

EXPLORING ICT LITERACY AMONG LIBRARY PROFESSIONALS WORKING IN UNIVERSITY LIBRARIES IN MARATHWADA REGION.

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Abstract

This paper reports the study that was conducted to access the ICT literacy among library professionals and ascertains the need of training and orientation in ICT-based resources and services to the library professionals working in university libraries in Marathwada region. The questionnaire based survey was conducted to analyze ICT literacy among library professionals working in university libraries in Marathwada region. The paper gives an overview of the use of ICT based resource and services by library professionals and it helps to know the need of training and orientation in ICT-based resources, services and tools to the library professionals working in university libraries in Marathwada region. The findings of this study show that maximum library professionals are ICT literate and have significant basic ICT skills to handle the library; but still there is enough scope to develop their innovative ICT skills and implement these skills in the library to provide new ICT-based library services more effectively and efficiently.

Keywords: Information and Communication Technology (ICT), ICT Literacy, Library Professionals, University Libraries, Marathwada Region.

1. INTRODUCTION:

Information Communication Technology (ICT) has drastically changed the entire human activities including library and information science field. Now a day libraries are deeply engaged to modernize operations & activities to provide fast, integrated, interactive and comprehensive services (Dhanavandan, S. et. al.2012). The ICT tools and services are being used in libraries to manage libraries more efficiently and to cater users demand properly. In

this changing library scenario, the library and information professionals must possess adequate ICT skills to manage the modern libraries (Satpathy, S. K. and Maharana, R. K., 2011). Due to the advancement of new technologies, users consider libraries only as a last resort for their information needs. So it becomes a challenge for a library professionals when the need of the user becomes very precise and authentic (Sudhakaran, J. and Sivankutty V. S., 2011).

In view of the present challenges posed by both the information explosion and the complexities of ICT, it is clear that library professionals will need to use ICT effectively to discharge their professional responsibilities (Adeyoyin, S. O. 2005). The library professionals are not in a position to cope up with changing demand of the users in the information society satisfactorily. Ultimately the library professionals need to be trained with the latest developments in ICT to keep them up-to-date and to enable them to provide better and improved services for their users as well (Nagarajan, M., 2012). This study provides an insight into the current ICT literacy among library professionals working in university libraries in Marathwada region and enables them to intensify their efforts to enhance the ICT skills.

2. INFORMATION COMMUNICATION TECHNOLOGY (ICT) LITERACY:

Lowe, G, and McAuley, J. (2000) stated that ICT literacy can be defined as the skills and abilities that will enable the use of computers and related information technologies to meet personal, educational and labour market goals.

Katz et al., (2004) defined that ICT literacy is the ability to appropriately use digital technology, communication tools, and/or networks to solve information problems in order to function in an information society. This includes having the ability to use technology as a tool to research, organize, and communicate information and having a fundamental understanding of the ethical/legal issues surrounding accessing and using information.

3. INFORMATION COMMUNICATION TECHNOLOGY (ICT) LITERACY AMONG LIBRARY PROFESSIONALS:

The ICT adoption by libraries has moved from the early stage of automating selected library operations to the stage where ICT have permeated into almost all spheres of library services and routines (Anyaoku, Ebele N., 2012). With the implementation of ICT in the field of library and information science lot of changes have been placed and it has made a great impact on the library services and its users in the various capacities (Maan, I. S., 2012). The library and information scenario is changing at a dynamic pace; there is a paradigm shift from print media to web media; from ownership of documents to access to information; intermediary to end-user model of services; and from location of specific libraries to digital/virtual/hybrid libraries (Babu, B. R., Vinayagamoorthy, P. and Gopalakrishnan, S., 2007).

In this changing library scenario, the library and Information professionals must possess adequate knowledge and skills of ICT to manage the modern libraries, more specifically the academic libraries. They need to acquire continuous knowledge and skills on the fast changing Information Communication Technology to provide better library services to users (Satpathy, Sunil Kumar and Maharana, Rabindra K., 2011). As part of modern librarianship, it is vital for to be well versed with ICT applications to manage libraries and other web based services to cope up with the increasing information demands of the clients. Information and Communication Literacy (ICTL) among library professionals helps them groom to develop new skills and gain competencies that are required to cope up with the exponential growth rate of information (Gireesh Kumar, T K. and Murali, 2013).

4. STATEMENT OF PROBLEM:

The university libraries in Marathwada region are very positive towards the application of ICT in libraries. Libraries are well equipped with ICT infrastructure and providing various ICT based resources and services to cater the information need of users. But no library can provide effective library services without qualified and component library staff. The present study attempts to identify the ICT skills among library professionals and ascertain the need of training and orientation in ICT-based resources and services to the library professionals working in university libraries in Marathwada region.

5. OBJECTIVES OF THE STUDY:

The objectives of the study were:

1. To assess the ICT skills among library professionals working in university libraries.
2. To identify the means and methods of acquiring ICT skills by the library professionals.
3. To identify the constraints in acquiring ICT skills by the library professionals.
4. To ascertain the need of training and orientation in ICT-based resources and services to the library professionals.

6. SCOPE AND LIMITATIONS:

The study is limited to the university libraries attached to the universities in Marathwada region. Further it covers only state universities which are recognized by UGC and are covered under section 12(B) of UGC Act 1956. Study considers only regular full time library professionals which include Librarian, Assistant Librarians, Information Scientist, Technical Assistant, Professional Assistant and Library Assistants working in university libraries in Marathwada region.

7. METHODOLOGY:

The quantitative research methodology was used for the study. A structured questionnaire based survey was conducted. The study population comprised of 26 library professionals working in university libraries in Marathwada region taken into consideration for the study.

