

Preparing LIS Professional Workforce for Managing Digital Library and Information Centres A Conceptual Framework

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Abstract

The manpower is very important aspect in implementing an automated system/computerisation in the library and establishing a digital library for it. The librarian and other library staff play an important role in the process of establishing digital library, networking of digital libraries for information sharing. During the implementation of extending digital library activities, librarian should ensure a proper coordination of the activities in the library. Library professionals should be aware of handling modern technology and electronic gadgets. Therefore technology to awareness of library professionals and their participation in the library automation, networking and digitisation project is important for successful installation of modern system or in organising IT based digital library services. It is equally important that library professionals & staff should have computer knowledge and professional experience. Their involvement in the development of modern digital system is essential for successful implementation. The present paper highlights the concept of manpower planning, definition of human resource development, need of human resource and manpower planning for library activities, continuing education programme (CEP) for LIS professionals, role of various national level library organisations (both Government and associations) for imparting IT training for running modern libraries in network and digital environment. It also highlights the importance of manpower planning and need of trained workforce for implementing the computerised library and information services for the end users. The status of various categories of library professionals, other administrative staff working in the library, the requirement of IT training for them, role of various agencies imparting training to the LIS professionals & other staff are described in brief.

Keywords: Manpower Planning, Manpower Development, LIS professionals, LIS Workforce, Continuing Education Programme (CEP), Digital Library, Networked Library, Library Automation and Networking, INFLIBNET, DELNET, DRTC, ILA, IASLIC.

1. Introduction

The human element is very important aspect in implementing an automated system/computerisation in the library and establishing digital library. The librarian / Library and Information Science (LIS) professionals and other library staffs play an important role in the process of establishing digital library, networking and implementing the digital library projects for information sharing. During the implementation of extending digital library services & other housekeeping operations, librarian should ensure a proper coordination of the activities in the library. Library professionals should be aware of handling modern technology and electronic gadgets. Therefore awareness of technology to library

professionals and their participation in the library automation, networking and digitisation project is important for successful installation of modern system and for digital library services. It is equally important that library professionals & staff should be technology. Their involvement in the development of modern digital system is essential for its successful implementation [1].

It is now recognized that information plays an important role in national development, where LIS infrastructure is equally important associated with it. Such infrastructure requires trained & skilled professionals. Now library is no longer considered as a trinity of books, and a storehouse of knowledge. In the age of information, scenario of library has changed to information centres and learning resource centres. The primary responsibility of the librarian/ knowledge manager is to collect, organise, process, store and disseminate information to the end users. Now information has been considered as a commodity and economic resources. Considering the importance of information, the LIS professionals need to update their knowledge and skill accordingly. This is a creative and learning process, which can be imparted by continuing education, and training.

2. Concept of Human Resource Development or Manpower Development

Human Resource Development (HRD) is regarded as a positive method to upgrade the employee's ability and capability enabling them to work towards the achievement of set goals and objectives. HRD philosophy is to respect and value human beings as the prime and invaluable contributors to higher productivity and quality of products and services. This can be achieved through strategic and operational planning, which includes mechanisms, instruments and systems. HRD process translates the plans and the means of applying different techniques and strategies into practice. A number of aspects like performance appraisal, training, teamwork, organisational culture and self-renewal systems, which help in proper application of HRD programmes. HRD is also relevant to the organisation and management of Indian university/ institutional libraries irrespective of its size. It however needs a positive approach based on the faith that these processes would benefit them in their immediate and future growth and development [2].

3. Definition of Human Resource Development (HRD)

The term HRD was defined by Nadler [3] as learning experiences, which are organized, for a specified time, and designed to bring about the possibility of behavioural change. Rao. [4] has described HRD in organisational context as a process by which the employees of an organisation are helped in a continuous way to acquire or sharpen capabilities required to perform various functions associated with their present or their expected future roles; developed their general capabilities as individuals, discover and exploit their own and inner potentials for their own and organisational developmental purposes; develop an organisational culture in which supervisor subordinates relationships; teamwork and collaboration among sub-units are strong and contribute to professional well being, motivation and pride of employees. It reflects the organisation's responsibility in providing

