Chapter 2 Literature Review

2.1 Introduction:

The researcher before finalizing research topic conducted a detailed library search on the topic of research which supports to the idea of research.

Literature review narrates and develops the concept related to proposed research which is related to prior research conducted to find new avenues in it and analysis. It helps in indicating the originality and relevance of research problem and identifies the status of research and its newness from other past reported studies. Literature review justifies proposed methodology and demonstrates preparedness to complete the research in systematic manner.

2.2. Role of Literature Review in Research

The research study is a substantial and lengthy piece of professional work and has to satisfy number of academic requirements. The literature review is one of these important academic requirements. The literature review is a critical discussion and summary of literature that is of `general' and `specialized' relevance to the particular area and topic of the research problem in statistics. Researcher has to spend lot of time on literature review because it helps in designing most of the part of dissertation. Every statement in a literature review must be supported either by a reference to published literature. In a literature review, do not present all of the details found in the references. By providing the sources of the references, advisor and committee can go to the original reference for verification of the details to assess the reference.

Literature search this helps in:

- Discover what statistical knowledge exists related to research topic (retrospective manner)
- increase knowledge in research area and identify gaps in published research and generate new original ideas
- avoid duplicating results
- justify the relevance of proposed research and its useful to information society
A literature review is a proposal is long enough to convince committee that researcher have thoroughly explored the research topic by searching relevant literature to the topic.

The literature review performs a number of important functions like:

- It demonstrates to a Ph.D. committee that the student has read enough amount of literature to prove that the researcher is aware of the wide range of research in theory and methodology related to the proposed research topic.
- It provides proof to a Ph.D. committee that the student has deep understanding of area in which he is working gives new impact to researcher.
- The published research related to the topic of the dissertation.
- It should convince the Ph.D. committee that the student can communicate under-standing of the literature and its relationship to the proposed research.
- By identifying gaps in the literature, the student can justify the originality of the proposed dissertation research.
- In the proposal emphasize or stress is on the presentation of originality in the dissertation.
- With-out a good literature review, it is not possible to convince committee that the proposed research is original.

Thus the Literature Review is more than a summary of publications, which provides evidence that research is new and supported by relevant contribution.

2.3. Facets of Literature Review for Study

Following facets are considered for the literature search as these might help in the formulating study systematically

1. Functions of Libraries
2. Traditional libraries: Pros and Cons
4. Staffing Patterns, functions Policies and Commissions
5. Staff : Management
6. Resource Management
7. Future of libraries
2.3.1 Functions of Libraries

Edwards (1998) predicted the changes in the library system and information dissemination due to use of computers, application software’s, internet, networking etc. Due to this there is a significant change in the functions of libraries. Along with technology there is a need to deploy effective staff to process and disseminate the information for the benefits of users.

Purnima Devi (2006) indicates qualities of qualified and educated skilled staff in the library. The staff fulfills the objectives of libraries by giving exact information in form of books to the user. Manpower is required with proper knowledge, skills in the digital environment to give pinpointed information in the digital era. Day by day technology changes and manpower need to upgrade their knowledge with sufficient staff requirement.

Hamedan Branch (2009) emphases that libraries and the librarians are planning to manage the digital libraries due to transformation as well as providing traditional print based facilities to users. This article highlighted the function of digital libraries and implementation of digital libraries from traditional and considered administrative and staffing perspectives in it. In the changing environment special staff with computer and programming efficiency is required as per the opinion of the author.