The library professionals were classified according to their designation into six categories: Librarian, Assistant Librarians, Information Scientist, Technical Assistant, Professional Assistant and Library Assistants. The data collected through the questionnaires were converted into machine readable form and imported into the Statistical Package for the Social Sciences (SPSS). The analysis of the data provided an in-depth interpretation for fulfilling the research objectives.

8. DATA ANALYSIS AND DISCUSSION:

A survey was conducted to analyze the ICT skills of Library Professionals working in university libraries in Marathwada region. A detailed analysis of the data and its interpretation is presented below in the form of tables and graphs.

8.1 Designation-wise response rate of the sample:

The study population comprised of library professionals working in university libraries in Marathwada region taken into consideration for the study. The questionnaires were personally distributed among 28 library professionals. Out of 28 library professionals, 26 (92.85%) library professionals have responded to the research study.

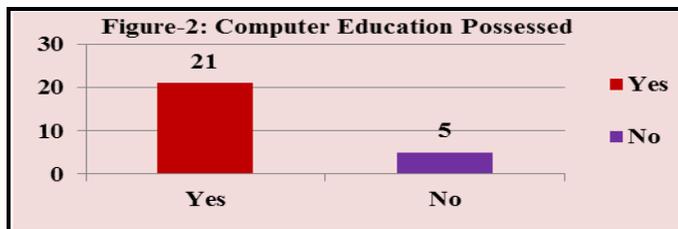
Figure-1: Designation-wise response rate of the sample			
Designation	Total Numbers	Questionnaires	
		Received	Response Rate (%)
Librarian	2	2	100%
Assistant Librarian	3	3	100%
Information Scientist	2	2	100%
Technical Assistant	5	5	100%
Professional Assistant	1	1	100%
Library Assistant	15	13	86.66%
Total	28	26	92.85%

The data collected and tabulated in Figure-1 shows the designation-wise response of library professionals. Out of 28 library professionals 26 library professionals working in university libraries in Marathwada region responded to the survey i.e. 92.85% response was received. On the base of maximum 92.85% response received from library professionals the further analysis was carried out.

8.2 Computer Education Possessed by the Library Professionals:

In present electronic information age, it is necessary that the library professionals should possessed certain type of computer education to cope up with the latest technological changes and its application in library operation. To know the computer literacy of library

professionals, question was asked to library professionals to indicate whether they possessed any type of computer education.



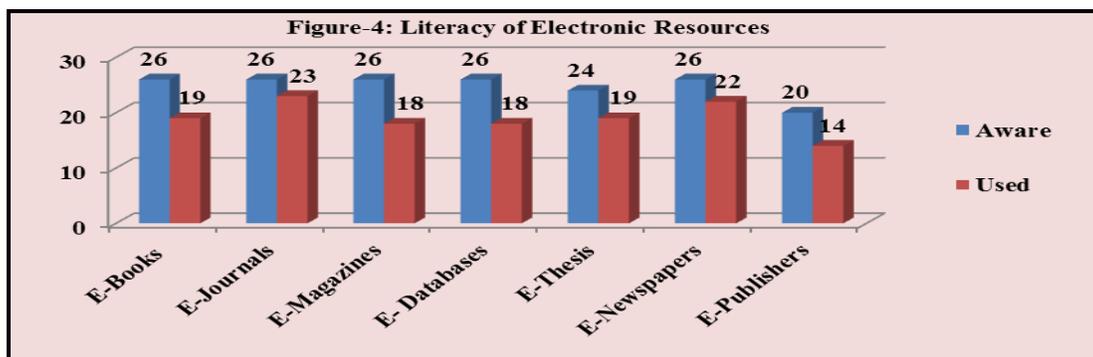
The data collected and tabulated in Figure-2 depicts that maximum 21 (80.76%) library professionals possessed certain type of computer education but still few 5 (19.23%) library professionals need to take formal or informal computer education to cope with the information challenges and provide quality library services to its user community.

8.3 Literacy of ICT-based Resources and Services:

Application of ICT in libraries possessed many challenges to library professionals. With the changing role and responsibility of the library professionals their identity is also changed, they are now known as Information Officer, Information Broker and Information Provider etc. (Mazumdar, Nirmal Ranjan, 2007). It became necessary for the library professionals should have the knowledge of information and communication technology and its application in library operations and services. Library professionals need to equip them with core competencies and emerging skills required for the service delivery in electronic information environment (Sankari, R.Lakshmi and Chinnasamy, K., 2014). Hence in order to investigate the literacy of ICT based resources and services, the library professionals were asked to indicate the current literacy of ICT based resources and services and the responses received are described below:

8.3.2 Literacy of Electronic Resources:

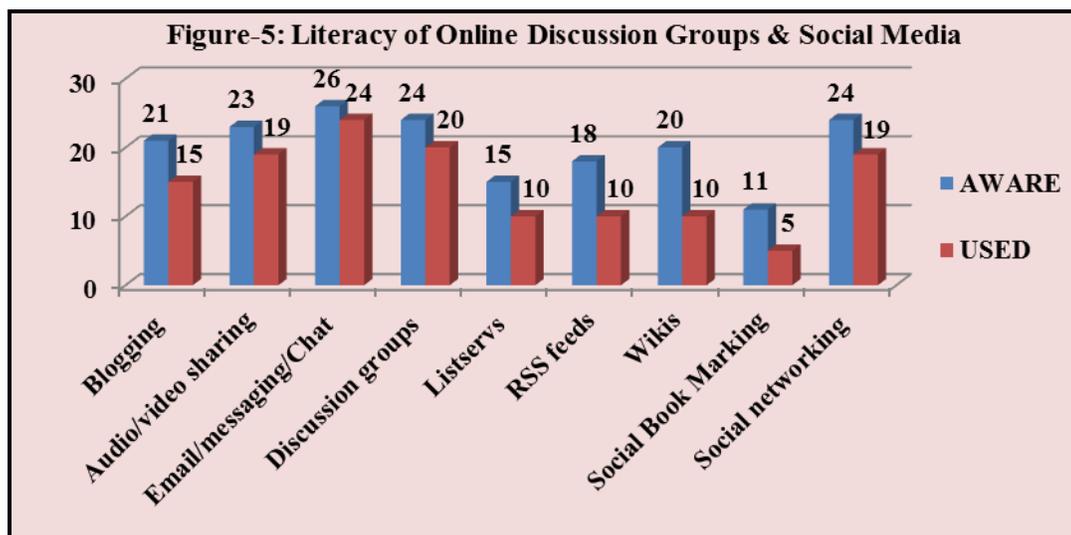
To reveal which kind of electronic resources being most preferred by library professionals for the information retrieval, the library professionals were asked to indicate their literacy of different electronic resources.



