

CURRENT STATUS OF IT SKILLS OF LIBRARY PROFESSIONALS OF TECHNICAL INSTITUTIONS IN INDIA

Sanjeev Kumar Sahu*, J. N. Gautam**

Abstract *A study has been conducted to investigate status of information technology skills among library professionals of technical Institutions of our country. The study is based on a Questionnaire Survey of librarian / library authority of technical institutions which have sufficient fund for developing IT infrastructure. This study covers aspects of library automation, digitization, web technology, content management skills in library professionals in addition to the details of their qualifications and position. Also, involvement of library staff in staff development and orientation programmes for users has been explored.*

Keywords: *Information Technology (IT) Skills, Library Professional, Technical Institution, Library Infrastructure and Library Services*

INTRODUCTION

Modern librarianship is based on Information and Communication Technology (ICT) due to explosion of internet, high speed bandwidth, search engines, reduced cost of latest computers, web tools, free open source library automation software, content management software, social media, mobile apps, increased availability of free-of-cost e-resources, open archive, online e-resource sharing and an enormous increase in various electronic publications. The main goal of library professionals today, is to adopt IT based infrastructure, tools and services as per the requirement of modern librarianship. They are supposed to require continuous improvement and need to adopt web based technology in library.

This study has investigated the current status of information technology skills of library professionals of technical institutions of our country. A well qualified library authority, with technically sound knowledge in library & information science and information technology skills is mandatory for organising and managing IT based services as required by a modern user. A qualified library professional can manage IT base infrastructure and services in a better way. To adopt IT based infrastructures and challenges of modern era, current status of library professionals find them to be equipped with skills of information technology, software application, library automation & digitization, database management, website development & design, use of web markup language

and utilisation of content management software. In addition to library professional the contribution of non-professional staff working in the libraries of technical institutions of our country also require a deeper thought. Staff development programmes and in-house training programmes for library professional staff helps to keep up-to-date of library services as well as enhance skills of library professionals. Definitely, well qualified library professionals in their respective fields with in-depth knowledge of computer application make a distinguished position at their place.

REVIEW OF LITERATURE

A research done by Gerolimos (2008) on librarian's skills and qualifications in a modern information environment and found many difficulties faced by professionals due to lack of education needed, required skills and qualification. So that modern librarian required to adopt new qualification and technical skills. Narasappa (2016) investigated, librarians play a vital role in current era to providing better utilisation and access to digital information. They concluded that professional should be IT based person so as to process acquisition, organization, sharing and distribution of information in all formats. As per Emanuel (2013) recently career selection of academic librarian is based on their technology skills and attitudes towards technology. They realise their position as digital native has allowed them to recognize that technology based librarianship in changing as career.

* Research Scholar, SOS-Library & Information Science, Jiwaji University Gwalior & Librarian, S.A.T.I. (Degree), Vidisha, Madhya Pradesh, India. Email: sahusanjeevsahu@gmail.com

** Professor & Head, SOS-Library & Information Science & University Librarian, Jiwaji University, Gwalior, Madhya Pradesh, India. Email: jngautam1@yahoo.com

ICT application and its impact based study done by Mathew (2012) on the university of Kerala, India. He examines the problems forced by library professionals, to study skills and awareness of library professionals and suggested to organized training programmes and workshops to developed required skills in modern technology. Seena (2014) also expressed to organised ICT awareness programmes, short term courses, in-house training programme, workshop, seminar for using digital resources effectively to professional and users by organization. Sankari (2014) observed that Librarians need proper ICT infrastructure and training to effectively use of digital resources. Library professionals has found to use ICT Technology in their work due to low level of technology skills in their profession, lack of authority support to implementation of the technology is major issue in university system.

Kumar (2012) has found that open source software plays an important role in modern librarianship and Koha Software is more suitable software for automation of libraries. Open source library softwares are an attractive alternative for libraries. As per Semode (2017) Social Networking Sites (SNS) plays an important role on skills and use of library facilities and profession. Facebook, Whats App, LinkedIn, Twitter, Skype and YouTube recently most popular tools used by modern librarians. Other social networking sites 'Online Forum' and 'Researchgate' also used by librarians. Satpathy (2011) observed that library authorities needs to motivation to upgrade the ICT skills of LIS professional to develop the infrastructure facilities of their libraries, LIS School needs to change their curriculum and try to organize various training programme for LIS professionals to enhance their ICT skills.

OBJECTIVES OF THE STUDY

The objectives of the present study are as follows:

- To find out the current strength, status and qualification of library staff and the impact of information technology on library professionals working in libraries of technical institutions of our country.
- To identify the skills of library staff related to open access resources, web tools & technology, software and services in the libraries.
- To investigate technical awareness of library professionals like computer & IT skills and software application skills.
- Study of the institutional support to attend Staff development programmes and In-house training programmes for library staff.