Naga Raja Rao (2013) indicated in his communication that present new technologies are being used in library and information science and is the main reason in changing environment of libraries, but staff needed to manage the new digital libraries is to be flexible in adapting and adopting new skills and levels of awareness. Librarians have to adapt different skills to cope up with new technologies. This article displays the changing role of librarians in a higher education sector and it has adapted to a new social as well as changing educational agenda. The paper basically covers the assumption that only its role has expanded due to changed formats of publishing documents. Technology alone cannot help in bringing out the required changes but also need efficient staff to manage the change. Attitudes, practices, and policies need to change if libraries in India are to truly benefit themselves and their community of users by the application of new technologies. LIS professionals have been playing a versatile role beyond their traditional job. They have to gather adequate knowledge of computer and communication technologies, networks and networking, operating systems, internet concepts, database management systems, along with adequate practical exposure to handle technological devices.
Summary

From the literature review it is noticed that the functions of libraries remain same but their operations and practices are changing due to applications of different technologies. The function like library services is totally changed. To manage with the revolution in libraries the staff has different qualifications and skill sets which are either to be obtained or hired to manage libraries in digital era. The staff pattern required in digital era is different.

2.3.2 Traditional Libraries: Pros and Cons

K. Nageswara Rao, and Babu (2001) highlighted the development in libraries from traditional to virtual which has brought drastic changes in the profession. The network technology and the internet using ICT has given the librarian a new dynamic role to perform as information scientist. The features of web, multimedia, collaborative multiprotocol, hypermedia oriented architecture made absolute revolution in information handling using different tools and technologies. Ultimately these avenues gave rise to digital library along with access to traditional library and staff pattern is different as compared to traditional library.

Liz Burke (2001) indicated that the virtual libraries and the digital libraries are the same but has a narrow difference in it. The future libraries can transform from traditional to digital and to the electronic and virtual movement. The librarians may require special skills having knowledge of web development, networking skills, hardware, software interface and creating web pages to provide information in the changing environment to users.

Emmanuelle Bermès (2011) developed a digital library repository using OAIS model and indicated to accept the change and librarians and the supporting staff should have appropriate skills to develop knowledge bases to maintain the digital library more usable. The digital information available in multiple formats and to arrange the huge data is the main activity of the library acquiring technical skills.

Bas Savenije (2000) focused on ultimate changes of traditional libraries from book savvy users to online grasping information. Innovative changes are seen in traditional and academic libraries. The users demands of locating information on desk tops is been considered with the availability
of electronic books and online information. To retrieve and disseminate the information and maintain storage, preservation of information is important factor. This concept of providing information to the users gives rise to electronic media and expert staff to manage the information.

**Summary**

The traditional libraries no doubt performing very well in the era they served to information community, but revolution and adaption of practices in libraries made the change. There are few drawbacks in the traditional library as compared to DLs environment in which all the practices are changed. Therefore the staff pattern and capabilities are also enhanced; in digital era to fulfill user’s exceptions from the digital libraries.

**2.3.3 Transformation in Libraries: Trends and Changing Scenario**

Lynne Brindley and Derek Law (1997) pointed that the digital library movement is initiated everywhere including developing countries. International organizations, govt. sectors, private organizations are using the digital resources and library tools for information retrieval and dissemination to manage funds and infrastructure appropriately. The digital library concepts are rapidly changing the traditional concepts. The ICT and electronic resources have been used in digital library and has changed the functioning of the libraries and role of librarians. Burke (2001) discussed on virtual libraries and the digital libraries which are the same but has a narrow difference in its meaning. The future libraries have to move from traditional to digital and to virtual and called as Libraries 2.0. The librarians have to acquire special skills of web development, networking skills, hardware, software interface and creating web pages to provide information in the changing environment and act as Librarian 2.0.

Linda Marion (2001) has discussed skills required for digital librarian to sustain in the modern age. There is a need to have digital librarians, systems librarian, reference librarian who supports the web based information delivery. The study ended with listing the skills and knowledge required for the librarians in the digital era.

