CHAPTER-3

COLLECTION DEVELOPMENT AND ITS ROLE ON LIBRARIES OF TECHNICAL INSTITUTES

Collection development is a vital process in creating and building a library collection, be it an academic or special or public library. It is said that developing the collection is one of the most important and responsible activities in the library. In fact, the utilization of library depends upon the quality of its collection. The heart of a library is its collections.

Collection development is defined as the planned purchase of materials in the various formats to cater the needs of the different users’ community. It is a well-planned activity for which a well-defined policy is essential. In this age, there has been a shift from print documents to electronic documents such as CD, DVD, e-book, e-journals, online databases, etc with the advent of internet and other IT tools. Accordingly, the collection development policy and process of libraries have been changed considerably. New trends of consortia mode have been introduced by the libraries to a great extent. In this changing situation, library and information science professionals need to be aware and acquainted with the latest changes in the collection development process of libraries.

The libraries of technical institutes play a key role for promoting technical education in a very positive approach. The libraries of technical institutes have great influence to the students, teachers and research scholars besides class room activities.
In regards to collection development of different forms such as books and non book materials, a proper policy should be adopted in the libraries of technical institutes. It is necessary to keep the documents both for conventional and modern ICT based resources to cater the needs and challenges of present age of millennium which are immense value to the users. Collection development has great impact for quality education in this age of competition.

3.1 Library Collection

A library's collection must be seen to reflect the needs and objectives of its parent body. Collection means the holdings of materials. In library aspects, collection means the several types of documents- Books, Periodicals and Serials, Govt. Publications, Academic Thesis & Dissertations, Research Reports, Annual Reviews, Conferencing Proceedings, Pamphlets, Standards & Specification, Patents, Trade Literature, Maps, Atlases, and Globes, Photographs, Illustrations, Painting, Microfilms, Microfiches, Rare Books, Manuscripts, Slides, Audio Cassettes etc. and with the advent of electronic media like computerized Databases, Floppies, CD-ROM, DVD, E-journals, E-books, E-thesis, Internet etc. with other special materials in addition to books as principal constituent.

The first three laws of library science propounded by Dr. S. R. Ranganathan, i. e. Books are for use; Every reader to his/ her book and Every book to its readers shows that the first and foremost role of a librarian is to provide every reader with the required documents at the right time. This leads to the statement that the librarian has to perform three important functions i.e. collection, storage and dissemination only if collected first. Among the three important functions of a librarian namely, collection,
storage and dissemination of reading and kindred materials, the collection occupies the most vital position.

Unless a library possesses adequate recent documents supplemented with latest reference and bibliographic tools, it cannot serve its clientele properly. Library’s effectiveness in performing adequate services can be judged in the context of its collection for the use of its readers. But due to limited resources i.e. finances and spaces, the librarian cannot afford to acquire every document being produced and he/she has to develop a criteria for building the library’s collection (Choudhury, 1988).

3.2 Collection Development

In Library and Information Science programmes, collection development generally is described in terms of a physical or electronic collection. Collection development is one of the most significant areas of librarianship. It is the backbone of all library services and important for the librarians to develop his collection in an organized way. There has been a general belief that there is a positive correlation between the collection size and its performance in terms of patron satisfaction. If a library ceased adding fresh material to its collection, it would soon have a negative effect on the library's services. A collection development policy is essential for a balanced and robust collection. It specifies the scope of the collection, authority for selection, criteria for allocation of funds and for selection of various types of materials, priorities in selection, and criteria for weeding.
Collection development is the first and foremost function of any library. Collection development is a vital process in creating and building a library collection, be it in an institution, college, school or a public library. It is a well-planned activity for which a well-defined policy is essential. The term “Collection development” includes all such activities as assessing the user needs, evaluating the present collection, determining selection policy, coordination of items, the selection of items, re-evaluating and storing parts of the collection and planning for resource sharing. Thus collection development is not a single activity but a group of activities.