HYPOTHESES

Following are the postulates as far as status of information technology skills of library professionals of technical institution in India is concerned:

- The technical institutions which have well equipped infrastructure, resources and services have qualified and technically sound library staff possessing ability to adopt current trends of information technology.
- The library staff of most of the well funded technical institutions has skills to work on open source software, web tools & technology, software and services in the library.
- The library professionals of technical institutions have developed competency for application of advanced technology i.e., computer & IT skills and software application skills.
- Library staff attends staff development programs on regular basis and is competent enough to provide support for organizing In-house training programees for library staff.

RESEARCH METHODOLOGY

This work is based on the first author's ongoing Ph.D. research work in which a sample of 20 technical institutions is taken and a pilot study has been conducted. To startwith, the study covers technical institutions from twelve states, as follows: Madhya Pradesh-04, Karnataka-3, Maharashtra-03, West Bengal-02, Uttar Pradesh-01, Tamil Nady-01, Chhatisgarh-01, Telangana-01, Haryana-01, Uttarakhand-01, Chandigarh-01 and Andhra Pradesh-01. This study is based on the literature review, the responses of the designed questionnaire, telephonic discussion with librarians and field experts of various technical institutions. An online questionnaire was prepared on google form in google drive in which a good number of multiple-choice questions were formulated. Questionnaire method has been found to be very useful to understand IT Skills of library professional related to infrastructure, tools, technology and resources using from the libraries of technical institutions. The study is based on the primary data collected from libraries of technical institutions in India and secondary data collected from previous publications. The survey has been done with the help of a closed questionnaire designed for the purpose. The reliability and validity of questionnaire is being reviewed and improved with the inputs from the consulted experts - librarians, teachers and statisticians of reputed institutions, data collected from library authority/librarian of technical institutions of our country conclusions are drawn on the basis of the and results obtained from the evaluation

and analysis of questionnaire. Data analysis has been done with the aid of ‘Microsoft Excel’ and results are presented in the form of tables and graphs with full descriptions.

DATA ANALYSIS AND INTERPRETATION

Library Authority / Librarian Status & Skills

Designation of Library Authority

It has been found that most of the libraries of technical institutions are being managed by the qualified and competent library professionals. Fig. 1 shows the details of status/designation of library authority of the institute. It has been found 45% libraries have been managed by the Librarian and 20% libraries have In-charge Librarians. In some institute the Deputy Librarians (10%) and Assistant Librarians (15%) are taking responsibility of librarian’s job also. About 10% institutions did not respond of this question.

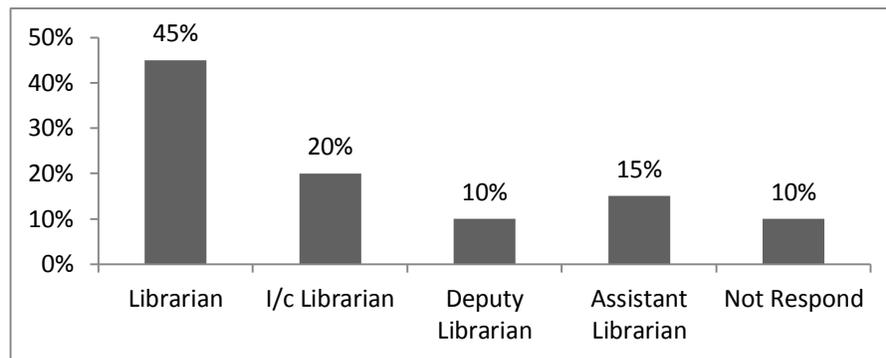


Fig. 1: Status/Designation of Library Authority

Highest Qualification of Library Authority/Librarian

Well qualified library authority/librarian is required for effective organisation and management of library resources and it makes better library services for users. Fig. 2 shows status of highest qualification of technical institutions of our

country. It has been found that 45% librarians have doctoral degree (Ph.D.) in library & information science and 20% librarians have M.Phil in library and information science. It shows 25% librarians have masters in library & information science and 5% library authority do not have any degree in library science. About 5% institutions did not respond for this question.