suitable conditions for employees. This definition is widely accepted by practitioners and academicians who considered it as basic source of description of HRD in India. However, Silvera [5] felt that HRD is a process consisting of mechanisms and techniques, such as performance appraisal, counselling, training and so on, used to initiate, facilitate and promote skills of employees in a continuous way. Jayagopal in his books *Human Resource Development: conceptual Analysis and Strategies* defined "Human Resource Development as a process of measurement and reporting of end value of people as organisational resources. It involves accounting for investment in people and their replacement cost, in addition to accounting for the economic value to an organisation". HRD is a set of structured and integrated social programmes whose scope and thrust are so defined as to put it into one of the following relations with other developmental strategies: as an adjustment; as a complementary; as an alternative strategy. Therefore HRD is a process of helping employees in an organisation to acquire new skills and competencies on a continuing basis.

The organisation should provide facilities to the employee in a planned and systematic way to : Acquire and sharpen skills and capabilities to perform various tasks associated with their present and expected future roles; develop their general capabilities, discover and exploit their inner potential for their own and /or organisational development; help bring about an organisational culture in which collaboration among sub units is strong and contributes to the supervisor –subordinate relationship team work and the professional well –being and pride of employees; facilitate upgrading of skills through mechanism and instruments ; and improve abilities by the introduction of strategic and operational HRD planning and execution.

4. Concept and Definition of Manpower Planning

According to Ambekar (2004) (<http://www.buzzle.com/editorials/9-12-2004-59200.asp>),

Manpower Planning is nothing but using the available assets for the effective implementation of the library plans. After preparing the plans, people are grouped together to achieve library objectives. Planning is concerned with coordinating, motivating and controlling of the various activities within the library. Planning means making a decision in advance what is to be done. It is the willpower of course of action to achieve the desired results. It is a kind of future picture where events are sketched. It can be defined as a mental process requiring the use of intellectual faculty, imagination, foresight and sound judgment. It involves problem solving and decision making. Management has to prepare for short term strategy and measure the achievements, while the long term plans are prepared to provide the better services, and extension of new activities.

While highlighting the advantages, steps of manpower planning, factors affecting the efficiency of work force, Ambekar [2] say that manpower planning ensures optimum use of available human resources. The advantages, steps and factors affecting the efficiency of workforce for manpower planning as suggested by Ambekar [2] have been enumerated in the following paras:

4.1 Advantages of Manpower Planning

- ◆ It is useful both for organization and nation.
- ◆ It generates facilities to educate people in the organization.
- ◆ It brings about fast economic developments.
- ◆ It boosts the geographical mobility of labor;
- ◆ It provides smooth working even after expansion of the organization ;
- ◆ It opens possibility for workers for future promotions, thus providing incentive;
- ◆ It creates healthy atmosphere of encouragement and motivation in the organization;
- ◆ Training becomes effective; and
- ◆ It provides help for career development of the employees.

4.2 Steps in Manpower Planning

- ◆ Predict manpower plans;
- ◆ Design job description and the job requirements;
- ◆ Find adequate sources of recruitment;
- ◆ Give boost to youngsters by appointment to higher posts;
- ◆ Best motivation for internal promotion;
- ◆ Look after the expected losses due to retirement, transfer and other issues and
- ◆ See for replacement due to accident, death, dismissals and promotion.

4.3 Factors which affect the Efficiency of Workforce

- ◆ Inheritance: Persons from good collection are bound to work professionally. The quality and rate of physical including mental development, which is dissimilar in case of different individuals is the result of genetic differences.
- ◆ Climate: Climatic location has a definite effect on the efficiency of the workers.
- ◆ Health of worker: worker's physical condition plays a very important part in performing the work. Good health means the sound mind, in the sound body.
- ◆ General and technical education: education provides a definite impact in the working ability and efficiency of the worker.
- ◆ Personal qualities: persons with dissimilar personal qualities bound to have definite differences in their behaviour and methods of working. The personal qualities influence the quality of work.
- ◆ Wages: proper wages guarantees certain reasons in standard of living, such as cheerfulness, discipline etc. and keep workers satisfy. This provides incentive to work.
- ◆ Hours of work: long and tiring hours of work exercise have bad effect on the competence of the workers.

Thus, manpower planning is must to make the optimum utilization of the greatest resource available i.e. manpower for the success of any organization”.

