Chapter Three
INTRODUCTION OF NEW TECHNOLOGIES

In the Current trends, Library professionals need to be aware on how to improve their skills with Information Technologies and other factors which will contribute to drastic changes in professional and reader roles. The summary is as under:

2. Library professionals need new management knowledge and skills.
3. Professional with greater motivation and commitment to work.
4. Disseminators of Information rather that the custodian of Information.
5. Trainers in information technology rather that passive supervisors.
6. Directing towards information packaging, analysis and repackaging.
7. Propagators of excellent communication Skills and subject awareness.
8. Collators of Information as per the information needs of the user community.
9. The need of information is to be emphasized that right information provided when it is needed, improves the capability of individual, a business, a government agency and various other organizations, to take informed decisions and achieve the targeted goals.

3.1 Information Communication Technology [ICT]:

Information communication technology is a generic term used to denote activities connected with computer based processing, storage and transfer of information. It includes microprocessor, cable access, television, fiber optics, satellites, word processing, electronic mail, video robotics and such others. Information Technology is an electronic Technology used for collecting, storing, processing and communicating the Information. Rapid transformations has taken place in the past few years in this field and are helping the library professionals to gear up to meet these challenges. The roles of the Librarians have changed in to information managers than custodians.
3.2 Impact of IT in Higher Education:

With the emergence of ICT and further development in it, the higher education itself has changed drastically. Emergence of e-learning is one of the most striking results of ICT's influence on higher education. E-learning and its variants such as MOOC (Massive Online Open Courses) are the most visible examples of ICT influence on higher education.

The software’s used for creation of course materials, and the software’s used for management of course materials the technology used for communicating the course content, as well as the programmers used for testing and evaluation of the knowledge and skills imparted through hardware and software technology have all impacted and are impacting and will be impacting the higher education. The technology has help overcome the difficulties of space and time for the learner. It has even empowered the special category of learners. The audio books for example, are helping visually challenged learners in knowing the contents of books, which otherwise would not have been possible. Similarly, the multimedia and visualization technology is enabling hundreds of students in easy understanding of complex concepts. The higher education is now able to use the social media for collaborative learning. The faculties and educationalist are able to design and apply various techniques of learning analytics so as to get the benefits of data driven movement in educational assessment. With the use of ICT higher educational institutes are able to offer flipped classrooms i.e. systems which enable to have more flexible, active and
more engaging learning, experience. Application of game and ramification has also been made possible by the advancement in the ICT. With these and other applications of ICT the world of higher education is experiencing a paradigm shift.

3.3 Important Components involved in ICT:
2. Telecommunications Channels [Modems, Instruments, Routers, Switches etc.
3. Storage Devices [Portable Hard disks, CDs, DVDs, Tape Drives etc.
4. Effective Database Management in place.

3.4 The Role of Technology in Academic Libraries:
Till date the existing Educational Institutional libraries were operating as a traditional library with the standard manual procedure.

With the implementation of such technologies, communication has been made easier and access to information made live and authentic. Today we can have live interviews of people sitting across the globe by using applications such as Skype, Google-Talk, Messenger services as well as modern Intra as well as Extranet Services.

3.5 Need and Purpose:
Some of the important uses and solutions by using such services are listed below and followed by the library management personnel:

1. To improve services quality and provide maximum benefit to the users.
2. To create user- friendly environment in the premises.
3. Provide clear access to a range of Information by using Internet services.
4. Increased speed in acquiring information by keeping all the resources up to date.
5. Having technical skills to gear up to meet the challenges in analyzing & linking information locally and globally.
6. Upgradation of knowledge to meet the needs of the users with the help of the constantly changing Technologies.
7. Provide Continuous learning opportunities to the users and Library professionals.
8. Call for timely financial investment for technology from the management.
9. Understanding the need to provide accurate and authentic information to the users in short time.
3.6 ICT A Necessity- For enhancement of Libraries:

Modern communication resources have been developed and now being used not only from the local areas but including the aspects of remote connectivity. In the earlier days only few users who could afford to have such resources had access to information. Now the educational authorities stepping in and making some of the aspects mandatory especially the setting up of digital libraries for the benefit of the library users. The book issue system fading over the times, reprints of editions not being available at times and the paucity of funds by the managements calling for books, volumes and subscription to National as well as International journals have led to the use of electronic resources for academic activities. Thus with the advent of mobile internet, computers being available at lesser costs also have led to the advancement as well as using this channel of communication purposes. The channel of ICT has proven to be more effective and posed serious challenge to the management in terms of upgrading themselves so as to sustain employment. Trained and skilled manpower requirements, development in the areas of training as well as refresher courses for existing staff, personal development also has led to this widely used channel. With globalization, Research and Development activities also have seen a wide scope by using these channels. Use of modern methods, software applications, programs, online use of various formats, also has given a platform for easy working and convenience to the users.

3.7 Impact of ICT on Academic Libraries:
Academic libraries particularly, the university libraries have been playing a vital role in the higher education system of the developed world including India. The apex governing bodies like UGC and prominent assessing bodies line NACC consider that the library is the most valuable support service in the higher education.

Every concerned technological change has affected academic libraries from time to time. For example, the development in the microfilming technology affected libraries once upon a time. Similarly, the latest developments in the storage technologies such as CD and cloud computing has influenced libraries. ICT impact is noticed in every aspect of libraries. For example, the reading material libraries acquire is now available in the electronic format. Online methods, including online shopping are adopted for acquiring reading material. Software’s are used for accessing and cataloguing the acquired reading material. Even class numbers required for the acquired reading material can be searched online services. For circulation libraries are using library management software’s.

Software as well as hardware technologies are used for developing institutional repositories. Current contents are communicated through e-mails. Reference service is provided through digital technology. Despite these measures being undertaken, and other favorable impacts of ICT on academic libraries, various studies have revealed that in the current scenario the libraries are not the only source for information for the students and academia. With the internet services getting better and cheaper, and newer applications and search engines being introduced for the internet users, this has resulted in provision of alternatives for information gathering retrieval and pooling of academic resources which are easier to access even from remote locations. The academic library users expect something more that the availability of technology in the library. Following are the prominent expectations of the today’s academic library users.

3.8 ICT – The most Influential Technology of the 21st Century:

The modern world has witnessed many inventions that have wide influence on human societies. However, according to me the Information and Communication Technology (ICT) is most influential technology of the 20th century. I cannot simplify stop saying this because this is the only technology that has influenced every walk of life. To name a few, the ICT has influenced medical field, engineering field, educational field, the world of child, the field of research, the world of commerce and industry, the world of government, etc.
The ICT has empowered every field of human life. It has helped increase both speed and accuracy of the given field. With both speed and accuracy it has enabled to enhance quality of the process and product. Among the multifaceted impacts of ICT am discussing below its impacts on two field of our concerns i.e. impact of ICT on higher education and on academic libraries. While constituting documents especially in an electronic format, they can be in three forms. The first form is a Static form in which once a document is created the contents of that form remain constant and they will never change. If at all changes have to be made, the entire document has to be recreated. The other formats which may be online/offline can be changed, altered/ modified/deleted according to their use and updates.