Collection development is sometimes considered as synonymous to “collection building” which means that there is already nucleus of collection in the library and the librarian is going to build up the collection. But collection development is a term other than collection building. Since the word development implies qualitative improvement of the collection. Therefore, the collections have to be built systematically and continuously. Librarian has to be played a significant role in developing collection. The collection development in libraries has to be done on sound principles only then the library can succeed in meeting its defined aims (Dhiman and Rani, 2005).

Collection development is one of the most challenging and imaginative process of the library profession whereby, the library staff requires a variety of materials to meet the demands of its users. The classification of library collection in the present electronic era is shown in Figure 3.1.
Classification of Library Collections

- Possessed
  - Tangible
    - Conventional
      - Books
      - Journals
      - Newspapers
      - Cartographic material
      - Photographs and Illustrations
      - Drawings
    - Non-Conventional
      - Dissertations/Thesis
      - Patents and Standards
      - Reports
      - Cartographic material
      - Multimedia
      - Handheld e-books
  - Non-tangible
    - Digital Electronic
      - Cassettes
      - CDs
      - DVDs
      - E-mail
      - E-books
      - E-journals
      - Online
      - Databases
      - Networks
      - etc.

(Source: “Collection building through e-resources in the university libraries in India: An evaluation of U.P. state university libraries in digital environment”. Researcher: Mal, Bidyut Kr.)

Figure 3.1 Classification of Library Collections

The formats of library collection in present electronic era is shown in Figure 3.2
**Formats of Library Collection**

1. Textbooks
2. Reference Books
3. Rare Books
4. Thesis
5. Serials

1. Newspapers
2. Journals
3. Annuals
4. Memories
5. Conference Proceedings

Books  
Print  
Serials  
Government and Inst. Publications

Microform Materials  
Collection  
Non Print

Audio-visual  
E-resources

1. Microfilms  
2. Microfiches  
3. Micro-opaque  
4. Slides  
5. Transparencies

1. Charts  
2. Pictures  
3. Globes  
4. Model

1. Phone discs  
2. Phonographs  
3. Magnetic tapes/discs  
4. Audio Cassettes  
5. Video tapes  
6. Video Cassettes  
7. Video discs  
8. Film Strips

1. CD-ROM  
2. DVD-Rom  
3. Floppy  
4. E-journal  
5. E-book  
6. E-database  
7. E-thesis  
8. On line e-resources

Source: “Collection building through e-resources in the university libraries in India: An evaluation of U.P. state university libraries in digital environment”.  
Researcher: Mal, Bidyut Kr.)

**Figure 3.2 Format of Library Collections**
Development in the field of digital libraries, internet, electronic publications, CD-ROM etc. have forced the librarians to change the way they are functioning.

Functions of Collection Development as analyzed in the following Figure 3.3.

The Figure 3.3 clearly depicts that collection development is a dynamic ongoing cycle repeating the functions one after another. The last function of ‘Collection Evaluation’ takes us back to the first function ‘User Analysis’ and determining their needs (Hoffmann and Wood, 2005).

Three main elements of information transfer concerned with collection development are identification, selection and acquisition. Evans (1994) describes collection development as a cyclic process having six major components, namely market analysis, selection and collection development policies, document selection, document acquisitions, weeding or de-selection and evaluation of collection.
3.2.1 Traditional Collection Development

The library staff acquires variety of reading material to meet the demands of its users. Collection development includes selection of current as well as retrospective material and the evaluation of the existing collection. Collection development is the process of assessing the strength and weakness in a collection and then creating plan to correct the weakness and maintain in the strength.

The classifications of traditional library collection according to Ranganathan, Hanson and Grogan are as follows:

**S. R. Ranganathan’s Classification**

- **Conventional**: Books, Periodicals, Maps, and Atlases
- **Neo-Conventional**: Standards, Specifications, Data
- **Non-Conventional**: Microforms, Audios, Visuals, Audio-visuals
- **Meta-document**: Directly produced document without human intervention.