The Data collected and tabulated in Figure-4 clearly indicates that maximum 26 (100%) of library professionals aware of e-books, e-journals, e-magazines, e-database and e-newspaper but out of which maximum 23 (88.46%) library professionals used e-journals followed by 22 (84.61%) used e-newspapers, 19 (73.07%) library professionals used e-books and 18 (69.23%) used e-database and e-magazines whereas 24 (92.30%) library professionals aware of e-thesis but only 19 (73.07%) actually use e-thesis, similarly 20 (76.92%) aware of e-publisher but only 14 (53.84%) library professionals use e-publisher hence the literacy about e-thesis and e-publishers is low among library professionals as compare to other e-resources. It can be diagnosed that maximum library professionals are well literate of different types of electronic resources and e-journals is the most preferred e-resource among maximum library professionals whereas literacy about e-thesis and e-publishers is low as compare to other e-resources.

8.3.4 Literacy of Online Discussion Groups and Social Media:

To reveal which kind of online discussion groups and social media technology being most preferred by library professionals for the information communication, the library professionals were asked to indicate their literacy of different online discussion groups and social media.

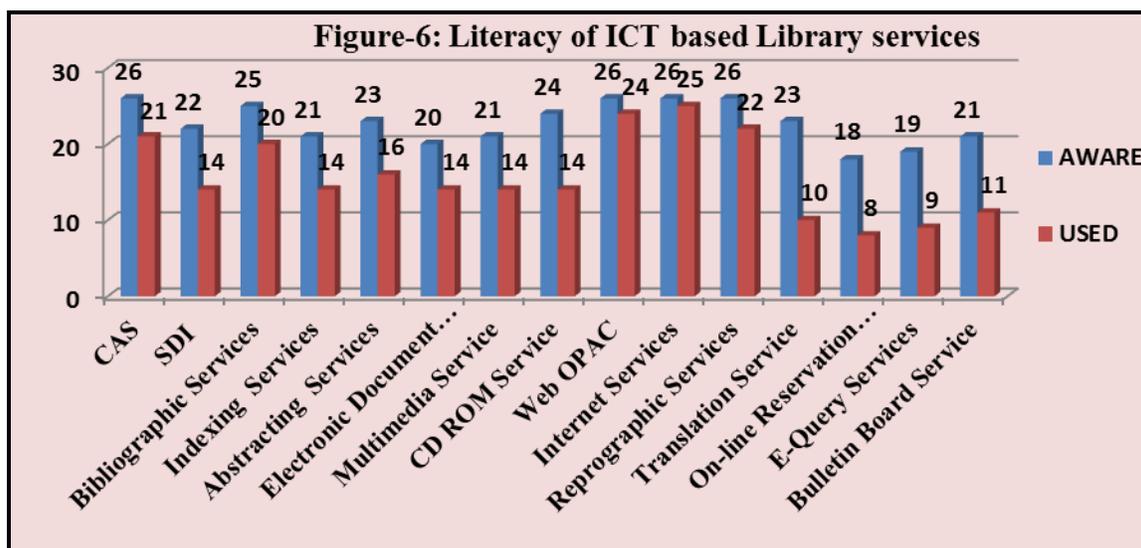


The Data collected and tabulated in Figure-5 clearly shows that maximum 26 (100%) library professionals aware of Email/Instant Messaging/Chat followed by 24 (92.30%) of aware of Discussion Groups and Social networking, but out of which 24 (92.30%) library professionals actually use Email/Instant Messaging/Chat, 20 (76.92%) use Discussion Groups and 19 (73.07%) use Social networking. Majority of library professionals 23 (88.46%) are also aware of Audio/video sharing/webcasting, 21 (80.76%) aware of blogging, 20 (76.92%) aware of wikis but out of which only 19 (73.07%) use Audio/video sharing/webcasting, 15 (57.69%) use blogging and only 10 (38.46%) use Wikis. Very few library professionals 18 (69.23%) are aware of RSS feeds, 15 (57.69%) aware of Listservs

and 11 (42.30%) aware of Social book marketing out of which only 10 (38.46%) use RSS feeds, wikis and only 5 (19.23%) actually use Social book marketing. It can accumulate that maximum library professionals are literate of different Online Discussion Groups and Social Media. Maximum library professionals actively participate in Online Discussion Groups and Social Media and through this participation they keep themselves update with the new developments in libraries, but still many library professionals lack the literacy of Blogging, Listserv, RSS feeds and Social book marketing etc.

8.3.6 Literacy of ICT-based Services:

In the ICT environment library professionals should keep themselves up to date with the latest ICT-based Services to provide effective services to users. To reveal literacy of ICT-based Services among library professionals, the library professionals were asked to indicate their current literacy of ICT-based Services.