Ghosh, and Kelkar (2003) focused on convergence of technologies and it is useful for significance for digital libraries in engineering colleges. Based on the widely accepted concepts of ICT, authors suggested various ways. The convergence of technologies includes community radios, Internet radio, local area networks, telecommunication -centers, information kiosks,
mobile phones, WAP applications etc. Use of convergence Technologies reduces the skew in knowledge distribution between rich and poor, educated and uneducated, rural and urban and men and women. ICT driven public libraries should act as intermediary center with suitable awareness programs and act as the nerve center for improving literacy, awareness, welfare and cultural awakening. It is the intention to put libraries in the right perspective to arrive at a single window integrated environment for information dissemination concerned with all aspects of human life.

NKC (2005) has been set up to transform India and suits for 21st century environment. The focus of the NKC report is to build excellence in the educational system to meet the knowledge challenges of the 21st century and increase India’s competitive advantage in fields of knowledge, promote creation of knowledge in S&T, social sciences and other academic institutions. NKC set up the “Working Group on Libraries” with the broad terms of reference redefine the objectives of the country’s Library and Information Services sector. The task force members have to identify constraints, problems and challenges relating to the LIS sector and take necessary steps to mobilize and upgrade the existing Library and Information Systems and services, taking advantage of the latest Information Communication Technology (ICT).

Ziming Liu (2006) has clearly stated that ICT and technologies, electronic resources and the implementation of digital libraries have made the tremendous impact on traditional libraries and its staff. Author in his survey which was conducted in Toronto listed the finding which indicates that young age people are more familiar with the electronic sources. The author said that the users are moving from traditional to digital libraries. The traditional and digital libraries have different roles where users demand is for both to satisfy their needs. The library has to play similar role in disseminating the information to users.

Lynne Brindley (2006) indicates the challenges faced due to new technologies used in the libraries and the necessity of changing the skills, services and techniques of the library staff in the ICT environment. The library is a place where the users hunt for information in form of books and the digital information. Libraries are seen as most trustworthy, reluctant, cooperative providing more accurate information than search engines. The enormous and infinite changes in providing and dissemination the information with new electronic and digital resources in the changing environment provides a new shape to redefine the roles and skills of the libraries for the future generations.
Subrata Sur (2007) has remarked Information Communication Technologies are being implemented in libraries to give traditional and digital information to the users. Librarian needs to redesign the infrastructure and skill to provide pinpointed information to the users in digital libraries and also highlights the professional skills required and technological facets required for the development of library staff to perform the future and current needs of the users.

Sharma (2007) listed skills required for the librarian to survive in the information communication era. The internet has made information easily available anywhere to the users through the search engines. Information can be accessed in electronic form by the users using electronic resources. Now in the digital era the librarians have to serves as e-specialist and provide information to the users. The traditional libraries providing digital information in the changing environment require technical skills like such as, operating systems, programming languages, networking, coding, etc. Digital library concept has change the working of the library environment.

G. Thamaraiselvi, (2009) discussed aspects of information and communication technologies which are changing everyday with rapid information explosion, made activities more complex. The knowledge society is depended upon the technological changes using electronic and digital resources etc. The impact of web based technologies has changed the library professional attitude and has to use internet based information services, multimedia, electronic resources, global networking for managing libraries in efficient ways. The new techniques and technologies permitting access to electronic knowledge resources and librarians have to change their role from traditional librarian to information scientist by learning and adapting new skills, new programming languages, networking etc. The library staff requires essential skills to work in the changing environment.

Mathews (2009) found a substantial need for Web development, project management, systems development, and systems applications in the library profession. This suggests that librarians are incorporating a significant subset of IT professionals’ skill sets. The author has also predicated requirement of IT skills. Technology is changing and the librarians have to adapt IT skills in the changing environment to disseminate and satisfy the user’s requirement.

Shiou – Luan Wang’s (2009) studied revealed the impact of ICT in university libraries to understand the users demand using ICT. The users require pinpointed information and guidance to use and refer the information generated and retrieved for the e-resources, the library staff has to computer savvy with IT knowledge to retrieve and disseminate the information to the required
users. Varalakshimi (2009) justifies in the era of digital technology accompanying with traditional and print technology the library professionals must perform their duties according to both environment. To access organize and retrieve digital information, the LIS curriculum need to add the digital trends in the syllabus. Author has suggested redesigning and re-engineering contents in syllabus.