Free software and their availability have altered the scope of competition in educational institutions. In order to save money, most of the smaller colleges have opted for such software which can be easily downloaded for user convenience. Digital libraries are established with the help of the latest equipments available and resources which are used for communication purposes. These institutions are capable of providing authentic and accurate information to the users in short period of time. The information sought from such institution is not limited to local. With the help of internet services available in the premises, global access can be obtained. Information on e-books, journals, e-journals as well as information from different websites as well as through powerful search engines is possible from such institutions. Digital Libraries can help move the nation towards realizing the enormously powerful vision of ‘anytime, anywhere’ access to the best and the latest of human thought and culture, so that no classroom, individual or a society is isolated from knowledge resources. Digital library brings the library to the user, overcoming all geographical barriers.

3.9 Library Liaisoning and Services:

This research explains the purpose of tracing the possible Librarians- Publishers liaison in an academic library environment to build partnership for mutual understanding and benefits. It highlights possible measures in successful functioning of the academic libraries with a Librarians- Publishers work in digital Era. The Librarians are also in a dire need of having a well developed and highly trusted relationship with the publishers and Book- Vendors to fulfill the core activity of the Library, i.e. the collection development. Since the strength of any Library is judged
by its collection, librarians need to take utmost care in the selection of books and other documents that are to be added to the Library.

3.10 The Need for Relationship with Publishers:

Publishers, book vendors and librarians are working partners, Mission of producing, certifying, collecting, disseminating and preserving the scholarly output of the research communities are the joint responsibility of the publishers and the librarians. Publishers need the assistance of the library community: the convergence between the strategic partners, in increasing the intersection of librarianship and publishing.

Figure 3.3: library liaison and services

1. Asking for preformed invoice / Bill for the books procured.
2. Asking for Price Proof / Publisher’s catalogue / Principal invoice.
3. Conversion Rates / clarification on Good office’s committee related matters.
4. Claim for the institutional discount that is allowed.
5. Bills- Clarification / modification in the bills raised.
8. Claim for replacement of defective copies of books / journals.
9. Clarification about the latest edition, remainder copies etc.
10. Asking for the status of the orders already placed with the publisher/ vendor.
11. With the latest electronic gadgets, the librarians get opportunities to interact with the publishers in the areas like e-publishing, online products, digital world, digital repositories, and subject like copyright, licensing, user’s right, dynamic databases, aggregators, archiving and preservation.
3.10.1 The Librarian Vs Book Publishers / Vendors:
The transitions that they have to make are not easy. And their objectives are not always mutually compatible. It is expected that they would continue to operate in close relation to one another through constructive dialogue and collaborative efforts.

In the new collaborative environment all the major publishers collaborate with Librarians through their websites wherein an exclusive menu is provided to know more about their products, policies and services besides the information exchange has led to a better understanding of the challenges faced by both parties. It has created a useful conduit for discussion, collaboration and builds stronger relationships. Such interaction influences the level of respect, accountability and cooperation. Also they share the awareness of individuality and mutual goals which would make them more successful at fostering beneficial partnership. Types of Relationship with Publishers,

Figure 3.4: library liaison and services-2

The relationship between the librarians and publishers are multi-faceted with three broad dimensions- the commercial relationships, the legal relationships, and the collaborative relationship. The legal relationships touch the most important area of law, pertaining to the relationship between the libraries and publishers as copyright law. In collaborative relationship, libraries and publishers continue to collaborate in a number of areas, and those collaborative efforts continue to be very productive.
Similarly, programs initiated by libraries to support bibliographical control—such as Cataloguing in Publication have enlisted the cooperation of publishers and have significant benefits for both sectors.

3.10.2 Benefits:
1. The changing Publisher – Librarian relationship creates opportunities to discuss the intertwined future of both libraries and the scholarly publishing business.
2. The rapport between Librarian and publisher / book vendor is too essential, which brings the two categories professionally in achieving the common goal?
3. Librarian and vendors both benefit from productive long-term reciprocal relationship.

3.11 New Collection Policies:
3.11.1 Collection Development:
According to Encyclopedia of library and Information Science, “Library collection is the sum total of library materials- books, manuscripts, serials government documents, pamphlets catalogues, reports, recording, microfilm reels, micro card and microfiche, punched card, computer tapes etc. that make up the holding of a particular library”.
It also explains the process of planning a stock acquisition programmed not simply to cater for immediate needs but to build a coherent and reliable collection over a number of years, to meet the objectives of the services. Collection development in a library therefore would mean building up and improving the collection in that library.

3.11.2 The Purpose of Collection Development:
The purpose of collection development is to find out the user’s information needs to:
1. Fulfill the library’s obligation to the user community to provide relevant and nascent information.
2. Find out the user’s information needs.
3. Selected and acquire document that are really useful to the clientele.
4. Adopt systematic and judicious spending on document collection keeping the objective of the service in mind.
5. Periodically review the collection for weeding out unwanted and outdated document from it.

3.11.3 Prerequisites of Collection Development:
Collection development is interplay of the library’s aims objectives and the strategies of the librarian and his/her staff in order to meet users needs within the constraints of the library. For this purpose library has to formulate a clear policy of acquisition, periodic evaluation of the collection and systematic weeding of documents. According to Bloomfield, collection development involves:
1. Identifying of the purpose and mission of the library and parent organization.
2. Formulation of library’s collection development policy by library committee.
3. Matching between users’ requirements and institution aims and objectives.
4. Budgetary provision and the contingent problems.
5. Working out the strategies for implementing the policies and programmers.
6. Maintaining, revising and updating policy statement.

3.11.4 Collection Development Policy:
Collection development policy is the course of action adopted for developing the collection in a library.

Advantages of Collection Development Policy:
1. Express its relationship with the objective of the parent organization. Forms the basis for planning collection development.
3. Support and assist in justifying the selection as well as collection.
4. Act as a relational guide for budget allocation.
5. Helps in making best use of resources.
6. Facilities cooperative programmers linked interlibrary loans, resources sharing and network.
7. Assist in establishing method of reviewing material before purchase.
8. Offers suggestion on types of material to be stored, weeded and discarded.
9. From the above we observe that a collection development policy should essentially state the policies of the library on:
10. The selection and acquisition of reading materials
11. The nature and method of periodic evaluation of the reading materials available with it.
12. The storage and weeding of the collection
13. Resource sharing and networking.

The guiding principal for evolving the collection development policy is:
1. The goals and objectives of the organization
2. The needs for the user community, real users as well as potential users
3. The availability of financial and other resources.

**3.11.5 Components of Collection Development Policy:**
According to a leading authority, Katz listed the various components of a collection development policy as follows:

a. Objectives of the library.
b. Philosophy of the library.
c. Purpose of the library.
d. Brief description of the community.
e. Who is responsible for the operation of the library and selection of materials?
f. Method of selection As well as limitation of budget served different age groups of user and similar information.
g. Type of material excluded.
h. An indication of how the collection is to be built in terms of:
   i. Level of collection intensity
   j. Language
   k. Chronological areas collected
   l. Geographical area collected
   m. Forms of material collected
   n. Who is responsible for the selection?
o. Acquisition of foreign language material.
p. Statement of handling gifts
q. Clarification on weeding and discarding practice
r. Statement regarding intellectual freedom.