**C. W. Hanson’s Classification**

- **Primary**: Books, Periodicals, Dissertations, Reports, Patents, Standards, Trade Literature, Conference Proceedings;
- **Secondary**: Catalogues, Bibliographies, Indexes, Abstracts, Indexing and Abstracting Journals.

**Denis Grogan’s Classification**

- **Primary**: Periodicals, Research reports, Conference Proceedings, Patents, Standards, Theses and Dissertations, Trade Literature, etc.
• **Secondary**: Reference books, Indexing and Abstracting Journals, Reviews of Progress, Text-Books, Monographs, etc.

• **Tertiary**: Bibliographies of bibliographies, Yearbooks, Directories, Guides to Literature, Lists of research in progress, Guides to libraries, Guides to organizations, etc.

### 3.2.2 E-resources

The library environment is currently undergoing a rapid and dynamic rapid revolution on leading to new generation of library collection with an emphasis on e-resources. On one side, there is an increasing demand for good library collection in terms of large amount of data/information and on the other hand, the publishing media is striving hard to support this demand at lightning speed by way of e-publications as well as on line access. As a result, a large number of e-resources are published on all subject areas. Therefore, library needs to adopt electronic media for its collection development in a better way to fulfill the requirements of users. With advancement of technology, the libraries are moving towards digital resources, which are found to be less expensive and more helpful for easy access. These are more helpful especially to that type of asters who have limited time to access the libraries from outside by the commonly available e-resources mainly CD-ROM, OPAC, electronic publications (e-journals, e-books, e-thesis etc.) and Internet which are replant media (Maharana and Dutta, 2004).

### 3.2.3 Consortia Based Subscription

The main reasons for forming a library consortium is to improve the collection
of information resources and services to the library users and to gain financial benefits. The standardized policy in collection development and bargaining power of a consortium can help to reduce cost of documents. Shared subscription to electronic resources is the main activity of a library consortium and it can be a viable solution in order to increase the access to electronic resources across institutions at a lower cost.

The consortia based subscription can be successfully deployed to meet the pressures such as diminishing budget, increased users’ demand and rising cost of electronic resources. The collective strength of consortia members facilitates the libraries to get the benefit of wider access to electronic resources at affordable cost and at the best terms and conditions.

3.3 Trends of Collection Development

Libraries have always been valued for and measured by their collections. The process of collection development has undergone many changes in the past few decades. Through the ages, the library has been measured by and valued for its collections.

Late in the 1800s, when library schools in the United States were developing educational programmes and methods for certification of library professionals, and libraries were redefining themselves through outreach and service improvements, the library collection was both central to the mission of libraries and secondary in concern in professional development. Libraries were expected to have the accepted core collection, comprised of the “gentleman’s library,” the canon of literature, and titles that would enlighten, inform and inspire the masses. The focus of work, then, was not on what to buy but more on how to buy it, house it, catalog it, and circulate it.
As budgets grew, and our professional interests expanded, and we introduced technology into our work lives and that of our users, the process of collection building became at once more simple and more complex. We were able to communicate electronically with publishers and vendors around the world, simplifying our workflow, but introducing an enormous amount of new information that needed to be handled.

In addition to simple inflation, the collections librarian must watch the relationship between print and electronic and how each is used. More than a trite statement for academic libraries in particular, the library is shifting from being collection-centered to being learning-centered. Hybrid libraries, with mixes of print and digital, are not just common but also required by both our users and the output of publishers.

Many libraries that collected primary source materials widely now have the opportunity to digitize and share these collections with the wider world. This puts the library in a potentially entrepreneurial position, if it wishes to pursue that; to partner with commercial ventures; or to partner with other libraries and archives to make collections freely available. This is a potentially powerful tool that libraries can use to rethink their collections and how they are used. It addresses the growing hybrid nature of libraries, pushes use of collections, and tackles some of the key points in the changing culture and context of libraries. Global issues are also emerging as important agents of change in our library collections.