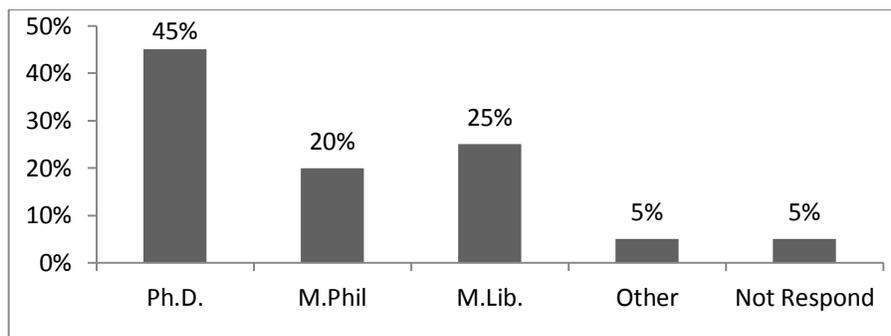


Fig. 2: Highest Qualification of Library Authority / Librarian

UGC-NET Qualified Librarian Status

UGC-NET stands for University Grant Commission-National Eligibility Test. As it is known that on behalf of UGC, the National Testing Agency (NTA) conducts the

test in Indian for eligibility of assistant professor. NET is also essential qualification (In place of Ph.D.) for the post of assistant librarian of university library and librarian of college library (https://en.wikipedia.org/wiki/National_Eligibility_Test). Fig. 3.1 & 3.2 show that UGC-NET status

of librarian working in technical institutions of our country. Fig. 3.1 shows only 50% librarians of technical institutions have UGC-NET qualified. Fig. 3.2 shows that out of UGC-NET qualified librarians some have acquired additional qualifications, 60% librarians have Ph.D. Degree with UGC- NET, 20% librarians have M.Phil & UGC- NET and remaining 20% have only UGC-NET qualified librarians.

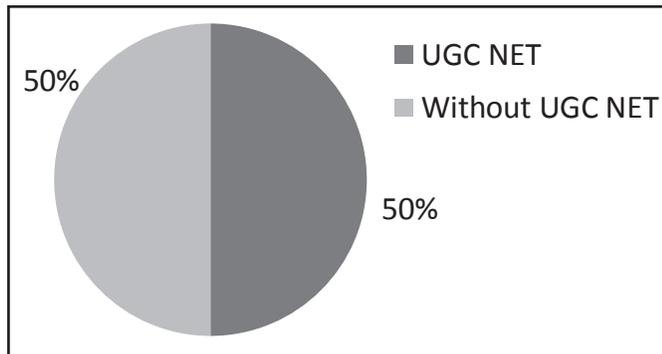


Fig. 3: UGC-NET Status

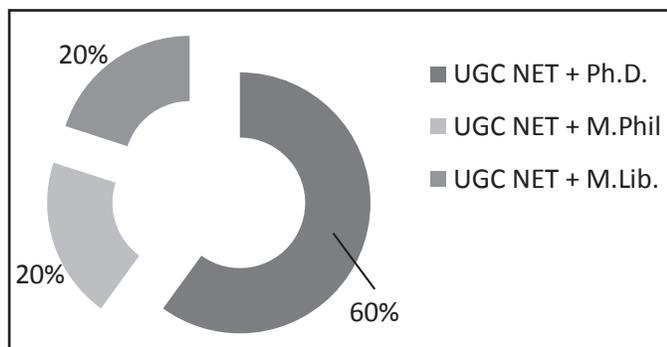


Fig. 3: Beyond UGC-NET Status

Computer / IT Education Status of Librarians

Due to emerging trends of information technology in library and information centre, it is required for librarians to get computer and IT education from recognized institutions. Fig. 4 the computer / IT education status of librarians in libraries of technical institution. It has been found 45% librarians have Post Graduate Diploma in Computer Application (PGDCA), 15% Librarians have Post Graduate Diploma in Library Automation & Networking (PGDLAN). Only 5% Librarian have Bachelor of Computer Application (BCA) and not any librarian has done Master of Computer Application (MCA). Interestingly of 25% librarians have done other computer courses as well and 10% institutes did not respond to this question.

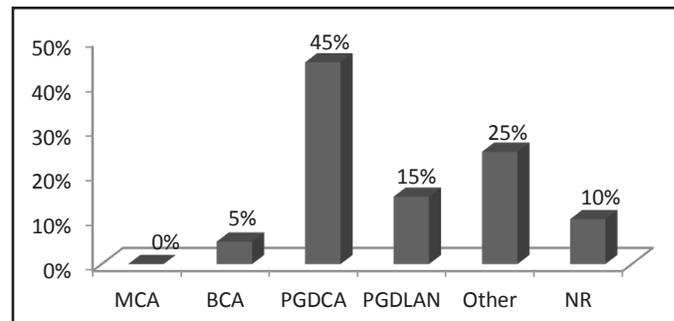


Fig. 4: Computer / IT Education Status of Librarians

Information Technology (IT) Skills of Librarian

IT skills supports to organise, store and dissemination of IT based services and resources. It will also help to develop digital library and for library automation.