**3.12 Electronic Libraries:**
Information and communication technology has totally changed the situation of libraries, each and every library wants to get digitized and slowly work is in progress. The ideal great Electronic library is fully user centered system and its services, connects users to the information. Electronic library features and opportunities attract all the areas and departments and also all branches of education fields. Electronic library environments give the efficiency of access, availability, portability in services, so day by day usability of Electronic divides and services is growing and every library staff wants to use it for speedy and fast service providing and handling
also. Electronic libraries will be one among the most important and influential institutions of this century. With the possessions of versatility, accessibilities, and economy, it focused collections of everything as Electronic. So, the Electronic libraries are the fast becoming ‘banks’ in which the world wealth of information is stored.

The Electronic library is expected to provide assimilated, collated and globally acceptable collection of information. Current scenario suggests that every library service needs to be more energetic, speedy and its first work is to collect Electronic collections, resources. Electronic libraries have been developed as institutions which are expected to deliver and provide information resources. They are supposed to have with them special trained staff members and personnel. A digitized library is expected to have the requisite resources so as to provide its members the required information in Electronic form. The effective use of defined protocols such as the telecommunication channels using specified internet protocols as well as the effective tools and techniques for speedier communication.

3.12.1 Electronic Library Development:

The Electronic library is an advanced version of an electronic library. The Electronic library is expected to be effective by the usage of high speed OFC offering better faster and reliable intranet as well as extranet delivery system of information. Advanced services like video conferencing, online communication without interruption is possible with these channels of communication.

3.12.2 The Concept of an Electronic Library:

1. An organization or an institution in itself which is expected to have its own collection consisting of electronic devices as well as communication channels and networks including multimedia and other Electronic resources.
2. These resources can be utilized and used for processing electronic data.
3. The process of seeking of information, processing, acquiring, storing, and retrieving of information by using the Electronic technology.
4. Provision of global access to information and can be made available directly or indirectly across the intranet as well as the internet.
5. This method provided should ideally support the users to deal with information directly related with its objectives.
6. The library should ideally support the organization / institution in preservation of the relevant information in the desired formats by the effective means which include the electronic/Electronic methods.

7. The library contains Electronic material; the Electronic contents may be stored in computer system for manipulations and retrieval. Someone says that an Electronic library is nothing but online and offline access to the collection.

**3.12.3 Elements of Electronic Library:**

According to an author associated with the ARL, There are five key elements which are common in all the studies so far associated with the formation of electronic libraries:

1. An electronic library in an integral part of an academic or institutional library.
2. Digital resources are required to set up such libraries.
3. There is a strong link of information, services, and the users when it comes to the use of electronic libraries.
4. Without the internet as the media the purpose of electronic libraries does not get fulfilled.
5. The documents accessed through the electronic libraries cover not only the e-books, but e-journals, photographic material, works of arts, manuscripts etc.
6. The users would always like to have information in well arranged, subject wise classified and well designed and currently updated. Library users becoming very special and their reading materials demand also changed.

**3.12.4 Electronic Libraries- Features & Working:**

The Electronic library is not a single entity, Electronic library users need not go to the library physically. Electronic libraries can gain access all over the world through the Internet. Electronic libraries coverage Electronic contents, text, audio, video, graphics, animation, etc. Electronic library provides anytime access. The Electronic library is fully accepted and granted concepts. Electronic libraries, services and system are first and foremost.

**3.12.4.1 The Positives of Establishing a Good Electronic Library:**

1. Electronic library provides fingertip access to its users at anywhere in the whole world. Electronic libraries benefits are very much.
2. Electronic libraries divide helpful in searching and provide accurate information to users.
3. Electronic library provides multiple user access at any given time.

4. It is now very convenient for any user to seek access to information. If the access to the portal has been provided to the user, the internet resource can make it possible for easy access to information.

5. The Electronic library has to be equipped in such a way so as to provides faster access to information in a reliable atmosphere by using reliable resources in an authentic manner. The user in this way can have direct access to the desired information on the topics of their interests.

6. Electronic library provides 24 hours and 365 days access to users.

7. Electronic library first made an exact copy of an original document, without any damage, and save it for long life future generation.

8. Electronic library required very little space physically. Electronic library saves large amount of information.

9. The Electronic library with the help of the Internet can provide an easy access and a reliable gateway to access the information pertaining on topics by linking the resources of another library which may be located remotely.

10. The Electronic library systems require a minimum level of maintaining costs and are lower as compared to a standard library.

11. With these good things Electronic library proves its importance and usefulness in educational fields. Every college library in developed cities has now started to collect Electronic contents and Electronic documents, databases.

**The Negative Perspectives regarding Electronic Libraries:**

Some negative aspects have been expressed about Electronic library system. The Electronic library system and its services have some weakness in its implementation and applications.

1. Electronic libraries infrastructure cost means the required software cost, the other equipments like scanner, camera, network connection availability and all audio-video aids cost is very high and not affordable.

2. Technological development, everyday discover new technical tools, divides and many resources. But in a changing environment, these are the technologies which may become redundant tomorrow.

The issue of becoming obsolete is a very important issue in the field of electronic services.

3. Electronic libraries use for long time turns into physical stress.
4. Many a times constant use of use computers, and reading on screen leading to eye problems.
5. Electronic libraries, information is not totally protected, anyone copy it.
6. Copyright law is available; privacy and security of document are the main problems of Electronic libraries.
Electronic library technology accepted these problems, challenges and always tries to sort out problems for Electronic development. Information technology finds out solution for Electronic library quality, interoperability, property right, privacy and security, preservation problem. Electronic technique is very useful in well settled metro city. Metro city environment useful for technical advancement, so electronic library and it’s all applications are applied and really helpful in a big city environment.

3.13 Basic Component of an Electronic Library:

**In the Hardware requirements:**
Electronic system required high capacity server, hard disc, LAN, web and FTP server apart from:

a. Multimedia desktop workstation, computer, etc.

b. Scanners, cameras, cards as capturing tools.

c. High power support UPS.

d. Storage and secondary storage devices.

e. High speed networks and printer in its various types like laser, dot matrix, inkjet, and all such hardware essential for establishment of electronic libraries.

**In the Software requirements:**

a. Library management library software like D-space, Greenstone, Fedora, CDs/Isis, New genlib, Open biblio, Phpmy library, e-prints, Koha, Libmen, these open source software are necessary for Electronicization.

b. With the manpower requirements Electronic library needs a trained and capable, skilled staff for better handling resources.

c. Electronic library staff and all libraries, professional always need attention and perfection in their works.

d. Electronic library techniques need all time availability and 24 hours ready or new arriving tools and techniques. Electronic library collects digitized collection and provide wider access and respected links to the user’s desktop.