Since the Library and Information Centers are the organizations on which the performance of the parent organisations depend, the above concept of manpower planning may be applied for the effective management of the library and information centers and also for preparing LIS professionals for managing effectively computerised as well as digital library and information services for the academic community in better way.

5.2 Needs for Applying Human Resource Development and Manpower Planning Concept in Computerised and Digital Libraries

Human resources are the ones that convert all other resources into products and services. Investment in the development of this resource ensures a good chance of achieving higher productivity with quality. Therefore in libraries and information centres attention to the development of human resource should be given. It is recognized by one and all that the human capital plays a vital role in all sectors of societal development. The development of all other resources depends on the efficiency of human resources. HRD motivates the professionals and employees and creates a favorable psychological climate and environment. It also helps in the long run to reduce the cost of production in various industries, organisations and institutions. HRD and manpower development inculcate team spirit and reduce tension between individuals and professional groups in society and strikes in organisations. It reveals that training and development programmes become more effective with the educational or training needs of the work force. It brings out the best talent and contributes to the socio-economic and cultural growth of the country. It develops intelligent and committed leadership. It enables employees and professionals to update themselves and their knowledge[6].

6.3 Training for Information and Communication Technology (ICT) Application in Libraries

In last few years a positive change in the attitude of using computers has been observed and professionals are keen to learn the new technology for applying it in to their day to day library operations for providing effective and quick information services to their clientele without wasting much time. Formal training for developing ICT competency for using computers in library services have been included in curriculum; crash courses for working librarians have been introduced. Many professional bodies like ILA, IASLIC, and regional library associations and other Government agencies like NISSAT, DRTC, INSDOC, INFLIBNET, DELNET and regional library networking agencies are involved in imparting training and organizing workshops on application of IT in to library activities. Various IT equipped library and information centres associated with national institutions like ITs, NITs, IIMs, IISc, Central Universities, some State Universities, Medical Institutions like AIIMS, Agricultural Universities have been arranging in-house training for their professionals and other staff and also

for out side participants from their respective regions and different states, which shows the positive trends among the young as well as senior professionals to acquire IT skills relating to library activities. The senior library and information professionals who have already exposed to the modern trends of using IT in library environment are taking active parts in arranging such types of short term and long term courses for the younger professionals to have an exposure of IT based library operations.

Computer literacy is essential for library users and library professionals for successful implementation of the automation and networking of libraries. In order to keep the professionals abreast in handling modern technologies, continuous training and development of ICT skills is essential. So the library users can optimally utilize the huge investment on electronic resources. Library school has been doing modification in its curriculum to include more topics on ICT even changes in the library curriculum, Professional requires updating knowledge and their skills. Staff development and comprehensive continuous education and training are essential elements of general manpower and carrier development policies in libraries. The hands on training is essential for getting ICT skills as the fresh graduates and post graduates are not enough competent for handling real life situation in ICT based library services.

7. Factors for Creating Digital Library Workforce

Followings are the factors which compels the university or institutions to introduce well defined and structured training policy, plans and programmes for the library professionals and staff: Impact of I CT; demand for specialised Internet based On-Line services from the users; R & D activities of the institutions; increasing numbers of users; explosion of information; and Knowledge exploitation.

Apart from the above methods following factors may also be taken into consideration for creating digital library workforce in LIS in networked and digital environment: The revision of library and information science curriculum for inclusion of modern information and communication technologies; Skill enhancement training for LIS professionals; Professional status of library professionals; Regular HRD programme for the training of in-service LIS professionals; Role of professional organisations like ILA, IASLIC , SIS, etc., for organising regular training courses at different places of the country; Framing of plan for National policy for Indian Information Service across the counrtry. Enactment of Library Legislation in all states of India

Against the technological changes in every field, rapid changes are also taking place in the area of library and information science and cope with this development of human resource or manpower development is necessary. The delivery of information is becoming entwined with the information itself, and LIS professionals are increasingly involved in the management of computerised and networked based library and information services like E-mail, Internet for faster communication and access of on-line information resources. The LIS professionals should strive hard for their professional excellenced by maintaining and enhancing knowledge and skill. Continuing education and training

have always played an important role in the development of the profession. One of the important reasons for under utilization of electronic information is due to lack of requisite level of working knowledge and consumption skills among customer and LIS professionals. Therefore manpower training is pre-requisite for successful implementation and computerisation of library services through Continuing Education Programme (CEP) and training.