Publishers are moving at all different speeds away from print to electronic only access. Some smaller publishers expect to keep print for several years to come,
as they rely on the printed advertisement for their revenue. Other publishers have moved or are about to move to electronic only. For library collections, electronic-only publishing points toward the issue of preservation as much as access, and for the most part publishers have made little or no attempt to address the long-term archiving of digital content. Institutional repositories are developing on many campuses, and the library collections are firmly in the center of this development and discussion. The future of collections is one of collaboration. The successful collections leader requires both grounding in business and a willingness to reach out and establish new relationships (Mosher, 1983).

Universe of knowledge is not static, it is dynamic continuum. Flow of resources in the libraries is all time a regular phenomenon. Though the environment has changed from time to time, it is mandatory to procure the documents for the changing society. Some traditional books are automatically converted to rare collections which are important for future posterity. 21st century is the age of ICT. The libraries are converted to information centers due to its complex nature of literature. The library collection will always retain the conventional and modern collections of documents (Carrico, 2001).

The trend of printed materials is decreasing and need for accessing electronic information resources is increasing slowly day by day. Nowadays, the selection and acquisition of library materials is changing to build up the collections in most of the libraries. Today, libraries are acquiring their library materials combination of both print and electronic information resources.
3.4 Primary Role for Building Library Collection

Collection building is the primary responsibility of each and every library, be it a small library or a medium library or a large library serving the information needs of its clientele base. The documents collected in the library should be matched to the needs and requirements of the users of the library since the library is meant for the users. Therefore, the selection of the documents in a particular library must be suited to the needs and requirements of the users of that particular library. Obviously, the librarian is responsible primarily for the selection of documents and for enriching the library collection. There should be certain guiding principles and theories for document selection for overall development of the library. The principles should be followed in the library to make the selection result-oriented. The librarian must be skillful and ingenious while dealing with the selection job and wisdom of practical kind to understand the user’s needs as well as to evaluate the quality of documents to be acquired for the library.

The important factors of document selection are the kind of the library, size of the library, specialization area of library, intellectual level of the users, the merit of the individual documents, the nature and characteristics of the documents already in the collection and the needs and requirements of the users in a particular library.

A librarian does not simply accept, approve or acquire anything which just confirm to his likings. He selects material only when according to his discriminating and astute judgment; it will favourably affect his library user. The evaluation of a document precedes its selection and “the ability to evaluate documents in all departments of knowledge is a valuable part of the selector’s equipment” (Drury, 1930).
An efficient book selection makes a library of valuable books, a living source of culture. This selection must be in relation to reader requirements and not merely a collection of good books. Melvil Dewey stated in 1876 that the books selected for a library should be “the best reading for the largest number at the least cost”. How far this guideline principle has been followed rigidly by the librarians or how much of it is possible to be implemented, may be anybody’s guess; but the basic idea behind this principle are certainly reflected in every librarian’s performance of the function of book selection.

Most of the libraries don’t have written collection development policies which should give proper guidelines for acquisition of different types of material along with budgetary provision. The selection criteria given by Melvil Dewey (1887), Drury (1930), Haines (1950) and Ranganathan (1966) for selection of books need to be revisited which are applicable for selection of all types of resources including e-contents. Buckland (1992) had rightly made an observation that it would seem very foolish to expect any scenario involving/ or dichotomy – only paperless collection. Some balance between the printed and e-resources has to be maintained. Print material cannot be out rightly neglected till user refuse to use them. Selection is vulnerable to human biases and influences favouring some subject or individual. Policy document is a helping tool for librarian to take right decision as laid down in the policy by events or enthusiasm and from purchasing a random set of resources which may not support the mission of the library (IFLA, 2011).

3.5 Factors of Collection Development

Collection development operates the constraints of certain factors that vary from one place to another and from one time to another. The collection development
responsibility is to build the best collection. The factors that influence collection development may be grouped under five broad headings-

- Community or institution
- Library’s purpose
- Clientele
- Resources and
- Resource sharing (Lal, 1987).