Thus the Electronic library provides speedy and accurate service with the help of its tools and techniques.
3.14 Today’s Educational Institution:
The Electronic library creation process is very slow in much educational organization, but now some technological and engineering colleges and their libraries adopt some e-resources for information dissemination. Electronic libraries and services are essential because of the following:

a. Electronic libraries, techniques, help in finding pinpoint information.
b. Electronic library provides authentic information to its user with ease.
c. Electronic libraries, techniques are essential, because there is an explosion of information in huge amount.
d. Electronic libraries technique easily handles vast publication.
e. Electronic libraries divide costly, now decrease because of technology.
f. Electronic libraries, electronic resources, reduce the paper publishing and it saves the trees and the environment.
g. Today’s young generation demand e-resources, they feel it luxuries and easy in handling.
h. Provision of multiple user access at any given time by the use of the applications.
i. Electronic library collects a very large amount data and information collections for long time use.
j. Electronic library provides access to user at anytime, anywhere and anyone.

3.15 Electronic Libraries:
3.15.1 Supportive Factors & Information Provisions:
Above all these benefits Electronic libraries and its applications are becoming popular and need able among students, teachers, and researchers. Today, every student and researchers want all time connectivity with networking facilities. Electronic resources give richer interaction. There is great hope that, the willingness about Electronic collection and Electronic creation is increased in library professionals.

1. Electronic library users, readers supported by profile.
2. Electronic library content supported by metadata, metadata is supportive to educational objective and learning.
3. Electronic libraries thirdly supported common and standard protocols, developing the application services that add value in library content for the user.
4. In this supportive way Electronic libraries always engaged to provide to the users.
3.15.2 Actual Digitization Process:
In the educational library environment and libraries daily activities provide better access to information, this may be done because of library automation and digitization. Automation and Electronicization in the library is today’s very positive steps towards a faster delivery of information.

The actual digitization process starts when the decision was taken about the selection of documents for Electronicization. Document’s selection, approval is required for Electronic processing. Select the document, then tracking data complied, the document then sent out to be digitized, expert’s scans documents or electronically photograph documents to tagged image file. For this process high-resolution scanners and cameras and skilled technicians are essential. Document and Electronic file returned to person.

![Diagram](image)

**Figure 3.5: Creation and Development of Electronic Library**

3.16 Electronic Libraries & their Basic Requirements:
Now many software varieties are available for the library management processes, such as:

3.16.1 New genlib-
New Genlib, an integrated LMS is open source under the most widely used free software license. The software was developed over a four year joint efforts between professional trusts, Keswan institute and a fledgling software development company. Software features includes completely web based, complies with international metadata and standards.

3.16.2 D-Space-
This has been developed by MIT, USA libraries in collaboration with an MNC namely, Hewlett Packard. This software application is an open source application, and this application one of the first open source software platform to store, manage and distribute the information collection in electronic format. D-space software accepts all types of electronic formats.

3.16.3 Fedora-
This software has been developed by the University of Virginia. The functional applications of this software work at the both object and repository levels.

3.16.4 Greenstone-
It is a software tool for creating, building, distributing Electronic library collection. Software provides a new easy way for organizing information and publishing in the internet. Software has been developed in corporation with UNESCO. It has two separate interactive interfaces.

3.16.5 CDS/ISIS-
This software is used for all types’ libraries. It is freely available from the UNESCO websites. Most of the libraries in India now started computerization and cataloguing activities with this software.

3.16.6 OPEN BIBLIO-
Open Biblio software has provided OPAC facilities and also circulation, cataloguing and all official work. It is well documented easy use software.

3.17 Electronic Library needs Metadata Standardization:
There are three types’ metadata-- descriptive metadata, structural metadata, and administrative metadata. Example of Electronic library metadata is a very large collection of articles. The users cannot read each topic of information in the searching process, and users do not get perfect subjects information quickly. So in order to reduce this disturbance, Electronic libraries subject expert and librarian create an interface to guide the users about the content of the collection. Electronic library and its usefulness present the Electronic collection in many ways to the Electronic users.

Electronic library describes each object in a meaningful manner. This description method called metadata. Data is the detailed description about data. This descript metadata is very usefully manageable. Metadata is created in a standard format. Now libraries and Electronic information centers are reached at expected fast service
with innovative organizations, information infrastructure and also alert for deliver stable services.

3.17.1 Electronic Preservation of Data:
Preservation process, beneficial for keeping a document objects safe from harm, loss damage, and preservation is method for protecting knowledge content in this changing environment. Electronic preservation helps in ensuring the Electronic objects accessibility for over time. The aim of creating Electronic libraries that will be able to preserve our heritage. Preservation is more essential for Electronic than for traditional resources.

There are three types of Electronic preservation, such as long term preservation, medium preservation, and short term preservation. There are various distractive requirements in Electronic preservation. Electronic preservation is required for to preserve the maximum amount of information carried out by the original and also for avoiding unnecessary duplication of effort and expenses to preserve all recorded materials to maintain the historical value of information.

3.17.2 Electronic Preservation Strategies:
Refresh: refreshing is the copying of data on to newer systems from the conventional methods. Technique of Migration: Basically it deals with the data transformation from on form to another as the formatting also changes according to the needs of the users. Emulation: Emulation is the replication of functionality of systems. Emulation is one of the existing ways for retaining old information and older versions of the information. Replication of Data: It is basically creating duplicate documents of records and storing in different locations in different systems as a method of backup of data. Electronic preservation is very important activity in library.

In order to achieve these objectives there is a requirement from all the departments in terms of co-operation, guidance, leadership and sharing of tasks which are considered to be the main factors in the preservation of information. It is one of the best methods applied today so that the users of tomorrow will get the knowledge about the works which have been done so far so that they can continue their works in a smooth manner.

3.17.3 Electronic Libraries and its Associates:
The technological advancement and changed outline have put new challenges before library and information profession. In recent times there have been many improvement in information technology which been changing the outlook of the
society and leading it of what is now popularly call new information society. As the society moving fast direction in the new millennium, the application of IT resources are gaining importance day by day. The IT in the form of computers, micro electronics is same called as E-service. The information thus generated is stored in libraries and information centers for providing faster access to the user in the present as well as future also. The management of the libraries need to gear up for their changes in their roles as better information providers and move according to the time. Due to treatment growth in information and publishing in various sources users of library demanding Digital/Electronic resources. Digital/Electronic resources becoming popular among users since it can be accessible anytime, anywhere. Every library whether large or small, should develop a plan before digitization. Digital/Electronic collections are reviewed, selected described and categorized by the libraries subject specialists. A serious doubt is raised at times with specific reference to the accuracy of the information provided by the source. If the information provided is of doubtful in nature it could seriously hamper the study program or the works being undertaken by the usage of such information and its source. In such cases the role of the librarian or the administrator of the library is of utmost importance. The resource provided by the establishment of a digital / electronic library is also of equal importance to the users as well as the subscribers in using authenticated and trustworthy information so as to draw logical conclusions. In this way the identity of the library is also established and a confidence building measure for the students, Faculty as well as the Researchers to come forward and use the resources from the library in the most effective ways. Similarly it will become easy for the librarians as well as the custodians to store and preserve such valuable information in established electronic formats for further usage.