8. HRD and Development of Digital Library

There are three stages of development of digital library: Infantile, Adolescent and Adult. In the developmental process of digital libraries in any university/ institutions, there is an interrelationship between the abilities of library professionals & staff and the level of development of digital library. The Infantile Digital Libraries are portrayed as experimental, opportunistic organisations that are set apart from traditional library services. They operate in a protected environment with soft money and known for being competitive and quest for killer application whether in data, metadata, network protocols, or systems format. The Adolescent digital Library having acquired core competencies focuses on integrating digital resources into the library's collections and on developing and supporting with core funding, the requisite policies, technical capabilities, and professional skills to sustain its services. As the integration of new technologies begin to transform the library and to create new opportunities, the adolescent library realizes that it must engage users and reassess their interest and needs. The adult digital library exists where the entire library operations are being carried out in the digital form. It can be reached when synergy state exists among human resource, technology and the end users needs [6].

9. Training and HRD / Manpower Planning for Library Human Resource Development (LHRD)

Training and development is the most essential instruments of Library Human Resource Development (LHRD). In beginning when ICT training was introduced, some people thought that this is not relevant. Now the training and development has become an integral part of every one to cope up and sustain with constant change in day-to-day life. In fact training and development begins with specific learning activities that shall best assist in the learning process, ultimately resulting in relatively permanent change in behavioural potentiality. Training now encompasses activities ranging from the learning of a simple motor skill to the acquisition of complex technical skills. Therefore, the training and development is an important tool to provide desired level of LHRD for managing LIS professionals for successful ICT application in the libraries in networked and digital environment.

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networked based library and information services like E-mail, Internet for faster communication and access of on-line information resources. One of the important reasons for under utilization of electronic information is due to lack of requisite level of working knowledge and consumption skills among customer and LIS professionals. Manpower training is pre-requisite for successful implementation of computerisation of library services for any institutions through Continuing Education Programme (CEP) and training [6]

10. Challenges for Managing Networked and Digital Library

In the present scenario, manifold changes have taken place in library activities, which is due to integration of Information Technology in library activities and services. If we look at working environment of library penetration of modern ICT gadgets would be evident which pose challenges to the LIS Professionals to organize and manage such modern libraries with all latest technologies. We may see following challenges for the LIS professionals to run the computerised and networked library for the library users:

- ◆ Use of Computer in House-Keeping Operations including computerised library services;
- ◆ Database Creation and merging with the union database and access to In-House Bibliographical Database through OPAC and Web OPAC;
- ◆ Library networking activities by various agencies like INFLIBNET, DELNET, for Resource/ Information Sharing;
- ◆ Collection Development of Electronic Resources or Digital Resources like CD- ROM Databases, on-line Bibliographical Databases, Theses and Dissertation Databases, On-Line e-journals (along with printed copy),
- ◆ Making available Internet Services over campus Network through Dial-Up, Broad Band, V-SAT, Leases Line and Radio-link Connectivity;
- ◆ Conversion of Computerised Library to Digital Library either by digitizing the local collection or by procuring digital resources and hosting on institutions web site for wider access;
- ◆ Establishing Institutional Repositories and maintaining the research out put of the university/ institutions on the institutional repositories servers for restricted access or open access for all;
- ◆ Library Security using RFID (Radio Frequency Identification of Document) Technology;
- ◆ Organising Library Conferences, Seminar, Workshop for LIS professionals;
- ◆ Organising In-House Training for library professionals and staff; and
- ◆ Training for empowering end users for ICT based library and information services

So these are challenges before the LIS professionals, which can be executed only by keeping ourselves up-to-date with the modern technologies, which are available, and also keeping abreast with the new models/ versions of Hardware and software. Hence LIS professionals must be ICT empowered.

11. Continuing Education Programmes (CEP) for LIS Professionals

Continuing Education Programme provides an opportunity to the professionals to develop managerial and problem solving skills. The present day profession demands new skills, methods and approaches, where information providers, information specialists, information intermediaries and end users are becoming increasingly significant. The radical changes make it imperative for a good system of continuing education. Education and training of professionals for converting them into information professionals require changes at three levels viz., Library and Information Science Education (LISE) curriculum, Continuing Education Programme, and Specialised Training. ICT based learning such as multimedia technologies, artificial intelligence, expert system, networking, and hypermedia etc will change the working environment of the library professionals including the pattern of education and learning.

