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ICT SKILLS OF LIBRARY PROFESSIONALS IN THE ENGINEERING COLLEGE LIBRARIES OF WARANGAL, TELANGANA: A STUDY

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ABSTRACT

Library professionals today need to acquire knowledge and skills in information and communication technology (ICT) as the services of more and more libraries are now centering on information technology, especially in educational institutions. Application of ICT in academic environment in India has increased gradually in the recent decades. This paper examines the ICT skills among library professionals in engineering educational institutions, Warangal District in Telangana State. The analysis of the data represents the extent and the level of ICT skills possessed by the library professionals of these institutions. All the library professionals stated a positive attitude towards the application of ICT skills.

Keywords: Library professionals, Information and communication technology (ICT) skills, Automation, Engineering colleges, Digital Library

Introduction

The fields of library and information science are changing and growing rapidly. Forty years ago, libraries were about books, Journals, Magazines and newspapers. Today libraries bring together people and all forms of information. Libraries make information content from various sources available online as well as in print. Librarian's information technologists and information scientists are collaboration to transform slow archives into dynamic digital resources for learning. At the same time, librarians and information professionals are providing value-added online and personal services to customers and clients. The internet has carried along with it new possibilities for communication in the changing environment.

The dynamic environment of the library and information sector stresses the need for academic library professionals to remain flexible and adaptable to change. To meet this need, they have to ensure that their knowledge, competencies and skills meet the needs of the community which they serve. Similarly, employers have a responsibility to provide opportunities for library and information professionals to keep their skills, knowledge and competencies up-to-date. In light of the technological advancements that are taking place, there is an urgent need for LIS educators to conduct evaluation and performance measurement studies on the effectiveness of their curriculum in responding to the needs and demands of the real world of information work. The library and information science curriculum must incorporate more technology components to meet the intellectual and practical needs of information professionals.

Information and communication technology (ICT) and library Modern information and communication technology have created a global village because of information revolution

and the consequent computer based messaging system, and electronic networks for access to information and library services. ICT is a growing phenomenon in the society. Library is a dynamic and evolving enterprise in education. The trend now is information and communication technology, library and information have undergone various stages on transformation, storage and retrieval of information application in delivering library services. Such as oral tradition, letters, and figures on leaves and skins, while the librarians then were custodians. Ranganathan(1957) says in his five laws of librarianship which cut across all ages that "Library is a growing organism"

Objectives of the study:

The objectives is to make an analysis of the ICT skill of Library Professionals working in engineering colleges of Warangal District in Telangana State

1) To identify the types of ICT skills possessed by the Library Professional working in engineering colleges of Warangal
2) To find out the participation of Library professional in various ICT related activities
3) Assess the level/extent of different types of ICT skills possessed by the Library professionals under study.
4) To find out the application of ICT skill by Library professional in modernization of libraries
5) Find out the constraints encounter by Library professionals in acquiring ICT skills.
6) To suggest some of the suggestions/recommendations for the development of engineering colleges libraries in Warangal District in Telangana State.

Literature Review:

Review of the literature shows a few studies on skills of the library professionals published in India and other countries. Prathiba Naran1 has outlined the skills of the librarians, which make them suitable for a variety of positions in the diverse fields such as software, database and information area, publishing trade, and outsourcing opportunities. Kumaresan2 projected the emerging scenario of LIS professionals in the Indian environment and emphasized the future challenges of the librarians with added knowledge of network and information retrieval systems. Jones3 stressed the importance of IT literacy for the professionals working in library and information centers. Shiholo and Ocholla4 outlined the changing trends of training needs of informational professionals in Kenya and argued that core knowledge and skills for information providers have to be reviewed regularly. Nyamboga, et al.5 surveyed the skills of professionals working in the university libraries in Kenya. Nyamboga6 also examined the training opportunities for library and information professionals in India and stressed the need for developing information skills and information literacy programmes. Rajalakshmi7 outlined the skills required by the LIS professionals in the 21st century in the context of ICT implications. Bawden, et al.8 examined the approach to the education and training of librarians in digital libraries and the competencies required for creating and managing digital libraries, and assessed these competencies vis-à-vis LIS education in the UK and Slovenia. Kannappanavar and Kumbargoudar9analyzed the management skills in the light of ICT among LIS professionals in agricultural universities in India.