Due to treatment growth in information and publishing in various sources users of library demanding Digital/Electronic resources. Digital/Electronic resources becoming popular among users since it can be accessible anytime, anywhere. Every library whether large or small, should develop a plan before digitization. The establishment of a Digital/Electronic library is very important to an institution in the current scenarios. The statutory authorities who sanction them are the complex and advanced forms of information systems that can be endowed with a multiplicity of function and features. These are the open source software’s. D-Space software is available on the internet and can be installed free of cost. The Digital/Electronic
Collection can be understood as a body of materials in Digital/Electronic formats. Digital/Electronic collections are reviewed, selected described and categorized by the libraries subject specialists.

A Digital/Electronic library is constituted with the help of electronic devices comprising of a network of computers, LAN/WAN Networking, Routers, Switches as well as communication devices such as modems, telephone/broadband internet connectivity. The access to information sites can be possible through search engines as well as websites with links provided for information and value added services. There are different websites for different sets of communication. There are special links for access to International journals individually, book publishers-National/International. There are different links to be provided for open access journals. In addition to above, there are sites provided for social networking, blogs, research based applications as well as applications for video conferencing as well as online communication with the help of chat sites. With the help of these sites, access to information, data collection, online exchange of information, downloading of data required for study purpose, online reading as well as knowledge upgrading is possible. Nowadays, it has become easier for educational institutions to provide usernames to the registered students of respective colleges so that institutional portal access is provided to the students. With the help of this access, remote connectivity as well as remote study program has been made possible. These works have established a strong relationship between information services related disciplines like modern resources management, e-book inventories and databases, Storing of archives as well and digitally mastered documents. This has led many organizations to be training their personnel in document management systems as well as training in e-commerce practices. Many educational institutions also have started using e-business transactions, online banking as well as following e-commerce practices. It is difficult to achieve the set objectives because if the resources are not in place none of the above would be possible. Educational institutions need to allocate funds by planning in advance. Effective team management will only make things possible. Trained staff will be required to handle critical situations as well as deliver information to the users in an effective manner.

Impact of IT on higher education and academic libraries is discussed with examples. At the background of the impact of ICT, the stakeholders such as government, governing bodies as well as users are expecting a definite response from the
academic libraries. These academic and research works has discussed and elaborated in detail and the kind of responses expected from the academic libraries which are working in the Digital/Electronic environment.

3.18 College Libraries Informative Resources:
OPAC: on-line public catalogue, these services allow users to search for the bibliographic records. Now some OPAC services also provide access to electronic resources and databases.

3.18.1 Electronic Reference Service:
Automated libraries now offer web based reference services and recent studies details.

3.18.2 Access to the Internet:
In day today life, the role of the internet has increased manifolds. Now it has become a media for communication which not only saves time, money, but also provides information which is reliable as well as authentic, update with speed.

3.18 3 Free Online Service:
Advanced internet facilities and its application are very useful because many publisher and organizers are providing free sample copy of their journals. Libraries users and researchers use these on-line copies for reference source.

3.18 4 Free Tables of Content Service:
Publishers provided table of content of their electronic journals on the websites. Students observed all table content and access to related expected information.

3.18 5 Free Abstract Service:
Some publishers provide abstract of the articles on the website, users can get clear idea about full articles and access if it is usable.

3.18.6 Free Electronic Services:
Free newsletters and important notice are provided by publishers and organizations for the library users, which can easily reached towards users.

3.18.7 Encyclopedia:
Encyclopedia Britannica, Grolier’s encyclopedia is available for a free trial.

3.18.8 Emerald Publishers:
Emerald publishers are the leaders in publication of more than 100 journals. Electronic collections of journals are designed to meet the increasing demands for access in college libraries. In this way library automation and technological changes
provide better usability of library services to the users. Now every college libraries make right decisions towards automation and computerization.

3.19 Various Issues & Challenges from Committee Personnel:

Technological Problems: Hardware and software and other various component selection is highly essential for ideal Electronic library, but these hardware, software configuration always changing and library staff get confused and then application and selection of these divides are becoming a big problem.

Technical skill and qualification in technology and also communication latest knowledge is required in the library professional’s job. Most of the library staff has little background in computer application. Some library staff refuses to library transformation; they thought that it is a false ideal. Many of the library staff feel it hard and overload burden also.

Disinterest about technology is the again major problem in library automation and digitization. Some library staff has very low interest in technological development, they like their old style very much.

There is no good relation and communication among the library staff.

Library automation and transformation process started, at that time software and hardware, scanners, networking divides availability is essential, but these electrons divides are costly every educational institute did not afford it. This cost and lacks of the library budget is a big problem.

The Geographical situation of the library is also a very big problem in computerization and digitization. Modern metro city atmosphere and technologies availability help in the process, always keep library function informative and updating, but rural area libraries did not catch current techniques, so library location is the problem.

Management support is very important in the creation of Electronic libraries. Library development and its progress depend upon the management support. The library advisory committee makes provision of finance for library expenditure and development. Many management committees did not have sufficient information about budgeting for new techniques. Management’s negative support is the problem.

Low awareness and misunderstanding about Electronic resources and services, facilities among the students, teachers, and library users is the big problem in developing libraries. Students and some teachers are not interested and some don’t know anything about this technique, some students didn’t understand how to use
and how much useful they are. Many library users did not take advantage of facilities and services. There is no proper and daily use of libraries in educational development.

Library infrastructure and furniture, equipment’s are not well in condition. Damaged and low quality material available and not in sufficient manner. It is the biggest problem in the process.

Electricity and inverter, battery backup power supply for running and handling electronic resources is not in forcefully available in time. Power supply is the main problem.

This lack of infrastructure, insufficient budget, shortage of expertise, quality problem, interoperability, property right, privacy and security, preservations problems, and also low awareness among library users, all these weakness and problems took library development away from progress. Students, teachers and library user’s awareness and experts experience turn library towards digitization and automation.

There are many words used for the people, who are joined with Electronic technologies. The information creators include authors, designers, professionals and all those who create information. The users of the Electronic library are called as a reader, patrons, audience, and customers. In the education field users are known as researchers, scholars. The information managers are supposed to help the users as well as the subscribers in developing a good information network. Electronic libraries totally depend on users and introduced faster through people and organizations.

3.19.1 Computer and Electronic Libraries:

Electronic library is an output of the way the computers and networks links have been applied in information gathering and storage. These all show how information providing techniques changed the methods of communication and broad exchange of works, collating the data and keeping updated knowledge on the topics of study.

Electronic library means many computers united by a communication networks. The main networks are the Internet. Internet is the flexible, low-cost, worldwide available, because of this characteristics, Electronic libraries and use of e-resources is increased and college libraries become modern information centers.