The Data collected and tabulated in Figure-6 evident that, maximum 26 (100%) library professionals are well aware of CAS, Web OPAC, Internet Service and Reprographic Service and out of which 25 (96.15%) actually use Internet Service followed by 24 (92.30%) use Web OPAC, 22 (84.61%) use Reprographic Services and 21 (80.76%) use CAS. Majority 25 (96.15%) library professionals are also aware of Bibliographic Services, 24 (92.30%) aware of CD ROM Service, 23 (88.46%) aware Abstracting Services and Translation services, 22 (84.61%) aware of SDI, 21 (80.76%) aware of Indexing Services, Multimedia services and Bulletin Board Services, 20 (76.92%) aware of Electronic document delivery but out of which 20 (76.92%) library professionals actually use Bibliographic Services, 16 (61.53%) use Abstracting Services, 14 (53.84%) library professionals use SDI, Indexing Services, CD Rom, Electronic document delivery and multimedia services, 11 (42.30%) use Bulletin Board Services and only 10 (38.46%) use Translation services. Literacy about E-query service and online reservation service is low among library professionals as only 19 (73.07%) library professionals aware of E-query service and 18 (69.23%) aware of online reservation service

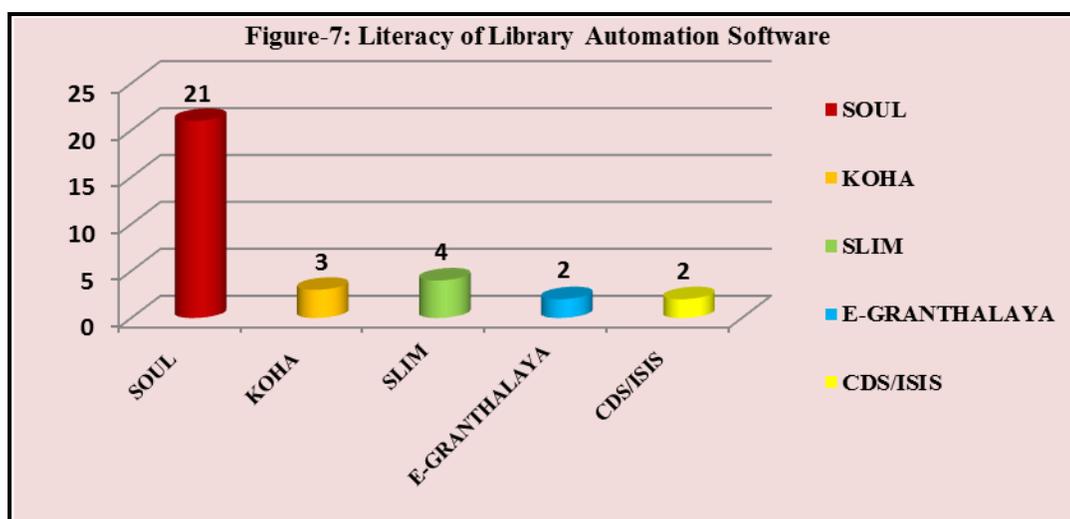
out of which only 9 (34.61%) actually use E-query service and 8 (30.76%) use online reservation service. It can be sum up that, maximum library professionals literate of Internet Service, Web OPAC, Reprographic Service, CAS, Bibliographic Services, Indexing Services, Abstracting Services, but the literacy about SDI, Indexing Services, Electronic document delivery, multimedia services and translation services is low as compare to other services. Very few library professionals use E-query service and online reservations service due to lack of awareness hence the literacy of these services is low among library professionals.

8.4 Literacy of Software:

In a digital web environment the library professionals should be more acquainted with technological skills, which are required to handle information and communication technology and its application in library field such as application of different software in library operations. Efficient knowledge of different software enables effective computer based information services. The literacy of different types of software among the library professionals are summarized in the following sections:

8.4.1 Literacy of Library Automation Software:

The latest advancement in ICT has compelled libraries to embrace automation as the facilities provided by automated libraries go far beyond the traditional libraries. In this scenario every library professional should have knowledge of library automation software. To reveal which kind of Library Automation Software are being more preferred by library professionals to automate the library services and activities, the library professionals were asked to indicate their current literacy of different library Automation Software.

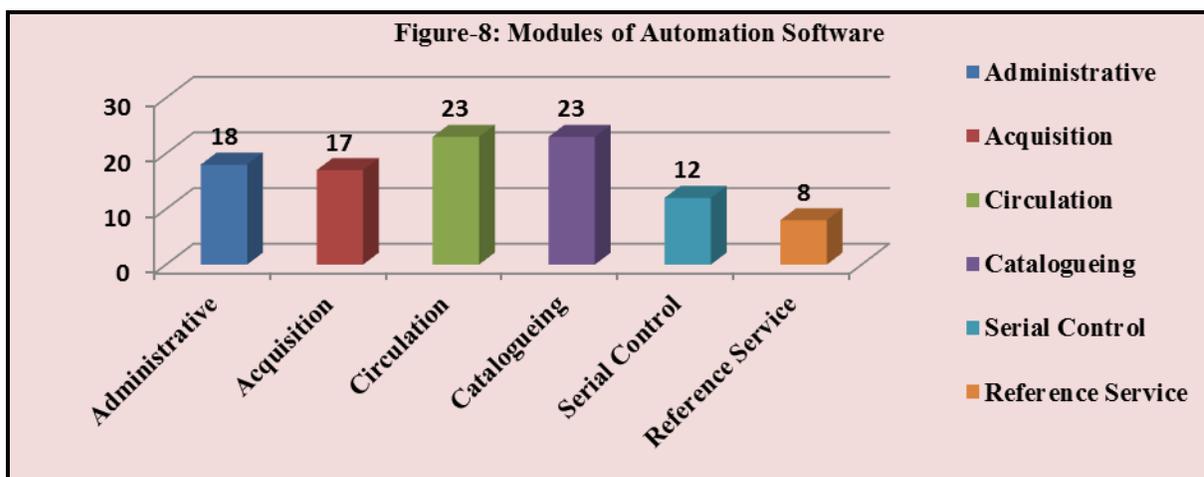


The data collected and presented in the Figure-7 shows that maximum 21 (80.76 %) of library professionals have literate of SOUL automation software, followed by 4 (15.38%) literate of SLIM, 3 (11.53%) literate of KOHA whereas only 2 (7.69%) literate of CDS/ISIS and E-Granthalaya library automation software. It can be extracted that maximum library