Nonthacumjane, Pussadee. (2011) discusses the key skills and capability of a new generation of LIS professionals and digital era which impacts on the changes occurring in libraries skills and knowledge of LIS professionals working in a digital era and related researches. Author focused on key skills and competencies of a new generation of LIS professionals which can be classified as personal skills, generic skills, and discipline specific knowledge with the image of the new generation of LIS professionals. In conclusion, to work efficiently and effectively in the fast-changing digital age, a new generation of LIS professionals should have the qualifications in providing information as well as dynamically exercising personal skills, generic skills and discipline-specific knowledge.

GharibTarzeh et al (2012) in his paper has investigated different factors for user’s satisfaction and evaluating digital libraries. The digital library is being used in almost all the organization followed by traditional libraries. The electronic resources, digital software’s, are being used to provide digital information to the users around the globe. The users get satisfaction if the information is generated and disseminated properly to the users. The staff should have proper skills to retrieve and disseminate information to the users.

**Summary**

From the above discussion it is noticed that transformation in library system is appearing fast due to application of ICT and different other tools supporting to information gathering. The libraries are shifting from traditional libraries to library 2.0 and library professionals as Librarian 2.0. Transformation of in libraries is visualized as different tools are used for dissemination of information like web tools, mobile teaching, SMS services, remote messaging etc. Transformation is positive and staff required to manage it is different from traditional library system. The NKC is also supporting concept of transformation and suggested the action to manage LIS and support educational system in academic sector. From the library it is felt that to manage transformation there is a need to re-define the role of staff using skill sets required.
2.3.4 Staffing Patterns, Formulas Policies and Commissions

Francis (1998) has discussed the role of ICT in transfer of information and its delivery in the form of books, electronic resources, over I Pads, I phones etc. Author has presented the staff formula in the changing environment and also considered aspects of hardware and e-resources while designing the model of staff formulae.

Samuel Adewale Ogunrombi (1999) has highlighted the problems and difficulties while handling the ICT applications in Nigerian University to get a specific staff for catering the modern technologies. Author has pointed out that there is a need to reconsider the staff pattern for managing modern libraries due to explosion of knowledge and information which is made available through e – resources based on networks and net. This new change has affected the staffing pattern which has developed in the past to recruit staff in professional and academic library. Author is of the opinion that there is a need of re-engineering staff pattern looking in to the new trends in the profession.

McGinty (2009) commented on exploration of digital technologies used in the academic libraries which is growing at an alarm speed. Author remarked on management and organization and also suggested that libraries have to handle the needs situation of the users in different way in his digital era. The new models or structure for staffing in the digital era is disused in this article. In future librarians have to process and subscribe digital materials with the print media resources. Librarians have to acquire the new skills within the organization to maintain digital and academic libraries.

Tikeakar (2009) discussed about the changing environment of university and college libraries in India. In the 21st century academic libraries are facing challenges like library software’s, automation, retrospective conversion, digital library etc. and discussed on these issues. To provide library services which requires are more skilled in the changing environment. The information required by the user and to disseminate it to then, if need to adapt the latest technologies in the profession.

Hamedan Branch (2009) said emphasis on the libraries and the librarians who are planning to manage the digital libraries as well as providing traditional print facilities. In the digital libraries different skills and different technical education is required. Author proposed formulation of managerial policies related to technologies and utilization of staff optimally.
Nagi Reddy and Uma (2009) distinguished between traditional and modern services in the libraries. It compares the staffing formula of Dr. S R Ranganathan and the staff required in every section in ICT by taking the data from IGM library Hyderabad. They have given the recruitment and promotion polices in their communication.