11.1 Agencies for Imparting Training for Human Resource / Manpower Development

There are various agencies in India, which are regularly arranging training programmes on application of ICT in library & information activities for library and information professionals to give them live demonstration and hands on practice for using Information Technology and modern electronic gadgets. These agencies are: INFLIBNET, Ahmedabad; DELNET DRTC, Bangalore; INSDOC NISCAIR; New Delhi; NISSAT; DSIR, Ministry of Science and Technology, Govt. of India, ILA, New Delhi; IASLIC, Kolkata; SIS, New Delhi; and various university libraries or institutions of higher learning of national importance like IIMs, IITs, NITs etc.

11.2 Status of Human Resource / Manpower Development in University Libraries

According to the survey conducted by Sinha [1], the status of manpower training and their deployment for managing the ICT based activities of university libraries of India has been described in the following paras:

Staff Strength in University/Institutional Libraries

The result shows that 11 to 20 numbers of staff strength are found in 177 (46.1 %) libraries whereas more than 50 staffs were found in 63 (24.8 %) libraries. Most of the libraries (64.2 %) are having 6 to 10 library and information professionals and less than 5 professionals are available in 26.0 % libraries whereas in 9.8 % libraries have more than 10 professionals employed. In 10.6 % libraries were having less than 10 number of supporting administrative staffs whereas in 59.1 % libraries, 11 to 20 administrative staffs have been found working and more than 30 administrative have been working in 5.51 libraries. 72.0 % libraries are having regular librarian and the post of librarian is vacant in 28 % universities /institutions whereas in 19.7 % library are being look after by the Librarian I/C or Professor I/C. in the grade of Asst Librarian or Deputy Librarian.

11.3 Agencies Imparting IT Training

INFLIBNET and NISSAT have emerged as two important agencies for organising maximum number of training programmes for library and information professionals which organised training for the professionals of 166 (65.3 %) and 32 (12.6 %) libraries whereas INSDOC and DRTC have organised training for 8 (3.1 %) and 6 (2.4 %) libraries alone. Other agencies like ILA, IASLIC, UPLA, LELPRO, MALI, TLA etc are also arranging training for library professionals working in school, college, Govt. institutional and public libraries.

12 Suggestions and Recommendations

Following suggestions would help appropriate manpower planning for computerised and digital library and information services for the end users in network and digital environment.

12. Manpower Training or In-Service Training to LIS Professional Workforce

In-service training is very essential at least for those who are deployed for database activities and computer based library services. The library professionals and other staff should be exposed to the new IT environment. It should be a continuous process. In case of financial constraints, one or two senior library professionals should be deputed for training who may further train other library staff or colleagues.

12.2 Deployment of Trained LIS Professionals and Staff for Computerised and Digital Library Services.

In university/institutional libraries, there are different modules for application of Information technology like acquisition, cataloguing, serial control, circulation, administration and computer based library Services like CD-ROM access, Internet/E-mail services, on-line searching etc. Therefore, all library professionals and other staff should be trained for adopting the new technology. The staff that has expertise in handling IT based services should not be frequently changed and staff having IT background section should be deputed for that purposes.

13. Conclusion

The importance of skilled library and information professional workforce with the knowledge of computer has been rising in our country for extending ICT based computerised and digital library services. The rapid progress in the educational technologies, pattern of imparting education and in ICT posed major challenges before the professionals to enhance ICT skills and capability of LIS professionals to serve the library users effectively. Therefore proper HRD / Manpower policies should be framed for continuing education and for in-house training and hands on experience for the LIS professionals to use modern technologies and electronic gadgets and give ICT based computerised and digital library services to the end users in networked and digital library environment.

The LIS Centres and system like INSDOC, NASSDOC, NISSAT, and national and regional LIS networks like INFLIBNET, DELNET, CALIBNET, and professional organisations like ILA, IASLIC, UPLA etc., are playing an important role in conducting manpower training for LIS professionals and providing them latest knowledge. Out of these organisations INFLIBNET plays a significant role in imparting manpower training to library professionals working in universities, colleges and institutions.

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