3.19.2 Importance of Electronic Libraries and Resources:

Now in technology driven era, a library whether it is an Electronic or Analog, the routine work of transaction is the same, and library user would always want a rich source of knowledge. But richer and continuous updated information is possible only
with the help of electronic resources which have become very common tools of use. Electronic library not only will help in providing updated content to its users but also provide valuable links to for seeking better services and additional information. The function of the Electronic library enables the users to have access to information in the digitized way by using electronic means and electronic resources. Electronic library can immediately and continuously adopt, new innovations in technology providing users. Electronic information therefore needs more active and suitable design of management. In this computer active era, Electronicization is the basic part of computerization Electronicization means find out information in Electronic form through computer. Importance should be stressed on the operations of Electronic libraries and the focus should be on issues of access to information.

3.20 E-Resources:
Traditionally, the academic college libraries totally based on print oriented collections. Advanced technology had very high impact on all types of libraries academic college libraries are not exception to this. Academic college libraries now adding electronic resources to their collections in variety of forms, electronic internet based Electronic resources provide very powerful direction to the libraries to concentrates their attention on overall operation and rethink about system and services. Today’s college libraries are maintaining traditional resources as well as electronic resources.

Electronic resources means collection of information that is accessed on electronic device, user can access electronically via computer network. Electronic resources and its use in studies is essential for students the upgrade their knowledge in this speedy and competitive world. Electronic resources allowing and enable to challenges and services so today’s library authority urgently make a provision of e-resources in the college libraries for speedy fast availability of information. Need of e-resources and services for today’s students in college libraries-resources are easy to download, it can be easily copied and convenient to save and print the desired data-resources can be sent as attachments in various formats via e-mail. E-resources are all available online round the clock, unless some of the outdated documents may be altered/modified/ deleted by the administrator. E-resources publishers update e-resource every time. So e-resource as well as the information is reliable, every reader gets up to date information-resources are beneficial nowadays because there has been a steep hike in the publication cost in print media. The most
convenient method is to go for online information sources. Today's students have demanding for e-resources because students attracts by electronic media. In this way electronic media is beneficial for every reader, electronic resources satisfying all needs.

**3.20.1 Types of E-Resources:**

Information that is available on the internet is called electronic, on-line sources. The electronic sources may be clarified into three categories; they are primary, secondary and tertiary sources. By the utilization of such resources, we can have various kinds of data in different formats such as electronic databases, electronic journals which are online, as well as electronic books which are easily accessible and are very useful and beneficial to the users.

**3.20.1.1 E-Journals:**

E-journals are most widely used resources, e-journals provides simple and advanced search facility to the user. E-journals each contents include the back files of topics. All these contents are available instantly and could be browsed in the 24 hours subscription rate is the most critical issue, related to the e-journals.

**3.20.1.2 E-Databases:**

Now, various e-databases available on the network, in which they are either free or with charges, e-databases are an organized collection of information. E-databases information contained in a special subject or on a multidisciplinary areas. E-databases information searched by electronically e-database service provided by libraries is very useful in academic library college libraries users can use these databases for project work. Students can get sufficient information from subject related databases.

**3.20.1.3 E-Books:**

‘Traditional printed books is available in electronic version is called e-book.’ E-book can be read via personnel computer, laptop, I-pod, or by using e-book reader. The useful method for getting on e-book is to purchase or download file from a websites. E-books are available on CD also. E-book generally downloaded from websites within five minute.

**3.20.1.4 E-Thesis and Dissertations:**

Previous research work thesis and dissertations are very useful for future research work. Thesis and dissertation are the primary sources Institution Vidyanidhi and INFLIBNET websites making arrangement for thesis availabilities Shodhganga web
sites also provides various universities thesis on-line. This e-thesis and dissertations services is very beneficial for students in their research project.

3.20.1.5 CD ROMs | DVD ROMs:

Information available on CD’s is called CD-ROM e-resources. Now, various books are holding CD’s along with them. Now every student’s demanding CD|DVD collections. Academic libraries now developed their CD|DVD collections and borrows to the students CD|DVD are mostly used for storage large amount of structured data, bibliographic information. Full text information and images DVD are also useful, because DVD’s have capacity of high storage data with multimedia elements like video and sound. Advanced library systems and e-resource systems are actually wishes in the need to interact in a variety of ways.

1. A librarian wishes to complete understand Electronic rights, and fair use of collections.
2. Students wish to join networks to get easy access. Students want to learn various information resources with searching techniques with on-line help.
3. Teachers wish to automatically get access to knowledge and computation services.

Information technology and Electronic technology based services and various techniques provide links to a specific library, direct links to full-text versions of relevant articles. Teachers and students and library users find new ways of developing learning activities. India is a very big country with historical backgrounds, historical information, and Knowledge is also in huge and precious, for this old and important information, knowledge preservation is required. Electronic systems preservation and transformation is essential for future generation. Some of the Electronic Library Initiatives executed not only at the institutional, but at the organizational as well as at the national level have been listed below for reference.

1. V.V. Giri Institute of Labour. Under the title: Archives of Indian Labor.
2. IIS, NCSI.
3. IIM, Kozhikode.
4. Search Electronic library SDL at DRTC Bangalore.
5. Nalanda Electronic library at the National Institute of Technology – Calicut.
6. IGNCA Electronic Library.
8. National Tuberculosis Institute (NIT), Bangalore.
Digitization is a data transmission technique. The documents such as in existence in various formats of printed works such as books, printed articles in journals, old maps, photographs, can be converted in a digital format for a long life as well as preserved for further use. The conversion process is done through, scanning, sampling and various techniques. Knowledge and information are stored in books. Books, journals, articles, are the medium. There should be proper care taken to preserve this information. Electronic libraries, librarians and all trained staff are always busy in providing link information and related resources to the user.

1. Electronic library success depends upon the users' performances, so improve student’s user’s attitude towards Electronic divide.
2. Good quality and relevant internet based resources are increasing day by day.
3. Resources are available easily and also find correctly.
4. Create Electronic atmosphere and excitement about resources, and then the users would be able to join and use the library with interest.
5. Provide over time accessibility of resources.

These things are very helpful in developing Electronic environment. Electronic library resources and divides widely and rapidly useful in an academic atmosphere, academic libraries apply and access electronic resources. Now big and metro cities academic library users indicated that, web-mail and search engines, databases, e-journals, give satisfaction.

**3.21 Library Services:**

In the era of information and technology library needs to acquire the facilities like CD/DVD collections, e-journals, e-books, databases access, all time internet connectivity, classrooms lectures recordings. Now information and communication technology tools and techniques presents library in very global way. Digital technology changed libraries facilities in very superior way and style. Today libraries are the repository of the wisdom stored in recorded information form for use of present and future generation. Today digital library makes it easy and comfortable. Today library environment are increasingly reliant on computer technology. The concept of electronic resources and digital technology services gives new dimension to all educational libraries. Researcher also agreed technologies importance and done survey observation. In survey observation researcher explored that, out of the
4 libraries covered, mostly all have possessed the collection of CD/DVDs. Most of the libraries in Technical Institutions are based on CD/DVDs and other technical resources, in these libraries have a collection of about 800-900 CD/DVDs collection. Some Institution libraries prepaid accession register for CD-ROMS. CDs are classified and make available for users. CD-ROMS can be issued to students for home lending for a day depending on the institution policy. Students can use these facilities for their study at home. Out of 25 Institution libraries, the researcher observed only 03 Institution libraries were connected with internet facilities. Very less internet connectivity found among these libraries. If the Institution libraries are properly networked connected and electronic resources are easily available to access point for users, then libraries can provide update service to students regarding the information.