3.5.1 Community or Institution

The first group is the community or institution in which a library is located. Many libraries have given support to the idea of community analysis or institutional analysis is difficult without thorough knowledge of the community. Communities may be analysed from several perspectives as mentioned below-

Individual citizens in which include their age, educational levels, ethnic and religious backgrounds, general economic status, cultural and recreational interests, etc. Organisation of the community is like both formal and informal including governmental, social, religious, etc.

3.5.2 Library’s Purpose

Closely related to the community or institutions is the purpose for which the library was established and community analysis leads to a new look at the library’s purposes, collections were to be built specifically in these areas-

- Cultural resource for the more intellectual and experimental segment of society;
- Information service is a period dependent on facts and data;
• Subject and educational provision for student and adults;
• Provision of audio visual resources;
• The standards statements for most type of libraries have something about goals, objectives or purposes.

3.5.3 Clientele

Academic library media programmes are expected to contribute to the life experience of users and their individual self fulfillment. Public libraries have the most diverse clientele to consider but even school and academic library have the faculties, who also differ in interest, abilities and motivation. Special libraries in institution face all of these situations in regard to changing faculty and students have the same need to follow trends closely. In non-academic settings, special libraries may find demands on their collections changing because of new services, new product development, new marketing approach etc.

3.5.4 Resources

Resources include human resources, financial resources, all the informational, inspirational and other kinds of resource existing. It might be necessary for a library to purchase bibliographical and evaluating resources that help identify the materials and human resources for collection development different from library to library. A library director with a large staff and other interested parties like faculty, students, researchers, board members, etc. who has diverse subject background, wide knowledge of print and non-print resources may properly develop the collection suitable for the clientele.
3.5.5 Resource Sharing

Resource sharing also includes materials that may be made available to users of a library. Standards for each type of library recognize this interdependence of library collections. This media staff obtains for users additional items available from local, regional, state and national agencies. The local resources are limited, public officials and librarians have the responsibility for providing access to full library services through a suitable and effective structure. A factor that has encouraged resource sharing to develop is the changing view of how to evaluate a library's service. At present, the trend is to prepare on live computerized database for effective resource sharing.

3.6 Collection Development Process

Evans (1995) defines collection development as the "process of meeting the information needs of the people (a service population) in a timely and economic manner using information resources locally held as well as from other organizations". He states that collection development is a six component process. These components are:

- **Needs Assessment**: collecting data to determine the information needs of the service community.
- **Policies**: writing the collection development policy.
- **Selection**: deciding which materials to buy for the library.
- **Acquisitions**: acquiring the materials for the collection through purchase, gifts or exchange programs.
- **Evaluation**.
• **Weeding (De-seletion):** periodic or continual evaluation of resources so that items that are no longer useful are removed.

Collection development is a process of systematically building library collections to serve study, teaching, research, recreational, and other needs of library users. The process includes selection and de-selection of current and retrospective materials, the planning of strategies for continuing acquisition, preservation and evaluation of collections to determine how well they serve user needs. Overall, collection development encompasses many library operations ranging from the selection of individual titles for purchase to the withdrawal of expendable materials.

![Library Collection Development Cycle](http://newcanaanlibrary.org/)

[Courtesy: Librarian, New Canaan Library http://newcanaanlibrary.org/]

**Figure 3.4 Library Collection Development Cycle**
3.7 Collection Development Policy

Collection development policy is the course of action adopted for developing the collection or stock in a library. A policy can be unwritten convention or a written document. The collection development policy is for the use of libraries’ staff and the libraries’ users. The policy will be updated as needed. This compilation of policies intends to inform on two levels. First, it communicates between selection officers and those who use the materials they select. Second, it comprises a plan for the future growth of the collection, a tool for delineating collecting priorities, and a guide for those charged with responsibility for selecting materials in a variety of formats. It also assists the stakeholders to gain an understanding of the appropriation of library resources to subjects and areas of particular institutes.

The American Library Association’s Collection Development Committee when preparing “Guidelines for the formation of collection development policies” assumed that “a written collection development policy is for any library a desirable tool which enables selectors to work with greater consistency towards defined goals, thus shaping stronger collection and using limited funds more wisely.”