**Summary**

The literature published on the staff pattern/formula in digital era is scanty, even staff formula, polices in Traditional libraries is also not available abundantly except Dr Ranganathan staff formula.

Every author is of the opinion that there is a need to have staff pattern for Digital library. Hence it was decided to analyse present status of academic libraries and deduce staff pattern with job description and skill sets in digital library environment.

### 2.3.5 Staff : Management

Parikh,(2000) emphasized on discussions on sustaining the library and information science professionals in the digital era. The author pointed out that to provide immediate and instant access to the information to users, the librarians has to change the skills and adopt new skills for proper functioning of the digital libraries. The author indicates the changing scenario due to applications of ICT in the libraries and information centers. There is a need to manage human resources to re-engineer the infrastructure of library, and librarians have to adapt additional skills to manage the digital library in addition to traditional skill sets. The copyrights, quality of information, acquisition of digital resources, maintenance, dissemination etc. is highlighted in his paper elaborately.

Karen and Henderson (2002) in their paper highlighted the job descriptions required in different advertisements and descriptions. They have pointed out that for using internet and Google or any search engines, consortia services, retrieving online publications and making them available to the users requires technical and interpersonal skills in the changing ICT era. The findings of the study explored the technology that has made changes in dissemination of information by the librarians and it is required by the users at the other end getting information in traditional form as well as with electronic and digital resources. Thus authors are of the opinion that there is a need of qualified and well trained manpower for the libraries and the advertisements need to cover the job descriptions in detailed.
Danielle Bodrero Hoggan (2002) says that in the age of digital era information is available through many resources viz. web resources, databases, internet resources etc. and the scientist/users use only one or two databases from which they retrieve very few information links. Author suggested that librarian’s using their special skills search for required and pinpointed information for the scientists using controlled vocabularies while searching. Librarians can assist to scientists in using multiple digital electronic resources and virtual information sources to download the information from various sources either paid or free. The skilled librarians using right strategies and tools can disseminate more web-based information which solves the user’s needs to initiate activity.

Hanna Kwasik (2002) in his paper emphases on the technological skills which are required in the careers of librarians due to electronic and digital resources in the 21st century. The author highlights the new skills which are required for online acquisitions and dissemination of information through electronic resources. The librarians require knowledge of integrated library systems in automated library, knowledge of software applications, programming languages, creating websites using open source software’s.

Conaway and Lawrence (2003) in their paper discussed the resources in print and digital media and compared the allocations made for these resources, Authors identified functions and resources associated with e–material used by the library and concluded that librarians and management are acquiring more digital resources in library with physical materials. The findings in this paper are staff and aggregate infrastructure, material resources are estimated to be few in all digital library. Authors have expressed the requirement of staff in the digital resources.

Vara Lakashmi (2003) highlighted the standards developed by ACRL, for evaluation of college libraries. The author has emphases on the standards, norms and rules for functioning the college libraries and the guidelines given by UGC. University Grant Commission has to develop standards for the change in technology in the 21st Century. The standards for library staff, organization, and administration should be developed in the current scenario where information is disseminated to the users at any location.

Lisa Allen (2005) indicated that due to globalization and information explosion and user needs are changing as per the change in technology to access the information in higher education. A hybrid service staff model is prepared to improve the services and provide new services and
orientation for the librarians. Training and development of hybrid librarians with proper and technical qualification is required. Library is giving traditional as well as hybrid services. Academic and college organizations have to develop awareness to computer oriented skills among the staff to face the new challenges of technologies in virtual environment.

Rosenberg (2005) conducted a survey to find out the status of digital libraries in 2004 and also conducted a pilot study concluded to know staff skills acquired by librarians to handle digital library resources, negating skills, e-management, dissemination of information etc. The author suggested that syllabus of library education have to be reformed and new professionals recruited have to acquire advanced skills to handle the digital library resources.