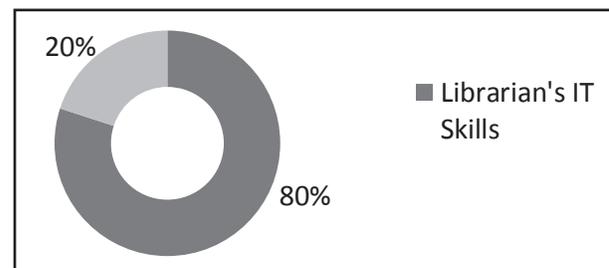


Fig. 5: Information Technology Skills of Librarian

Fig. 5 shows information technology skills of librarians. All librarians (80%) who responded the question are well versed with IT skills and implementing them. The remaining 20% institutions did not respond of this question.

Library Staff Status & Skills

Strength of Library Staff

Well qualified staff is responsible for the development of any library. It has been found that most of libraries of technical institutions of our country have library professional staff as well as non library professional staff. Library professional staff supports to growth of modern library services followed by standards of library. Fig. 6 shows strength of library staff; professional and non-professional. 60% professional staff and 20% non-professional staff have found in the range of 1 to 5, 35% non-professional staff and 30% professional staff have found in the range of 6 to 10, 15% non-professional and 0% professional staff have found in the range of 11 to 15. 25% professional staffs have found in the range of 15+ staff. 5% institutes did not respond the question of non-professional staff but all institutes have responded the question of professional staff.

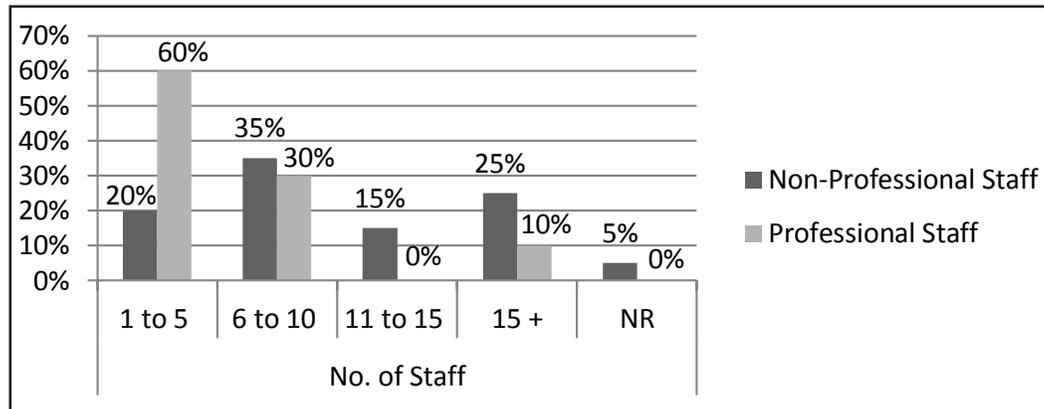


Fig. 6: Strength of Library Staff (Professional & Non-Professional)

UGC-NET & Ph.D. Status of Library Staff

In addition to qualification of librarian, qualified library professional staff supports to library administration as well

is responsible for the growth of modern library of technical institutions.