professionals literate of SOUL software whereas few library professionals also have sound knowledge of KOHA, E-Granthalaya and CDS/ISIS library automation software as many organizations and libraries conducts training programmes of these open source library automation software for the library professionals frequently.

8.4.2 Literacy about different modules of Library Automation Software:

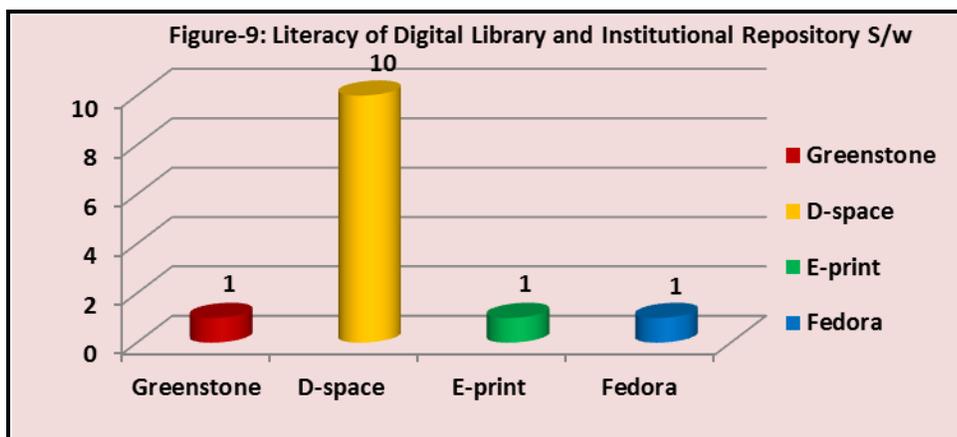
To reveal which modules of Library Automation Software are being more preferred by library professionals, the library professionals were asked to indicate their literacy about different modules of library Automation Software.



The Data collected and tabulated in Figure-8 clearly indicate that maximum 23 (88.46%) library professionals have knowledge to use Circulation and cataloguing modules, 18 (69.23%) have knowledge to use Administrative module, 17 (65.38%) have knowledge to use Acquisition module, 12 (46.15%) have knowledge to use serial control and only 8 (30.76%) library professionals have knowledge to use Reference Service module. It can be stated that maximum library professionals are literate of Circulation, Cataloguing, Administrative and Acquisition modules, whereas literacy about Serial Control and Reference Service modules is low among library professionals.

8.4.3 Literacy of Digital Library and Institutional Repository Software:

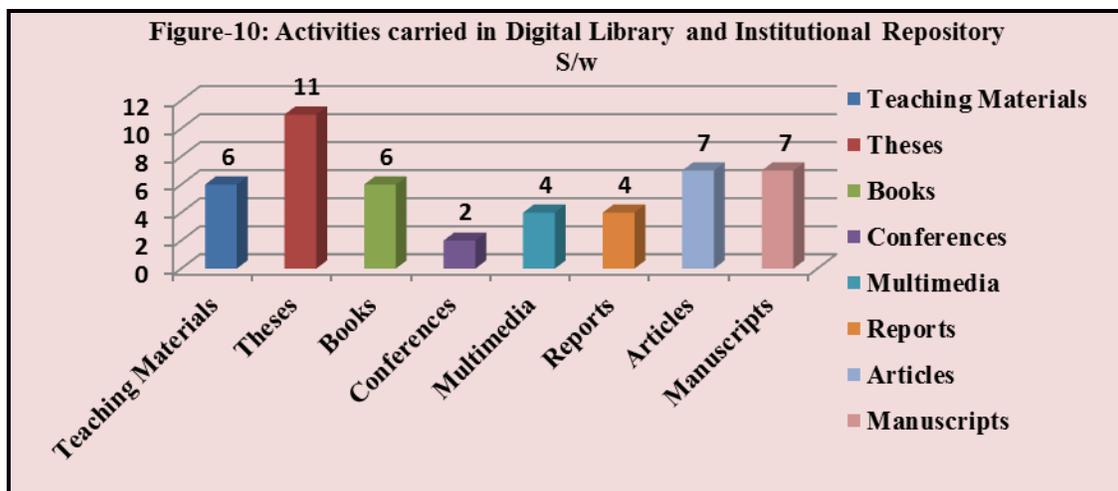
The knowledge of digital library and institutional repository software is essential for the modern library professional working in ICT environment to tackle the problems and challenges raised in building and maintaining a digital web-based library. To access the literacy and awareness of different Digital library and Institutional repository software among library professionals, the library professionals were asked to indicate their current literacy of different Digital library and Institutional repository software.



The data has been collected and presented in the Figure-9 shows that, out of 26 respondents maximum 10 (38.46%) library professionals have knowledge of D-Space, only 1 (3.84%) aware of Greenstone, E-print and Fedora digital library and institutional repository software. It can be stated that the literacy of digital library and institutional repository software among library professionals is very low. The library professionals should take initiatives to increase the literacy of different digital library and institutional repository software.