3.21.1 Adequate Collection & Requirements in Library:
The collection of adequate number, quantity, volumes, of books, periodicals, magazines, journals; National and International become the asset of the institution in terms of knowledge. By this invaluable collection, the librarian will be able to properly assess the needs of the students, the faculty. In addition to this the focus on research based activities, valuable inputs for the research scholars in terms of the availability of secondary data sources and the scope for improving and collection of primary data from the markets for updating information on topics of research. An important function of the library is to know the needs of the students, research scholars and staff members of the Institution.

Modern age is also called as the age of information technology, where researcher, scientists and philosophers done important and useful research work for nation's progress and also for student's studies. Major works are completed and then preserved it for use and also for future generation in form of soft copies. Most of the researchers research work published in periodicals articles. Now subject's special magazines and periodicals journals are available in electronic form. Electronic resources such as e-journals, e-books and e-databases are available in educational library. Internet connectivity is required for accessing these materials. Now every educational library subscribes these informative journals, databases and provides it for needed users through digital technology. Students use these resources and satisfied in their studies. In the present investigation the researcher found that only 06 libraries contained information in the form of e-journals and e-books, databases.
These libraries have subject wise journals articles digital collection. Subject wise digital collection is available for access. On-line information is the important aspect to collect important information in the form of databases. Students while searching information on websites, there are huge amount information is available on website students thought that all information is needed for another project at that time students save that digital collection in another folder for further use, this folder become an informative created databases for project work. Teachers also share their important information by uploading it on the internet. The researcher found that most of the libraries did not have proper on-line computer connectivity for the users. N-list facilities is the another mode of the searching information. Thus this overall description about facilities and services provided in the research areas libraries to the users, it seems to be very poor condition to attain the information. It needs to make mandatory to all libraries to get them connected to each other’s and to provide all time connectivity towards internet. There is also urgent need for storing information in the form of e-documents and e-resources to save the precious time of students and all library users. Responsible authority and organization committee arrange sufficient budget for making modern libraries.

3.21.2 Libraries Facilities:
3.21.2.1 Reading Room Facilities:
While the researcher dealing with the actual facilities provided by the selected libraries. Researcher observed the poor conditions regarding the fundamental facilities like proper reading rooms, seating arrangements. Remaining libraries did not have any provision in seating facilities for reading. Reading room facilities are very important for students. Students, teachers and researchers sit in reading room and read various reading material with carefully and also with concentration. Reading room’s atmosphere basically very silent and every one can concentrate on their readings and writings, but for these advantages Institution reading rooms required user-friendly infrastructure and comfortable furniture, such as chair, table, lights and air, water. It is also necessary that every library should provide separate seating arrangement for boys and girls. In the present research area researcher found in the observation, that out of the 04 Institution libraries, only 03 libraries have reading rooms which are comfortable manner and have an sufficient infrastructure facilities. So there is urgent need to develop usable and user-friendly reading room
facilities. This developed libraries and reading room facilities increasing rate of readers and students in Institution classes and reading rooms.

3.21.2.2 Library Resources:
They are related to the theme, when researcher tried to know about electronic resources and on-line services provided by libraries. Library management software is essential for automated library work. There are many and more library management software available in the library science world. Libraries now accept the challenges to provide greater information access and develop level of services, with the help of library software. Software application in libraries has become essential due to the growth of information and electronic resources, users demand for anytime access, and resource sharing. Today a number of application software is available in the market, such as e-Granthalaya, KOHA, Evergreen, D-space, Fedora, Greenstone, CDS/ISIS, NewGenlib, Openibibo, SLIM, SANJAY, SOUL, SOUL.2 etc. in the present research areas Institution libraries legally purchase and install SOUL library management software. Soul library software means software for Open University library. Library management software’s are very important and essential in educational libraries. Today there is urgent need in every educational library to develop libraries with digital technology.

3.21.2.3 Library Services:
All libraries main aim is to provide expected information to the users. Library development policy and application of digital technology greatly changed traditional library method of library services. Now libraries are offering and providing accurate access to the users. Library services include mainly, circulation, reference, current awareness, and document delivery services, now done through automated systems. In this present research work researcher observed that libraries services are not much sufficient in standard manner. Out of 04 libraries only 03 libraries provided library services according to the prescribed standards. Researcher observed that, libraries services become useful with the use of technological tools and techniques. After educational facilities and common library services, there are some value added services essential in the library development policy. These value added services activities include such as:

1. The library advisory committee supports for library development policy.
2. Best reader award for growing reading activities.
3. Book exhibition arrange for all daily library users.
4. User orientation program conducted about all libraries services and facilities.
5. Content of research journal, articles point service for researchers.
6. The information brochures and the suggestion box availability.

Out of the libraries covered, mostly all have the required facilities such as new papers, periodicals, sports magazines, competitive exam study material, photos, images, paper cuttings, general knowledge study materials, are available in these libraries. Now all Institution libraries provided BOOK BANK facilities and Inter library loan facility to the students. In this way, the Researcher found that, out the actual situation of Institution libraries with conducting observation note point method. Present days libraries should have converted in to information centers. Informative information centers are having a collection of digital electronic publications. Today’s modern libraries are always riding on the electronic highway for providing information through on-line search. Today’s library users and Institution students judge the Institution library by their services, facilities and e-resources. So every Institution library urgently gets automated and digitized.

3.21.2.4 CD/DVD Library:
Last 4 to 5 years these Institution libraries developed their CD/DVD collection and arrange it with special attention. Institution libraries make special accession register for this collection. CD/DVD collection arranged in subject wise classification and also provided maintenance for this collection. Currently every Institution libraries have 300 to 900, plus CD/DVDs collection. Important and very precious information is available in these CDs form.

3.21.2.5 DOAJ (Directory of Open Access Journals):
These electronic resources facilities provide great opportunities to the students in searching numbers of expected and current journals. In these services users access many current standard journals for their study and research.

3.21.2.6 Databases:
Database services are very useful tool for research and project work. Databases provide deep and pinpointed all information about content. Researcher areas 4 to 5 libraries started to create science related literature databases. These databases handle on-line and offline.

3.21.2.1 Internet and ‘e’ Services:
Research has shown that out of the 04 libraries, only 03 Institution libraries are using broad band services and separate internet connectivity for students and teachers.
These facilities provided to users last 2 years. 4 Institution libraries has enrolled membership and participated in ‘e’ services, with this services libraries provided e-journals and e-books advantages to library users. Institution libraries maintain e-mail ID and password for this service. Research areas selected Institution’s libraries provided many other electronic services to the students, these services include web-blog; we-blog provided all details about Institution library, current notice and general activities. Institution libraries also create users accounts in Google. In these services Google provide all information, journals, databases, current subject’s articles on users account for further reading also. In this way the researcher has indicated that research areas Institution libraries trying to get automated and take a step towards technological developments.