Scope and Limitations

The scope of the study encompasses the ICT skills of Library professional working in engineering colleges in Warangal District of Telangana. The study has following limits.

1. The study is limited to Warangal District of Telangana State only.
2. The study is include only the engineering colleges libraries Warangal (self-financed and Govt.) are affiliated under Kakatiya university and JNTU, Hyderabad and approved by AICTE, New Delhi.
3. The study cover only Library professional (Librarian, Asst.Librarian, Library Asst.etc…) ICT skills only

Methodology

A structured questionnaire designed and circulated among Library professionals of Warangal District Engineering colleges with a view to know the use of ICT skills. Accordingly 75 paper based questionnaires were personally distrusted among library professionals belonging in different Engineering colleges of Warangal District in Telangana. The majority of respondents 61 (81%) handed over the filled questionnaires to Librarian. The collected data were analyzed, classified and presented in the form of tables.

DATA ANALYSIS

Table 1. Gender wise distribution of respondents

Sl. No.	Gender	Users	Percentage
1	Male	50	82
2	Female	11	18
Total:		**61**	**100**

It is evident from table 1, it is inferred that the majority of about 82% percent of the respondents are males and 18% percent of the respondents are females respectively. The study conducted that both **majority of respondent are male**.

Table 2. Degree of respondent

Sl. No.	Degree of respondent	Users	percentage
1	Ph.D.	4	7
2	M.Phil.	10	16
3	M.L.I.Sc	36	59
4	B.L.I.Sc	11	18
Total:		**61**	100

It is evident from table 2, regarding the education qualification **majority of the respondents 59% are Post Graduate,** 18% of the respondents are Under Graduates respectively, 16% of the respondent's faculties are M.Phil, and 7% of the respondents are Ph.D. Degrees

Table. 3 Working Experience

Sl. No.	Working Experience	Users	Percentage
1	Less than 5 yrs.	18	30
2	5-10 yrs.	12	19
3	11-15yrs	24	40
4	Above 15 yrs.	7	11
Total:		**61**	100

It is evident from table 3, it is inferred that the **majority of about 40.% percent of the respondents have experience 11-15 years'** , 30% percent of the respondents have Less than 5 years' experience, 19% percent of the respondents have 5-10 years' experience, and 11% percent of the respondents have above 15 years' experience.

Table 4. Designation of respondent

Sl. No.	Designation	Users	percentage
1	Librarian	21	34
2	Asst. Librarian	28	46
3	Library Asst.	5	9
4	Library Teaching faculty	7	11
Total:		**61**	100

It is evident from table 4, shows that 46% are Asst.Librarian, 34% are Librarian, and 11% are Library Teaching faculty and 9% are Library Asst. **majority of 46% of respondent are Asst. Librarian**

Table 5. Knowledge of Library Automation

Sl. No.	Response	Users	Percentage
1	Yes	48	78
2	No	13	22
Total:		**61**	**100**

It is evident from table5, it is inferred that the majority of about 78% percent of the respondents are have knowledge of library automation and 22% percent of the respondents do not have knowledge of library automation. **Majority of respondent (78%) are having knowledge of library automation.**

Table 6. Application of knowledge in automating the library

Sl. No.	Response	Users	Percentage
1	Yes	26	41
2	No	35	59
Total:		**61**	**100**

It is evident from table 6, that in spite of knowledge of library automation only 41% professional have been able to apply their knowledge in automating their library whereas nearly 59% professionals have not been able to apply their knowledge. **Majority of respondent 59% professionals have not been able to apply their knowledge.**

Table 7. Stages of Library automation

Sl. No.	Stages of automation	Users	percentage
1	Fully automated	21	34
2	Partially automated	10	16
3	Starting Stage	5	9
4	Not started	25	41
Total:		**61**	100

Table 7, shows that 41% professional opined that library automation has not been started in their library, 34% professional response fully automated,16% professional response partially automated, remaining 9% of respondents opined that library automation is at starting stage. Majority of 41% professional opined that library automation has not been started in their library.