8.4.4 Activities carried in Digital Library and Institutional Repository Software

To access the contribution of library professionals towards the establishment of Digital library and Institutional repository in their library, the library professionals were asked to indicate whether they have contributed towards any of the activities carried out in Digital Library and Institutional Repository Software.

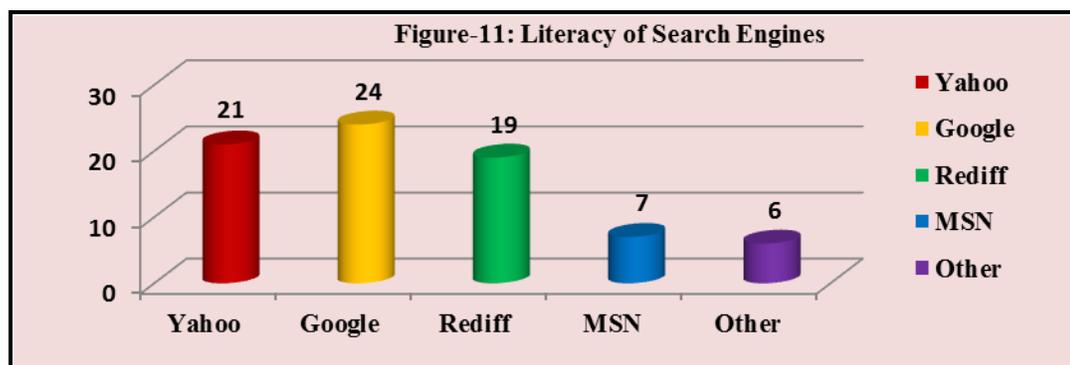


The Data collected and tabulated in Figure-10 evident that, maximum 11 (42.30%) library professionals contributed for the theses activity, 7 (26.92%) contributed for articles and manuscripts, 6 (23.07%) contributed for teaching materials and books, 4 (15.38%)

contributed for multimedia and reports and only 2 (7.69%) library professionals have contributed towards conference proceedings. It can be extracted that the contribution of library professionals towards carrying out the different activities in Digital Library and Institutional Repository Software is not satisfactory, library professional's needs to take initiative and contribute towards the development of digital libraries and institutional repositories in the library.

8.4.5 Literacy of Search Engines:

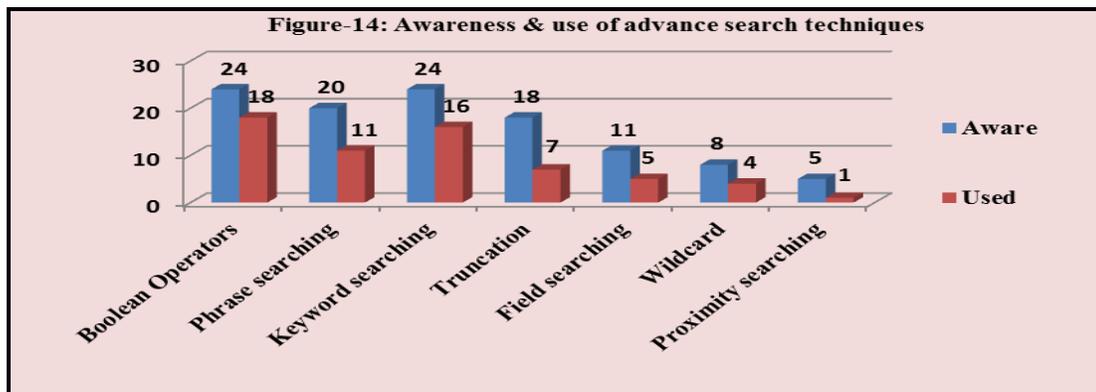
The Library Professionals should be in a position to help its diversified user community by providing ready reference services hence they should be more acquainted with different Search Engines to acquire electronic information available on the Internet. To reveal which kind of Search Engines are being most preferred by library professionals to retrieve the online information on internet, the library professionals were asked to indicate their current literacy of Search Engines.



The data has been collected and presented in the Figure-11 reveals that maximum 24 (92.30%) library professionals preferred Google search engines followed by 21 (80.76%) preferred Yahoo, 19 (73.07%) use Rediff, 7 (26.92%) preferred MSN and only 6 (23.07%) preferred other search engines i.e. AltaVista, Scirus and Khoj etc. It could be clearly seen from the above discussion that maximum library professionals are very much literate of different search engines. Among the all search engines Google and Yahoo are most preferred search engines by the majority of library professionals whereas Rediff, MSN, AltaVista and other specialized search engines such as Scirus, Khoj aren't so popular and highly preferred by the library professionals. The reasons for the supremacy of Google and Yahoo can be the popularity of search engine, database size, harvesting capacity, qualitative search hits, high precision and advanced search features etc.