3.22 Library Consortia:
The expanded interpretation in Oxford Advanced Learners Dictionary describes a consortium as a group of people, countries and companies etc. who are working together on a particular subject.

3.22.1 Importance of Consortia:
Information is a national resource and it is necessary for national development. The ability to access journals online has led to a new and still evolving, from a cooperation among libraries and information centers, every individual library now subscribes to a smaller number of journals, usually those most relevant to their organization, and the libraries then come together to share their journal electronically through a consortium.

3.22.2 Need for building Library Consortia:
1. The exponential growth of knowledge.
2. The development in scientific publication and price policies new challenges and opportunities for academic libraries in purchasing and managing the serials within their restricted budget.
3. To reduce the cost of member library operations.
4. The rapid technological developments have resulted in a constant pressure for new hardware and education and training of library staff.
5. New methods including collaboration techniques with other libraries as well as grouping among institutional libraries have helped to reduce the cost of setting up of proper resources in establishment of such libraries among the fellow members in the consortia.
7. To bring pressure to bear on information providers to reduce the rate of rise in the cost of purchasing information.

The setting up of digital/electronic libraries is a very complex task in the initial stages. But when established they provide an easy and convenient method to have access to data by the usage of modern methods and shifting from manual to electronic mode. The examples of D-Space, Greenstone, E-prints and Fedora are the software’s available for digital information creation. These are the open source software’s. The digital collection can be understood as a body of materials in digital formats. Digital collections are reviewed, selected described and categorized by the libraries subject specialists.

3.22.2.1 UGC – INFONET:
This form of consortia has been promoted by the authorities belonging to the Commission and they have among their main objectives agreed to promulgate strategies to extend all possible services by the usage and promotion of electronic usage of resources to tap the databases so as to cater to the demands raised by the research scholars as well as the academia. Under this program of the policies all the people associated and registered users under the Commission have been extensively covered and are considered to be the main beneficiaries of the resources.

3.22.2.2 J- GATE:
This is a prominently accepted form of electronic journal service initiative in India. The importance of this journal came into existence as the libraries started to move from the traditional operations to digital operations. The librarians, Research Guides as well as the concerned authorities started instructing the Research scholars to use the services offered by this journal. The important parameters considered while using the services include:

a. Accessing the database collection of updated knowledge on different topics and multi-disciplinary aspects with over eight thousand different categories of electronic journals across the globe.

b. Searching a well indexed bibliographic database of journal articles from these journals.

c. Subscribed titles will be maintained.

d. One of the greatest advantages to the users is that access to information is not restricted to local information, but at a very economical expense the users get access
to accurate, updated knowledge from different sources world-wide by sitting in one location. The convenience to complete their assignments in a time bound manner. These critical issues can be taken at central Government level and form a national level consortia covering all the educational and research libraries irrespective of ministry, department and states in India. This will provide good opportunity for exploiting the consortia resources effectively and efficiently in use.

3.22.2.3 Reading Advice:
Providing reading advice based on expert knowledge is an inherent feature of any profession. Librarianship is a profession. Therefore, it is a legitimate responsibility of library professionals to provide reading advice.

3.22.2.4 Role of University Libraries:
A University is an institution of higher education where an individual sharpens the intellect and unfolds the mysterious faculties of mind. It helps in exploring and developing talent and teaches us how to live successful in the society. The University education opens to its entrant new vistas of knowledge and inculcates in him a sense of purpose of values. It enables the students to be responsive and responsible to the problems faced by the contemporary society and motivates them to contribute to the welfare to their fellow beings.

The education imparted therefore should be meaningful and relevant. The University Libraries thus assumes important role the process of University education, it is the heart in an academic institution with arteries running into all its departments. From the time when the authorities insisted that the data to be used in the research works should be compiled from a particular period of publication, many research scholars as well as the libraries have not been able to have access to the printed materials in the form of reference books. Even if they were available, they were available in the international market impacting the budgetary provisions of the institutions. This is the main reason that authorities started insisting that the researchers use more economical ways to access the desired data through the access of these kind and varieties of electronic journals which is free and convenient. A University library is one of the largest units in a University. Library collects process and provides a wide variety of reading materials. It acquires all the text books and other reading materials. Prescribed in the syllabus for the cause offered, it also collects reports, general books on important subject and general and subject journals satiable for the academic community. A University library provides variety of services such as Inter
Library Loan Services, Reference Services, Reprographic Service, CAS, SDI and referral Services.

The kind of information needed by any researcher depends on the topic and relevance of the information. The needs change everyday and new as well as updated information is wanted in vast quantities in many forms and formats. Information and data are the keys to any Digital/Electronic Library. Technology as well as Technology Transfer is also playing a major role in the establishments of such institutions. So the Information as well as the Library Professionals are also gearing up to meet the challenges in the days to come as well as the satisfaction of the users and subscribers of the institutions. In digital environment library becomes modern web base information resource centre; users become Hi-tech and librarian becomes high alert and ready to give services.

3.22.2.5 The Transition in Libraries:
This new digital library is not only changing the nature of print based collection but it also provides additional opportunities to the users to satisfy their information needs. Information is available in digital form has great capacity for transmission of text, audio, graphics and videos.

3.22.2.6 A Standard Library:
Library resources and services such as reference, bibliographic instruction and interlibrary loan continue to be in high demand. Students regularly visit campus libraries and place heavy demands on libraries and library staff.

3.22.2.7 Automated Library:
A library has with computer resources in this era of digitization. Online Public Access has Catalogue and offering quick and reliable services.

3.22.2.8 Modern Functioning of the University Libraries:
The objectives of a library in a higher educational institution as set out by the Education Commission of India are:
1. The libraries need to have all the adequate resources so as to make necessary provisions of information gathering and meet the primary requirements of the Research Scholars and the users.
2. The resources should be able to facilitate the Faculty members to be abreast of the latest in their fields of specialization.
3. The library should be capable of all the necessary services to the users and accordance to the curriculum as well as the study material utilities in their academic
calendar as well as the referencing materials suggested by the faculty members to the students.

4. The above parameters if followed in the right perspectives will encourage reading for pleasure self-discovery, personal growth and the sharpening of intellectual curiosity among the users and library subscribers. Thus, the University library is assigned the task of helping the teachers and they taught in their teaching work, cultivating reading habits and conversation and dissemination of knowledge. The library should be a living organism, humming with activity. Hence one should find that all services are directed so as to fulfill the requirements and needs of the users/subscribers such as the students, research scholars as well as the faculty members.

The users are expected to be provided with the best possible opportunities and time bound library services so that their time and energy is properly utilized and due credence be given for their scholarly works.

5. Providing information resources necessary for teaching and research.

6. The facilities helping the faculty to be abreast of the latest technologies and knowledge in his/her field of specialization.

7. Providing instruction and guidance necessary for all academic programmers.

8. Widening the scope of teaching by using the best possible e-resources and practical implementation of case studies and data which extend from distant places in order to cater to the specializations.

**3.23 Conclusions:**

In the formulation of this policy, long term objectives of the parent institution and strength and weakness of similar type of librarians must be kept in mind to allow for nationally coordinated services.