Table 8. Knowledge of Digital library/Institutional repository

Sl. No.	Response	Users	Percentage
1	Yes	49	80
2	No	12	20
Total:		**61**	**100**

It is evident from table 8, that in spite of 80% of respondents have knowledge of Digital library /Institutional repository, only 20% professional do not have knowledge of Digital library /Institutional repository. **Majority of respondent 80% professionals have knowledge of Digital library /Institutional repository.**

Table 9. Knowledge of Library automation software

Sl. No.	Library automation software	Users	percentage
1	CDS/ISIS	5	9
2	SOUL	9	15
3	Libsys	8	13
4	NewZen Lib	25	41
5	Open source software/other software	14	22
Total:		**61**	100

The analysis of Table 9 shows that 41% of respondents have knowledge of New Zen Lib software, 21% of respondents have other software and open software, 15% of respondents have Soul software knowledge, 13% of respondents have Libsys software knowledge and 9% of respondents have CDS/ISIS library software knowledge. Majority of41% of respondents has knowledge of New Zen Lib software,

Table 10. Computer skills

Sl. No.	Type of computers skills	Users	percentage
1	Computer fundamentals	56	92
2	Programming knowledge	10	16
3	Internet	51	83
4	Multimedia	15	25

Note: Total sample exceeds the required size since the questions are multiple choices

The table 10 shows that the library professionals of engineering colleges are skilled. As the respondents indicated that 92% of professionals have knowledge in computer fundamentals, 83% in Internet, 25% in multimedia and only few professionals 16 % have knowledge in programming. **Majority of the respondents indicated that 92% of professionals have knowledge in computer fundamentals.**

Table 11. using of Internet browser

Sl. No.	Internet browser	Users	percentage
1	Internet Explorer	10	16
2	Mozilla Fire Fox	31	51
3	Google Chrome	15	25
4	Opera	5	8
Total:		**61**	**100**

Table 11 shows that 16% of users using Internet Explorer, 51% of users using Mozilla Firefox, 25% of users using Google Chrome and remaining 8% of user Opera. **Majority of the 51% users are using Mozilla Firefox browser**

Table 12. Use of Storage media

Sl. No.	Types of Storage media	Users	percentage
1	CD(Compact Disc)	42	69
2	DVD (Digital Video Disc)	26	42
3	Pen Drive	55	90

Note: Total sample exceeds the required size since the questions are multiple choices

Table 12 shows that 90 % professionals used pen drive, 69% professionals used CDs and reaming 42% professionals used DVDs. **Majority of the 90 % professionals used Pen Drive.**

Table 13. Use of search engines

Sl. No.	Name of the search engines	Users	percentage
1	Google	49	80
2	Yahoo	33	54
3	Bing	21	34
4	MSN	9	14

Note: Total sample exceeds the required size since the questions are multiple choices

Table 13 shows indicates the 80% of Library professionals use Google search engine, 54% of Library professionals followed by Yahoo, 34% of Library professionals use Bing, 14% of Library professionals followed by MSN. **Majority of Library professional use Google Search engine.**

Table 14. Skills for managing electronic resources

Sl. No.	Electronic resources	Users	percentage
1	Library website	42	69
2	Use of OPAC/Web OPAC	32	52
3	Online Journals	33	54
4	E-Books	21	34
5	Digital archives	15	24
6	Library Networks/Consortium	29	47
7	Open access journals	39	64

Note: Total sample exceeds the required size since the questions are multiple choices

Table 14 shows that the professional have average skills like 69% have Library website skills, 64% have open access journals, 54 % have online journals skills, 52 % have use of opac/web opac skills, 47 % have library networks/consortium skills, 34% have e-books skills and 24% have digital archives. The professionals have average skill in use of almost all the e-resources. **Maximum professionals use library website, open access journals, online journals, use of OPAC/web OPAC.**

Table 15. Participation in ICT Tools

Sl. No.	Participation	Users	percentage
1	Social Networks (Face Book, Orkut,etc)	39	63
2	Professional forum (web based)	33	54
3	Blogging	18	29
4	Mailing list	51	83

Note: Total sample exceeds the required size since the questions are multiple choices

Table 15 shows that Library professionals actively participates ICT Tools, 63% of professionals participate Social Networks (Face Book, Orkut, etc), 54% of library professionals participate professional forum, 29% of library professional participates Blogging and 83% of library professionals participates Mailing list. Due to information explosion various tools have been developed in libraries to build a closer relationship with user's community and redesign library facilities and services according to the need of users. **Majority 83% of library professionals have participated Mailing list.**