Mazumdar (2007) discussed the library functions with the networking and telecommunication networks, computer networks which are related to web based library. The author highlighted the skills required for the librarians and its staff in the IT era. The information dissemination on the desk top to the users using IT and human resource management is discussed in the communication and need for the manpower to face the future. The borderless library can become global information hub with skilled staff in the library as concluded by the author.

Subrata Sur (2007) remarked that librarian and the supporting staff needs to be more educated and have to redesign and update their knowledge in the changing environment form traditional to digital era. In the changing environment the library staff should have knowledge of programming languages, good communication skills, retrieving and dissemination the information to the users. The major challenges for librarians are scrutiny of information and knowledge, transformation of ICT, expansion of ICT, and the demand of users through digital and electronic resources.

Robert Boyd (2008) discussed in his paper the principles of organizational analysis and job analysis to identify caliber of staff for employment in the information age, Author clarifies the development of information commons and standards followed by all library staff and same to be used during appointing the staff and calculating the performance appraisal of the staff.

Michalis Gerolimos (2008) has identified 38 skills and qualifications after verifying 200 job advertisements form UK Canada, Australia and USA from 2006 – 2007. The highest degrees in Library science with communication skills, interpersonal skills, organizational skills, web design, research knowledge, searching techniques, multimedia, ability to control software hardware and occurring technologies is required.
Archana Saxena (2009) observed that the method for collection, storage and retrieval is changing in the age of Information explosion and technology applications. Author made an attempt to review the change and discussed the impact of E-publishing over academic libraries. In changing scenario, the librarian is going to be a highly skilled professional whose total commitment have to develop navigators to global intellectual resources as facilitators, instructors, gatekeepers of knowledge interpreters, evaluators, consultants, researchers, information managers, promoters and has improved the image of the librarians by playing all the roles successfully.

Vinodh Kumar Mishra (2009) discussed the staff recruitment polices and experience in the digital era. Author says the staff working in the digital environment should have technical skills and IT skills. In the ICT environment working methodology and the tools and techniques used in the libraries are changing very rapidly and due to this it is very difficult to manage library system and challenging for the employer to get the employee who is having ability to satisfy the present and future requirements of the complex information needs of the users. The author demands for different discipline required for performing job in the digital era.

Choi, Youngok and Rasmussen, Edie (2009) suggested job requirements for librarians in the changing era and discussed abilities required, such as web page design, internet searching, and skills including technological skills adaptation. The study shows that current awareness and appropriate technological skills and experience in the digital library environment, knowledge and experience in creation and management of digital information, and metadata are the most required qualifications for digital librarian.

Parka et al (2009) the study examined the similarities and differences in the significant predictors of the digital library acceptance across countries and continents. Further, the authors suggested that external variables that affect perceived ease of use and usefulness need to be considered as important factors in the process of designing, implementing, and operating digital library systems.

Halder (2009) has highlighted the changing profession of librarians and the library staff in the ICT era. The new roles performed by libraries in ICT era are explained like Information Scientists, Information officer, Information Consultant, Content Manager, Knowledge Manager etc. The author has mentioned the working of librarians using current trends like library 2.0, Web
2.0, Cloud Computing, mobile computing, digital library etc. The design objectives of library professional are the same but the working culture has changed due to digital environment.

**Summary**

In any age there is a need of manpower to organize and function of the system. The difference is in number and job description. The opinion of the different scholars regarding staff management though varies but their main focus on re–engineering in staff management in digital era and for this there is a need for adjusting new management skills sets. The different skills set required for libraries in digital era are elaborated as under:

- Technological skills
- Information Retrieval skills
- Databases and internet resources
- Use of controlled vocabulary
- Federated searching skills
- Web sites and development skills
- Evaluation skills
- Communication skills

**2.3.6: Resource Management**

Griffiths (1995) discussed in his communication that in the 21st century the information available through electronic multimedia sources through networking and due to benefits. The information society is moving from the industrialization age to information and technological age. The role of librarians is also shifting to Information officer, facilitator, and information searcher and as a guide to the user due to new role played in the profession. Bas Savenije (2000) had focused on new techniques and trends in library and information science. All traditional libraries are facing challenges and impact of internet and applications of new technologies in the profession. The library collection is now developing in e-form along with the traditional print resources and also using networked and Internet resources. Thus librarians have to manage the e-resources in the current scenario.

