribe the INDEST online journal databases consortium.

7.2 Library Collection

Library collection is a sum of the total library materials that make up the holding of a particular library. Table-2A shows that the TITS library has the largest collection of books (i.e. 23847) whereas PIET library has the book collection of 13483 books. Maximum journals are subscribed by PIET library (i.e. 727) whereas TITS subscribed only 93 journals. PIET college library has more collection of thesis/ journals (i.e. 120) with the comparison of TITS (i.e. 19).

Table-2B shows that PIET library has comparatively good collection of CD-ROM (i.e. 1000) whereas TITS library has less quantity of non- book material (i.e. 800). Regarding the availability of computer the PIET library has the maximum number of computer (i.e. 19) with compare to TITS library (i.e. 15).

7.3 Library Staff

Human Resources play a prominent role for the successful management of any library. Table-3 deals with the library staff. The maximum number of staff is in PIET Library (i.e.8) whereas TITS library has 5 staff members. The PIET library has maximum number of non-professionals (i.e. 3) whereas TITS college library has only one non-professionals.

7.4 Library Finance

Library budget consists of data from 2006-07 to 2008-09. The details of each category of library budget are presented in the table. Table-4 shows that in all the session (i.e. 2006-07, 2007-08 and 2008-09) the PIET library has the highest budget with comparison of TITS library. In 2008-09 PIET college library has the largest amount of budget (i.e. Rs. 2829000) whereas TITS college library has 1825000

7.5 Services

Table-5 reveals that all the libraries under study provide all the above said services (i.e. CD-ROM Database search, Reservation, Web Browsing, OPAC/ Web OPAC, Searching Consortium).

7.6 Library Automation

The table number-6A presents the status of library application softwares in the respective libraries. Both the libraries under study have readymade library softwares. TITS library has implemented LIBSYS where as PIET library has Library MGT. System.

Table-6B shows that Both the Libraries have the all library software modules (i.e. Acquisition Control, Circulation Control, Serial Control, Barcode Printing, OPAC).

Table-6C shows the factors leading to the library automation. A total of seven factors were identified and librarians were asked to give their views on these factors. Both the librarians expressed that need to improvement quality of services, their individual initiatives lead them for automation and also favor the argument (i.e. special grant is provided).

The basic knowledge of technology is essential for successful planning and implementation of library automation. There is a variety of ways to gain knowledge of using IT in libraries. Table-6D shows the steps taken for library automation implementation. The highly rated steps are: sending staff for training courses, Consultation with other librarians and visit to automated libraries.

7.7 Infrastructure for Library Automation

Table no 7 shows that both the libraries surveyed have Xerox, Scanner and Printer. Both the library doesn't have the facility of TV and Slide/ LCD Projector. Telephone facility is available only in the PIET library whereas FAX facility is available only in TITS. Both the libraries have no Slide/LCD projector.

7.8 Networking/Internet

Regarding the network type used in libraries table-8A presents that both the libraries have networking of Local Area.

Table-8B shows that the facility of internet service is provided in both the libraries by only one ISP (i.e. BSNL).

Table-8C reveals that both the libraries have the Wi-Fi connectivity library campus.

8. Conclusion

The present study highlighted the existing situation of ICT in the textile college libraries of Haryana. Both the libraries are well strengthen in ICT and are able to meet the requirements faced. The study showed that the trends of libraries have been diversified: these are giving more importance to different aspect of ICT such as internet, e-mail, online databases, online journals etc.

On the basis of the survey, some conclusions may be derived. Technological Institute of Textile and Sciences is a prominent textile institution of India, while Panipat Institute of Textile and Engineering is new and comparatively less popular. The libraries of both institutes are making an endeavor to do well in collection development, services, and infrastructure. In some area PIET library has strong position with the comparison of TITS. Both the libraries need to attention towards e-books, e-thesis and e-newspaper. In the ICT pursuit imminent time will not give a pause and it is an obvious tool in all kind of libraries to carry on in the future.

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Table-A College Libraries under Study

S. No.	Name of the College	Abbreviation Used
1	Technological Institute of Textile and Sciences	TITS
2	Panipat Institute of Textile and Engineering	PIET

Table-1A Availability of E-Resources

	TITS	PIET
E-Journals	√	√
E-Books		
E-Thesis		
E-Newspapers		

Table-1B Name of Online Journal Databases Consortium

	TITS	PIET
J-Gate/ JCCC		
INDEST	√	√
UGC Infonet		
CSIR		
Any Other		

Table-2A Printing Materials

	TITS	PIET
Books	23847	13483
Journals	93	727
Thesis/ Dissertation	19	120

Table-2B Non-Book Material

	TITS	PIET
CD-ROM	800	1000
Computer	15	19

Table-3 Library Staff

	TITS	PIET
Librarian	1	1
Other Professional	3	4
Non Professional	1	3
Total	5	8

Table-4 Library Budget (in Rs.)

	TITS	PIET
2006-07	1345066	1850000
2007-08	1250000	2270000
2008-09	1825000	2829000

Table-5 Services

	TITS	PIET
CD-ROM Database search	Y	Y
Reservation	Y	Y
Web Browsing	Y	Y
OPAC/ Web OPAC	Y	Y
Searching Consortium	Y	Y

Table-6A Library Application Software

	TITS	PIET
In-house built	No	No
Readymade	LIBSYS	LIBRARY MGT. SYSTEM
Open Source	No	No

Table-6B Library Software Modules

	TITS	PIET
Circulation	Y	Y
Cataloguing	Y	Y
Bar Code	Y	Y
Serial Control	Y	Y
Acquisition	Y	Y
OPAC	Y	Y

Table-6C Factor Leading to Automation

	TITS	PIET
Librarian Initiative	√	√
Heavy work Load		√
Need to improve the quality of services	√	√
User's pressure		
To minimize repetitive task	√	
Pressure by authorities		√
Special grant provided	√	√

Table-6D Steps for Library Automation implementation

	TITS	PIET
Sending staff for training courses	√	√
Organizing onsite staff training		√
Visits to automated libraries	√	√
Study literature on ICT		√
Consultation with other librarians	√	√
Hired ICT consultant		√

Table-7 Hardware of Libraries

	TITS	PIET
TV	N	N
FAX	Y	N
Xerox	Y	Y
Scanner	Y	Y
Printer	Y	Y
Telephone	N	Y
Slide/ LCD Projector	N	N

Table-8A Network type used in Libraries

	TITS	PIET
LAN	√	√
WAN		
MAN		

Table-8B Internet Service Provider (ISP)

	TITS	PIET
ERNET		
Sify		
BSNL	√	√
Airtel		

Table-8C Type of Internet Connectivity

	TITS	PIET
Dial-up		
ISDN		
Leased Line		
VSAT		
Wi-Fi	√	√

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