Table 16. Attitude towards the impact of ICT

Sl. No.	Attitude towards the impact of ICT	Users	percentage
1	Improve quality of library services	55	90
2	Enhance knowledge & Skills of library professionals	51	83
3	Quick access to current data	57	93
4	Reduce workload of library professionals	46	75
5	Save the time of users community	53	87
6	Increased job satisfaction of library professionals	44	72
7	Utility of ICT in my College is good	33	54

Note: Total sample exceeds the required size since the questions are multiple choices

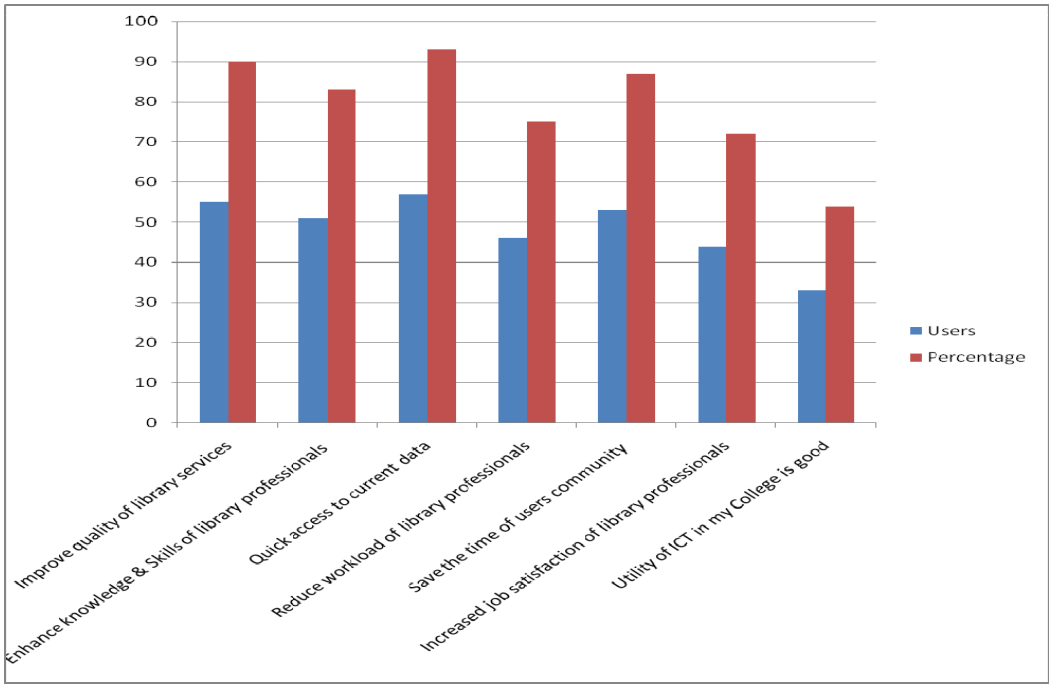

Figure 1: Attitude towards the impact of ICT

Table 16 shows that the library professional have a helpful attitude towards the application of ICT in libraries. Majority 93% of library professionals agreed that ICT application facilities quick access to current data, 90% of library professionals agreed that ICT application facilities improve quality of library services, 87% of library professionals agreed that ICT application facilities save the time of users community, 83% of library professionals agreed that ICT application facilities Enhance knowledge & Skills of library professionals, 75% of library professionals agreed that ICT application facilities reduce workload of library professionals, 72% of library professionals agreed that ICT application facilities increased job satisfaction of library professionals, 54% of library professionals agreed that ICT application facilities Utility of ICT in my college is good. **Majority 93% of library professionals agreed that ICT application facilities quick access to current data.**

17. Constraints in acquiring ICT skills

Sl. No.	Constraints in acquiring ICT skills	Users	percentage
1	Inadequate training in ICT applications	50	82
2	Tight working schedule	49	80
3	Lack of infrastructure & network facility	35	57
4	Lack of support from authorities	21	34
5	Lack of co-ordination among the library staff	15	24
6	Lack of budget for ICT	14	22
7	Personal inabilities	12	19
8	Lack of interest for library professionals in learning ICT application	10	16
8	Other…	5	8