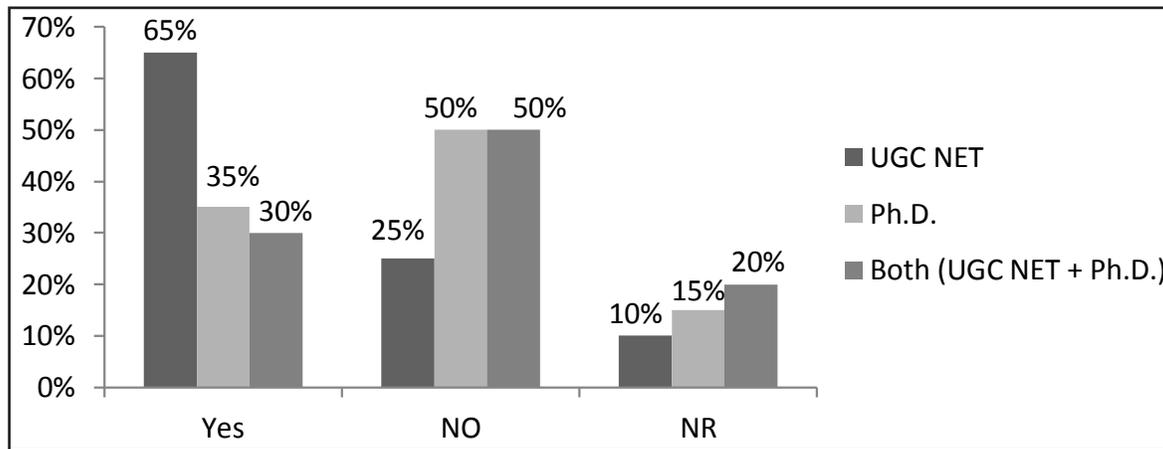


Fig. 7: UGC-NET & Ph.D. status of Library Staff

Fig. 7 shows status of UGC-NET and Ph.D. status of library staff. It has been found that 65% library staff has UGC-NET qualified, 35% having Ph.D. and 30% staff have Ph.D. degree and UGC-NET qualified both. Library staff has not qualification of UGC-NET (25%), Ph.D. (50%) and both UGC-NET & Ph.D. (50%). Some institutions have not responded the question of UGC-NET (10%) qualification, Ph.D. (15%) degree and both UGC-NET & Ph.D. (20%)

Computer Application Literacy of Library Staff

Information technology is playing an important role in the field of library and information science. Many library professionals are acquiring computer based qualification to make themselves self dependent in the field of computer science. Fig. 8 shows how many library staff have done

course of computer application. It seems that library staff (70%) have completed course of computer application and 20% library staff have not done any computer course. Nearly 10% institutes have not responded to this question.

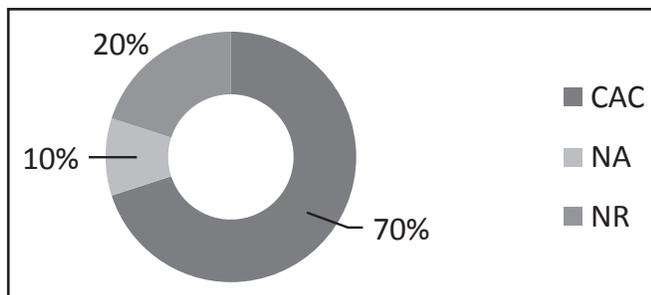


Fig. 8: Computer Application Course of Library Staff

Technical Skills of Library Staff

As per requirement of libraries of modern era, library staff has adopted computer based services for developing information technology based services and are using various types of software related to automation & digitisation of library resources to provide better services of library to technical institutions of our country. Fig. 9 shows technical skills of library staff. Most of the library professional staff of the technical institutions has adopted technical skill which is the current need of users. Seventy five (75%) library staff has computer skills, 90% library staff has skills of information technology and 80% library staff is familiar with software application skills.

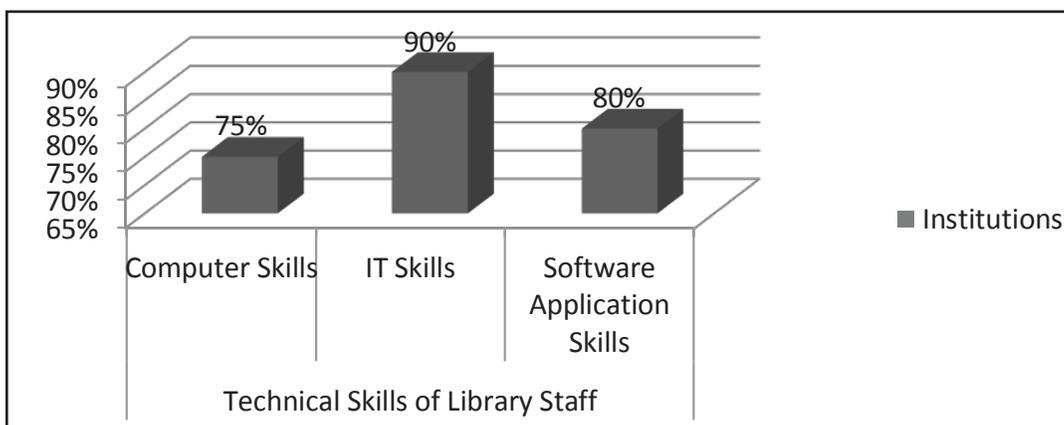


Fig. 9: Technical Skills of Library Staff

Library Automation & Digitisation Skills

Library automation improves job efficiency of in-house keeping job of library, time reducing, stops duplicity and gets outcome as per our required format designed in the

library. Digitisation for preserving rare documents and gets maintained documents available in the digital form. It may access over the internet/intranet. Fig. 10 shows the status of library automation & digitisation skills of library professional staff of technical institutions of our country. It has been observed.