Carol Tenopir et.al (2003) discussed many research studies in which have focused on how people use electronic resources or on assessing their feelings about use of electronic and print
resources in the library. Libraries prefer digital collections for many reasons, including digital journals databases etc. Access can be provided from the user’s home, office, or dormitory whether or not the physical library is open; the library can get usage statistics which is not available for print collections; and digital collections save space and are relatively easy to maintain. When total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs.

Nyamboga, and Kemparaju (2003) pointed towards the situation of Indian libraries which are still in process of getting access to electronic resources. Few developing countries like Kenya, Thailand are in process of using electronic resources, publications for retrieval of information. The authors discussed on the changes in technologies which has been used in the developed countries and is reflected on the developing countries for attributing new technical skills for library staff and the users. The World Wide Web has played a challenging role creating development of online and off line information through electronic and digital resources.

Jeevan (2004) focused on use of digital resources, optical media which has cut down the infrastructure and storage cost in the developed countries. The information can be reached to the end users on their desk tops. In India the digital library development need infrastructure that makes information to reach to the users at an alarming speed. Use of digital resources spread information around the globe with internet connectivity. To maintain the digital content require essential staff.

Youngok Choi (2006) predicts due to information available in digital and electronic formats, training the library staff in the digital era is the important issue in the libraries. Young Choi has conducted the survey with digital library professionals to analyze what skills are required in the digital library. To meet the requirement the digital library and skills required is the important issue. The author analyzed the LIS curriculum should be restructured adding interpersonal and communication skills, practical knowledge, to handle and access the digital information.

Alicia Garcia Medina (2007) says due to development of internet and telecommunication technology, multimedia technology the information is available in audiovisual forms, videos, audio recordings including the traditional print information can be catalogued with MARC 21 giving links and through.

**Summary**
All the authors opined that hence forth use of ICT and e-publishing there is a need to manage e-resources in the libraries, e-resource management its preservation takes leading role in the libraries as well as resources available over the networks and internet is also to be managed. The library professionals have to develop the e-resource management skills for its efficient use.

2.3.7 Future of libraries

Denna Marcum (2003) has emphasized on the need of digital libraries in the ICT era. For the future digital libraries the infrastructure like ICT, resources, budget and user’s satisfaction are the key factors. Collection and dissemination of information in proper format is essential. The information has to be easily accessed and disseminated to all types of users with support of skilled and experienced staff.

Fourie Ina (2004) identified the knowledgeable and user friendly staff to handle the ICT era. The author claims the new roles of the librarians in the ICT and digital environment, are librarian has to learn and train the users to get information through internet and web resources, and also listed different roles of the librarians as web trainer, cultural role, negations, advising, projection of time, information organizations, website development, handling databases, information management, archival management, information retrieval and researching, Subscription of online journals etc. The LIS schools have to develop a vision for the future roles of the librarians. Survival skills are now necessary to implement in the curriculum.

Viviane Reding (2005) highlights the importance of library as collection of information and disseminate to the users. Library has the information of the past and the present and they satisfy the user’s needs with the technological changes, adopting different applications, electronic resources. Viviane in his survey pointed out that the European libraries employed 337 thousand staff in 2001. This indicates the social impact of the libraries due to transformation. To meet the future challenges there is a need to employ skilled and technical staff who has to manage digital libraries.