8.4.7 Awareness and use of advance search techniques:

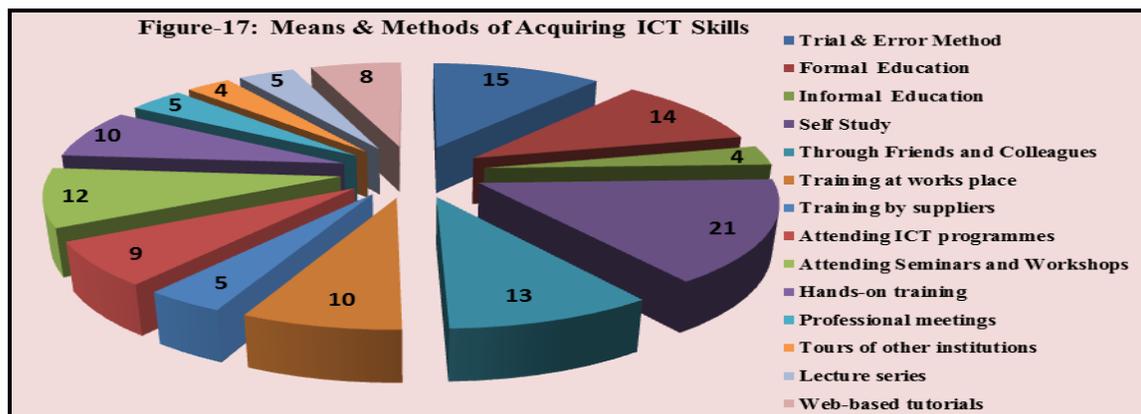
To get acquainted with the awareness of different advance search techniques among library professionals, the library professionals were asked to indicate their current literacy of different advance search techniques.



The data has been collected and presented in the Figure-14 denotes that maximum 24 (92.30%) of library professionals are aware of Boolean Operator Searching and Keyword Searching followed by 20 (76.92%) aware of Phrase searching out of which 18 (69.23%) library professionals actually use Boolean Operator Searching, 16 (61.53%) use Keyword Searching and only 11 (42.30%) aware of Phrase searching. Library professionals not well aware of other search technique as only 18 (69.23%) library professionals aware of Truncation, 11 (42.30%) aware of field searching, 8 (30.76%) aware of wildcard and 5 (19.23%) aware of Proximity searching out of which only 7 (26.92%) actually use Truncation, 5 (19.23%) use field searching, 4 (15.38%) use wildcard and only 1 (3.84%) use Proximity searching. It can be stated that maximum library professionals are literate of basic search techniques i.e. Boolean Operator, Keyword Searching and Phrase searching, whereas the literacy of other advance search techniques like truncation, field searching, wildcard searching, Proximity searching is very low among library professionals.

8.5 Means and Methods of Acquiring ICT Skills:

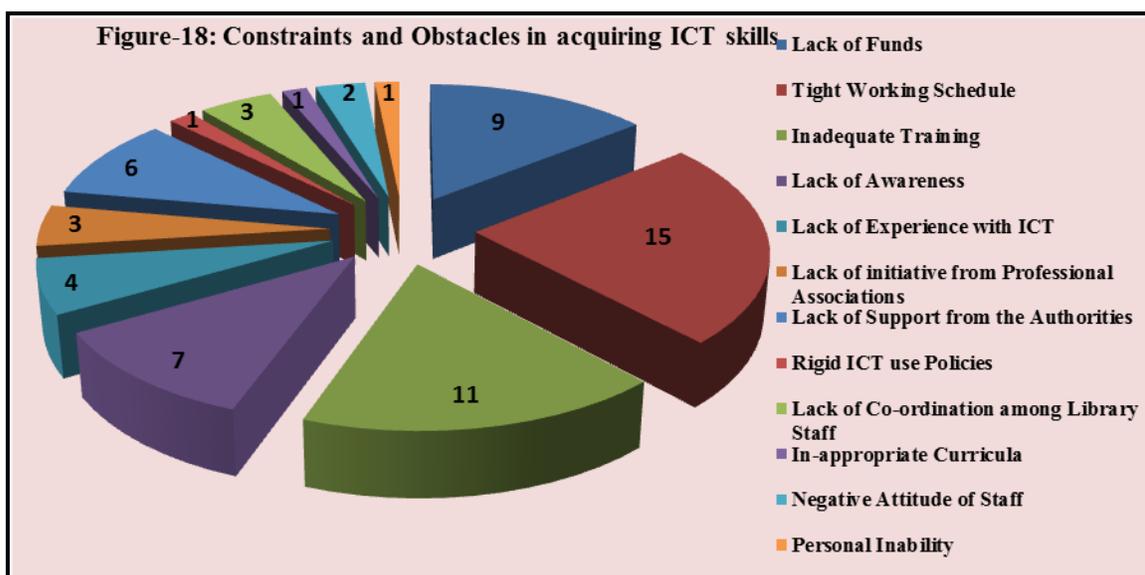
There are various methods of acquiring ICT skills by the library professionals. The library professionals were asked to indicate which means and methods are being acquired by library professionals to update the ICT skills and knowledge.



The data has been collected and presented in the Figure-17 reveals as high as 21 (80.76%) responses indicate that the primary method of acquiring ICT skills by library professionals is Self Study. It is followed by other methods such as trial and error method 15 (57.69%) and formal education and training 14 (53.84%). It can be diagnosed that the maximum library professionals acquire the ICT skills and Knowledge themselves through self study and trial and error method. The library authority should take initiative and organize in-house workshops, Seminars, Conferences and ICT training at workplace more frequently to increase the ICT skills of library professionals.

8.6 Constraints and Obstacles in acquiring ICT skills:

In order to understand the constraints and obstacles faced by library professionals in acquiring ICT skills, the library professionals were asked to indicate the constraints and obstacles faced by them in acquiring ICT skills.



The data have been collected and tabulated in Figure-18 shows that the main constraint in acquiring ICT skills by LIS professionals is tight working schedule as 15 (57.69%) respondents out of 26 have responded to this. It is followed by the other main constraints such as Inadequate training 11 (42.30%), lack of funds 9 (34.61%) and Lack of awareness 7 (26.92%) are the other constraints and obstacles in acquiring ICT skills. It can be sum up that maximum library professionals could not acquire the sufficient ICT skills due to their day to day busy working schedule and do not get opportunities to enhance their ICT skills and knowledge. Library professionals lack the proper ICT training at work place. Hence it is recommended that the library professionals should be encouraged and deputed by the authority to attend seminars, workshops, conferences and training programmes on ICT based resources, services and tools.