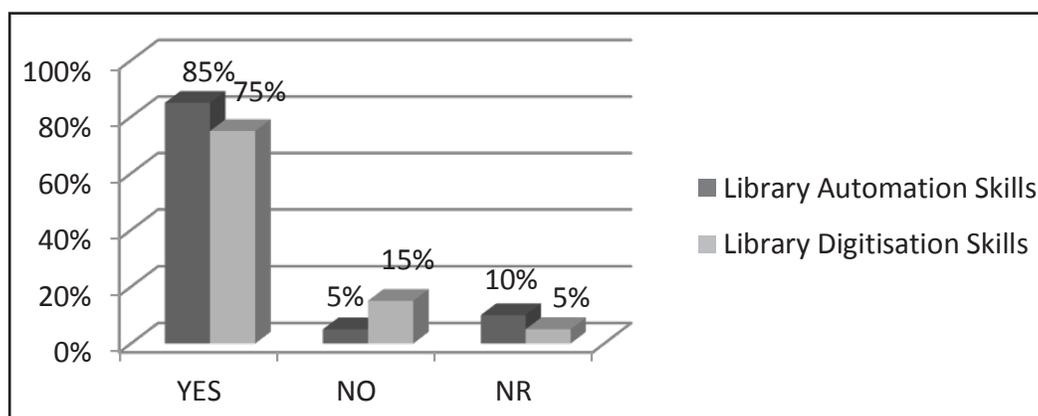


Fig. 10: Library Automation & Digitisation Skills

that library profession staff has automation (85%) and digitization (75%) skills. The library professional staff has not skills of library automation (5%) & digitization (15%). Some of the institutions did not reply to the question of library automation (10%) and library digitization (5%).

DBMS and Web Tools & Techniques Skills

Knowledge of database management system in the library is an important job because most of the libraries of technical

institutions are adopting software for the management of library related database and information. Technical skills of web tools makes smart library professional of library staff like blogs, social networking, RSS feeds, etc. Fig. 11 show that 60% library professional staffs have skills of Database Management System (DBMS) and web tools & techniques both.

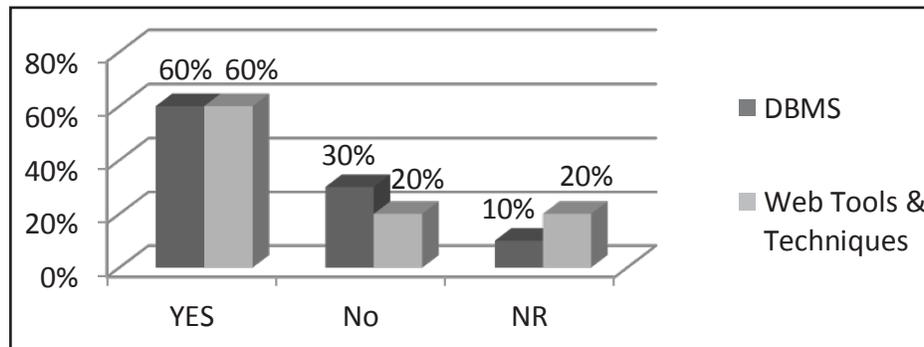


Fig. 11: DBMS and Web Tools & Techniques Skills

It has been found that library professionals (30%) have not skills of DBMS and 20% library professionals have not skills of web tools & techniques. 10% technical institutes did not reply question of DBMS and 20% did not reply to the question of web tools & techniques.

Web Technology Skills of Library Staff

Web technology skills are required for the development of website of its own library for an institute as well as updating

and customisation of web based software and services. Fig. 12 show web technology skills of library professional staff related to web markup language and web development & design. It has been observed that library staff (40%) has skills of web development & design and 25% library staff has skills of web markup language, 30% library staff has not skills of web markup language and web development & design. Some technical institutions (15%) did not respond question of web markup language and 30% institutions for the question of web development & design.