Qian Zhou (2005) has focused on the development of and shaping the digital libraries in china. Author has focused on various projects in digital libraries in China. The working and quality of traditional librarian and digital librarians is highlighted in the paper. This paper highlights the
importance and requirements for digital libraries and the skilled digital librarians. Expert skilled quality librarians require developing the libraries. The librarian acts as a convener for the revolution of human knowledge.

Anne Adams (2005) has assessed the changing information in the ICT era due to electronic resources and digitized information interviewing and observation of 150 users. The study focuses mainly on the digital libraries. User’s information demand changes as the new resources and technology changes. The digital library designers have to consider the changing needs and demands of the users. The digital library features should be supportive to the users and should implement the staff to provide required information to the users.

Vinitha and Kanthimathi (2006) expressed the development between developing countries and developed countries and initiated that still users prefer print material to access information along with digital. The advancement of science and technology forced to shift the library environment to change the information dissemination activity through the digital and electronic media using digital resources. Authors narrated the technological skills, communications required for the further development in future.

Youngok Choi (2006) has made a remark on working in digital library with unskilled staff. In digital library the staff has necessary skills to perform the task and retrieve the information for the end users. The education policy for recruitment of digital librarians is required to change. From the outcome of the survey conducted it was felt that the knowledge and skills and the technical competencies are required for the future digital librarians.

Pravakar Rath (2006) has highlighted the trends and developments in library profession from traditional library to digital library, library cooperation to resource sharing and networks, collection development to content development, conventional education to web based education, and information society to knowledge society etc. The government of India to overcome the impact of Information technology in the 21st century has declared Information Technology act in 2000, e- Governance Right to Information Act in 2005, and Library and Information Networks, Knowledge Commission in 2005 and 2009. The requirement is of qualified information managers, having good technical skills and communication skills.
McKnight Susan (2007) highlighted the knowledge management system which is essential to the librarians to cope up with the new technologies evolved in library for identifying and disseminating the information to the users with learning new skills to satisfy the demands of the users. In the following era librarian have to deal with content management systems, instructional repositories, customer relating management systems with help of federated search engines and internet. The traditional library management system might change by open sourcing, networking tools as blogs wikis. In the digital age the purchasing online, copyright laws, on lying buying, requirement, organizing, fluency, communication skills, technical barriers are the important factors to be considered.

Bhide et.al (2007) narrates use of information technology and digital and electronic resources and clarifies in most of the academic digital libraries the usage is very low. The communication focused on the making a new look of research academic digital library through disseminating the information using web applications so as to reach information to end users at any location.

Jadish Arora (2009) has emphases on new technologies, its products techniques providing new electronic resources to retrieve the information. Most of the libraries are moving to digital libraries providing digital information as well as traditional information with the communication technologies and networking technology. The librarians and the library staff have to develop new skills to perform their duties in the changing environment. The author concluded that librarians should have proper skills in the ICT era to support in the profession of future.

**Summary**

The different opinions have been put forth by authors while describing the future of libraries. The opinions are digital era, digital resources, ICT applications, web and net usage networks are growing fast and users are familiar of its use. The future libraries though have same functions but its nature of service might be different. The staff must be technology savvy and use technology for better functioning of the library. This future of libraries needs different challenges and skills to manage the library profession.

From the total literature review it is noticed that:

- There are very well efforts made to develop staff pattern during the traditional library system
• Transformation of libraries due to use of different technologies and techniques made changes in the libraries
• Since automation is completed now librarians are moving towards digital libraries
• The staff required in digital library is not related to number but skills to manage new environment libraries.
• The staff pattern for the digital libraries is discussed but there is a need to develop a suitable staff pattern.
• There is an acute need to work on staff pattern for the digital libraries as the forms and formats of the documents are shifting towards e-publications.

Keeping these points in mind the researcher has understand the need to conduct a study to initiate the activity towards development of staff pattern for digital libraries based on traditional library patterns, Job description in changing scenario etc. This is the main reason to conduct the study on staffing patterns in digital environment.

References