Note: Total sample exceeds the required size since the questions are multiple choices

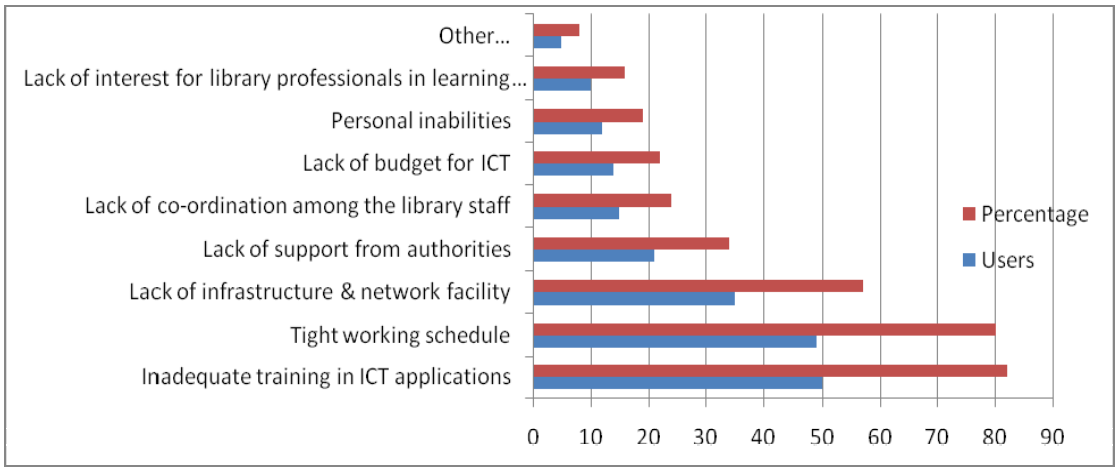

Figure 2: Graph of Constraint in Acquiring ICT Skills

Table 17 shows that Majority of library professional identified that the main issue relating to the application of ICT in libraries is the lack of training as 82%, and also another main constraint in acquiring ICT skills by library professionals is tight working schedule as 80% , Lack of infrastructure and network facility 57%, Lack of support from authority's 34%, Lack of co-ordination among the library staff 24%, Lack of budget for ICT 22%, personal inabilities 19%, Lack of interest for library professionals in learning ICT application 16% and other 8%.**Majority of library professional identified that the main issue relating to the application of ICT in libraries is the lack of training as 82%, and also another main constraint in acquiring ICT skills by library professionals is tight working schedule as 80%**

Suggestions:

The present study exposes that the Library professionals working in various engineering colleges of Warangal district in Telangana State are mostly computer literate and have acquired considerable basic ICT skills to manage the library. But still there are enough scope to enhance their ICT skills and to implement these skills in libraries to provide new ICT based library services to users. After careful observation of the present study some suggestions have been made below for the improvement of ICT skills of Library professionals.

- Library professionals should be encouraged and deputed by the authority to attend workshops, training programmes, short-term courses, seminars, conferences and training programmes on library management software.
- Sufficient funds should be made available by the authorities for developments of ICT infrastructures, Digital resources development and application of ICT enabled services.
- The Engineering colleges need to develop the infrastructural facilities of their libraries so that the ICT literacy of library professionals can be best used.
- Libraries should promote ICT awareness to the professionals as well as users.
- AICTE need to organize various training programmes for Library professionals to enhance their ICT skills.
- The Library professionals Associations need to organize various training programmes for Library professionals their ICT skills.

Conclusion:

Information and communication technology (ICT) provides libraries an opportunity to give value added information services and access to a wide variety of digital based information resources to their clients. In this current situation, whereby ICT are being continuously updated, and the traditional formats are being replaced by digital formats, regular raining for the library professionals in changing technology is inevitable. The library professional must possess sufficient knowledge of new ICT skills such as library automation, developing and maintaining digital libraries/institutional repositories, e-resources management, content management, organization of information on Internet and Intranet, web based library services etc. The exclusive aim of the study is to understand and sketch a framework of information literacy level of library professionals of engineering colleges' libraries of Warangal district in the state of Telangana, in order to meet the ever changing demand of users. Library professionals with right ICT skills and expertise will have sufficiently opportunities in future and will be vital to the management of technology intensive libraries.

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