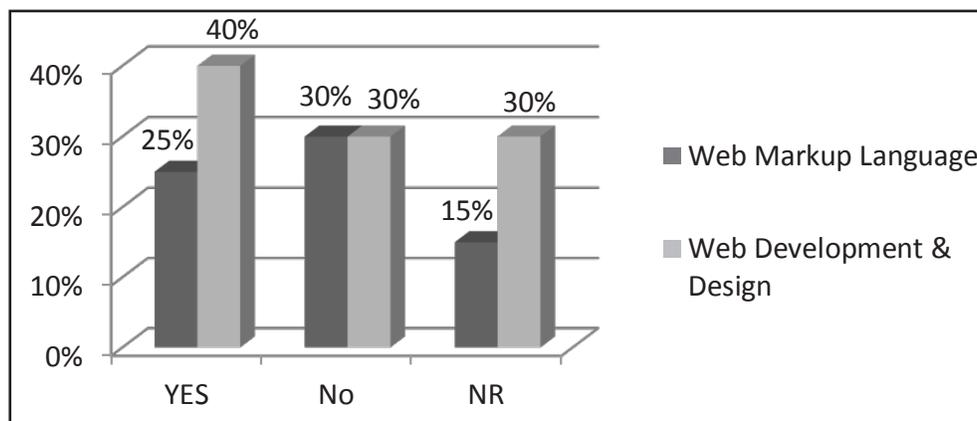


Fig. 12: Web Technology Skills of Library Staff

Content Management Software Skills of Library Staff

On the basis of basic knowledge of computer application, library staff may develop webpage of library with the use of content management software. Fig. 13 show content

management software skills of library staff. It has been found that 45% library staff has content management software skills and 25% library staff does not have skills to use content management software. 30% technical institutions have not responded the question of content management software skills.

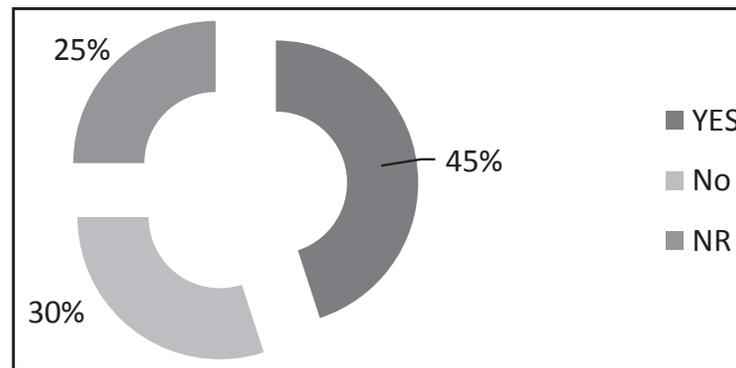


Fig. 13: Content Management Software Skills of Library Staff

Staff Development Programmes

Library services and technology are changing from time to time, library staff needs to update themselves as required by library profession. Fig. 14 shows status of training programme attended by library staff and in-house SPD

organise for library of technical institutions. It has been observed that 85% technical institutions are providing facility to attend training programme to library staff and 60% institutions have organised in-house staff development programme for library staff. Institutions (10%).

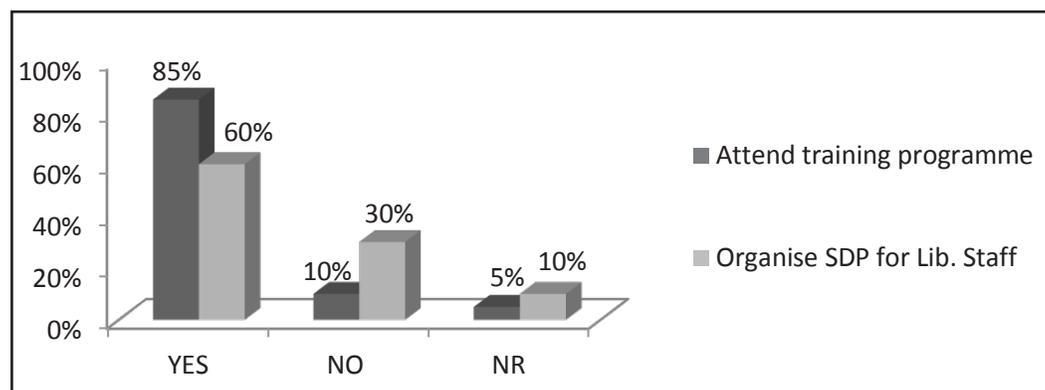


Fig. 14: Staff Development Programmes for Library Staff

have not permitted to attend training programmes and 30% institutions have not organised in-house SDP for library staff. Institution (5%) did not respond the question to attended training programme and 10% institutions did not respond question of organised SDP for library staff.

Staff Involvement in Orientation Programmes for Users

May good libraries ofrepute organize orientation programmes for its users for the awareness and better utilisation of the

resources & services of library. Fig. 15 shows the library staff involvement to organise orientation programmes for the users of library. It has been found that library staff of technical institutions (80%) has been involved to organise orientation programme, 10% institutes's library staff is not involved and 10% institutions have not responded to this question.