8.7 Training and Orientation Needs in ICT based Resources and Services:

To know the Training and Orientation needs among library professionals they were asked to indicate their training or orientation needs in ICT based Resources, Services and tools.



The data has been collected and presented in the Figure-19 indicates that the highest 23 (88.46%) of library professionals responded that they need training and orientation in use of ICT based resources, services and tools, where as only 3 (11.53%) library professionals responded that they do not need any training in use of ICT based Resources, Services and tools. It clearly shows that maximum library professionals need training and orientation in use of ICT based Resources, Services and tools. The library should organize in-house workshops, Seminars, Conferences and ICT training at workplace more frequently to enhance ICT skills of library professionals.

8.8 Training and Orientation Area:

To get acquainted with the training and orientation area in which library professionals need training and orientation, the library professionals were asked to indicate the area in which library professionals need training and orientation.



The data have been collected and tabulated in Figure-20 clearly shows that maximum 19 (73.07%) library professionals indicated the need for training ICT based Resources, Services and library automation software followed by 18 (69.23%) need training in digital library and institutional repository software; 15 (57.69%) in E-resources and 12 (46.15%) library professionals shows training need in ICT tools and equipments. It can be stated that that the existing ICT training and orientation provided by the libraries are not fully sufficient to create ICT literacy among the library professionals. Maximum Library professionals indicated the need of training and orientation in use of digital library and institutional repository software, ICT based Resources and Services, Library automation software, ICT tools and communication and media technology.

9. FINDINGS:

The present study comes out with the major findings which are summarized as follows:

1. Maximum library professionals working in university libraries in Marathwada region possessed certain type of computer education but still few library professionals need to take formal or informal computer education to cope with the information challenges and provide quality library services to its user community.
2. Most of the library professionals are well literate of different types of electronic resources. E-journals are the most preferred e-resource among maximum library professionals whereas literacy about e-thesis and e-publishers is low as compare to other e-resources.
3. Maximum library professionals actively participate in Online Discussion Groups and Social Media to get interact professionally and through this participation they keep themselves update with the new developments in libraries, but still many library professionals lack the literacy of Blogging, Listserv, RSS feeds and Social book marketing etc.
4. Majority of library professionals literate of ICT-based Services and use these services while providing services to the library users, but the literacy about SDI, Indexing Services, Electronic document delivery, multimedia services and translation services is low as compare to other services.
5. Most of the library professionals are literate of SOUL software whereas few library professionals have sound knowledge of KOHA, E-Granthalaya and CDS/ISIS library automation software. Library professionals are literate of Circulation, Cataloguing, Administrative and Acquisition modules, whereas literacy about Serial Control and Reference Service modules is low among library professionals.
6. The literacy of digital library and institutional repository software among library professionals is very low. The contribution of library professionals towards carrying out the different activities in Digital Library and Institutional Repository Software is not satisfactory.
7. Majority of library professionals are very much literate of different search engines. Google and Yahoo are most preferred search engines among majority of library professionals whereas specialized search engines such as Scirus, Khoj aren't so popular and highly preferred by the library professionals.

8. Most of the library professionals are literate of basic search techniques i.e. Boolean Operator, Keyword Searching and Phrase searching, whereas the literacy of other advance search techniques like truncation, field searching, wildcard searching, Proximity searching is low among library professionals.
9. Maximum library professionals acquire the ICT skills and Knowledge themselves through self study and trial and error method.
10. Majority of library professionals could not acquire the sufficient ICT skills due to their day to day busy working schedule and do not get opportunities to enhance their ICT skills and knowledge at work place.
11. Most of the Library professionals indicated the need of training and orientation in use of digital library and institutional repository software, ICT based Resources and Services, Library automation software, ICT tools and communication and media technology.

10. SUGGESTIONS:

The major suggestions of the present study are summarized as follows:

1. The contribution of library professionals towards carrying out the different activities in Digital Library and Institutional Repository Software is not satisfactory, library professional's needs to take initiative and contribute towards the development of digital libraries and institutional repositories in the library.
2. Library professionals need to increase the literacy of specialized search engines as well as different advance search techniques in order to retrieve selective and relevant information on complex topics.
3. The existing ICT training and orientation provided by the university libraries in Marathwada region is not fully sufficient to create ICT literacy among the library professionals. The library should organize in-house workshops, Seminars, Conferences and ICT training at workplace more frequently to enhance ICT skills of library professionals.
4. Library professionals should provide training and orientation in the area of digital library and institutional repository software, ICT based Resources and Services, Library automation software, ICT tools and communication and media technology.
5. In-house training programmes and regular attendance of relevant Conferences, Workshops are prerequisite for library professionals to enhance their ICT skills/ ICT knowledge and effective use of ICT-based resources services and tools.

11. CONCLUSION:

In the past two decades, there has been a tremendous explosion of information and communication technology in the field of library and information centers. This has made library professionals to get acquainted with the ICT to provide effective ICT based services to its clientele. It is therefore imperative for library professionals in university libraries to face the enormous challenges posed by the ICT-based information revolution. However, in this study it was revealed that the ICT literacy among library professionals working in university libraries in Marathwada region is satisfactory and maximum library professionals

have significant basic ICT skills to handle the library, but still there is enough scope to develop their innovative ICT skills and to implement these ICT skills in the library to provide effective ICT-based services in the library. The existing ICT training and orientation provided by the university libraries in Marathwada region is not fully sufficient to create ICT literacy among the library professionals. The library authorities should organize in-house ICT training, workshops, Seminars and Conferences more frequently to enhance ICT skills of library professionals.

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