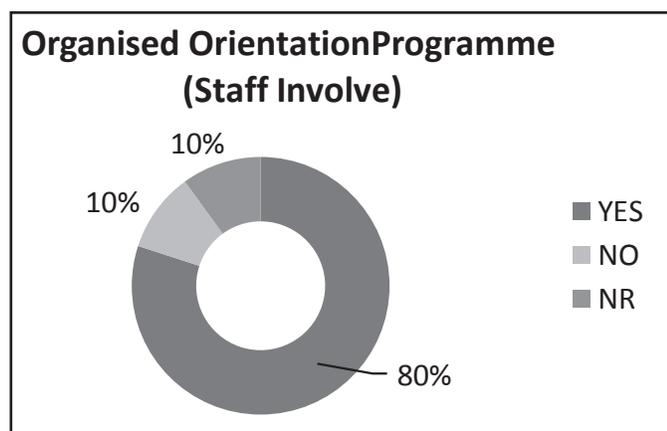


Fig. 15: Staff Involvement in Orientation Programmes for Users

CONCLUSION AND RECOMMENDATIONS

The outcome of this pilot study is that the information technology skills of library professionals in libraries of technical institutions (of course, with sufficient funds) of our country are very good, and most of the institutions have well qualified library authorities who have sound knowledge of computer application and IT skills. Many of the libraries have librarian as library authority and some have in-charge librarian. Most of the library authorities have secured Ph.D. as Highest qualifications whereas most of them are UGC-NET qualified with M.Phil. A good number of Library authorities are found to have sound knowledge of computer application with PGDCA (45%) and PGDLAN (15%).

It has been found that the library staff in technical institutions is also well qualified and most of library staff had done course of computer application and they have good skills of information technology & computer application, library automation & digitization skills. Library staff has also been found to be well conversant with DBMS, skills of web tools & technology and knowledge of content management software. The study reveals that most of the library staff have attended Training Programme, In-house training programme and about 80% library staff's involvement has been found in organising orientation programme for their users.

It is recommended that the Schools of LIS in India should incorporate advanced courses related to Information Technology in their syllabi. The technical institutions of our country require more professional staff to provide better IT based services. At least a bachelor level course in computer application for LIS professional seems to be a bare minimum additional qualification and should be made mandatory. For the library website development, a continuous improvement and upgradation of skills to implement content management software for the library professionals has become the need of the day.

REFERENCES

- Emanuel, J. (2013). Digital native librarians, technology skills, and their relationship with technology. *Information Technology and Libraries*, 32(3), 20-23. Retrieved from <https://doi.org/10.6017/ital.v32i3.3811> mode
- Gerolimos, M., & Konsta, R. (2008). Librarian's skills and qualifications in a modern information environment. *Library Management*, 29(8/9), 691-699. Retrieved from <http://www.emeraldinsight.com/doi/abs/10.1108/01435120810917305>
- Kumar, L., Singh, L., & Lal, P. (2012). Open source software using koha: A case study of L R institute of engineering and technology. *International Journal of Digital Library Services*, 2(3), 61-75. Retrieved from <http://www.ijodls.in/uploads/3/6/0/3/3603729/61-75232.pdf>
- Ms, M., Susan, K., & Baby, M. D. (2012). Developing technology skills for academic librarians: A study based on the universities in Kerala, India. *Library Philosophy and Practice* (e-journal). Retrieved from <http://digitalcommons.unl.edu/libphilprac/702>
- Narasappa, K. C., & Kumar, D. P. (2016). ICT skills for LIS professional in digital environment. *International Journal of Research in Library Science*, 2(2), 55-58. Retrieved from <http://www.ijrls.in/wp-content/uploads/2016/08/ICT-Skills-for-LIS-Professional-in-the-Digital-Environment.pdf>
- Sankari, L. R., & Chinnasamy, K. (2014). ICT skills among librarians in engineering colleges in salem and namakkal districts: A study. *International Journal of Humanities and Social Science Invention*, 3(12), 9-17. Retrieved from [http://www.ijhssi.org/papers/v3\(12\)/Version-2/B03120209017.pdf](http://www.ijhssi.org/papers/v3(12)/Version-2/B03120209017.pdf)
- Satpathy, S. K., & Maharana, R. K. (2011). ICT skills of LIS Professionals in engineering institutions of orissa, india: A case study. *Library Philosophy and Practice (e-Journal)*. Retrieved from <http://digitalcommons.unl.edu/libphilprac/627/>

Seena, S. T., & Pillai, S. K. G. (2014). A study of ICT skills among library professionals in the kerala university library system. *Annals of Library and Information Studies*, 61(2), 132-141. Retrieved from <http://nopr.niscair.res.in/handle/123456789/29034>

Semode, F. D., Ejitaga, S., & Baro, E. E. (2017). Social networking site: Changing roles, skills and use by librarians in tertiary institutions in nigeria. *Library Philosophy and Practice (e-journal)*. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1500/>