Collection development policy of a library should be guided by the aims and objectives of that type of library in general and of that library in particular. The policy also needs periodic review to keep in tune with its changing objectives and goals. Even otherwise policy review is necessary to meet the changing situations and requirements.

The ideal collection policy is a living document, reviewed and revised regularly, that "organizes and guides the processes of acquiring and providing access
to materials and information sources, integrating these into coherent collections, managing their growth and maintenance, and making decisions about preservation, withdrawal, and cancellation” (Gorman and Ruth, 1997).

### 3.7.1 Purpose of the Collection Development Policy

The main purpose of the collection development policy is to establish operating guidelines for the planned development of a quality collection of materials to meet the educational need of students and faculty. The policy provides general guidelines for allocating funds fairly and formulating objective selection criteria. The goals are to ensure consistency among those who have responsibility for developing the collection and to provide a tool for evaluating and improving collections for all relevant subject disciplines. The library collection includes all formats, i.e., books, periodicals, microforms, audio-visual materials, electronic resources, etc.

The purpose of the collection development policy has been stated by M.K. Donahve in the following way:

- To represent an objective process for establishing long and short ranges priorities for collection intensity and depth.
- To facilitate consistency in planning and communicating priorities.
- To provide guidance for fund allocation and approval profile construction.
- To determine areas for cooperative sharing and development of resources.
- To provide guidance in withdrawal of materials from the collection.

The collection development policy is an official document which gives formal recognition to the criteria to be followed by the library. The collection policy as the
basis for rational and systematic development of collection building ensures that the needs and requirements of the user community are served properly. On the whole, the collection development policy establishes the norms and rules for planning, budgeting, selecting and acquiring library materials for optimum utilization of intellectual resources by the users to achieve the goals of both the library and the parent organization.

3.7.2 Weeding out Policy

The librarians’ responsibilities are to put selection in the reverse gear and choose items which can be weeded out safely. ‘Weeding’ is necessary, and it should be a regular process, which may be conveniently tagged with library stock verification work. If the library is to do that, it must be sure about the categories of materials which may be discarded and these are as follows:

- Duplicates of titles no longer needed, the demand for which has fallen;
- Old editions (not the first edition of any important work) superseded;
- Obvious mistakes in selection- books purchased for anticipated use, ultimately proving a wrong decision;
- Obsolete books, whose subject matter, contents and style have gone completely out of fashion.
- Outdated books on science and technology and conventional reference.

As book selection requires judgment, “weeding” also requires judgment. Weeding out policy is an important component of collection development policy. Weeding out documents means removing documents which are found not useful or not serviceable from a library. Weeding out policy means a policy statement on a)
what materials are to be weeded out? b) When to weed out? c) Who should weed out? d) How to weed out? e) What to do with weeded out materials?

3.7.2.1 Reasons for Disfavour of Weeding out

In spite of the compelling reasons for periodic weeding out documents from a library many librarians hesitate to put it in practice. It is quite evident in our country. The following are some of the reasons for such apathy:

3.7.2.1.1 Love for Numbers

The glory of numbers in libraries is still there. Though modern librarians realize that it is quality of service that is more important that the quantity of documents in a library even then they hesitate to weed out documents which are no longer useful. This is mainly because official reports to be submitted by them emphasis on numbers.

3.7.2.1.2 Pressure of Work

Library being a dynamic organization, work pressure will always be on the library professionals. Since weeding out implies careful, judicious and justifiable action, which needs time, librarians hesitate to weed out. Hindrance to or dislocation of the routine duties, due to time consumed by weeding out work, may not be appreciated by the clientele.

3.7.2.1.3 Fear of Audit and Clientele Comments

At the time of audit one may face objection that documents for which amounts were paid are not found in the library. Similarly, the clientele may also comments upon the documents weeded out of the library saying that some very useful
documents were also discarded. But a librarian need not get discouraged by these factors. A clear and well planned weeding out policy free from bias and approved by a committee appointed either for this purpose or the one looking after the library affairs will clear all hurdles (Dhiman and Rani, 2005).

3.8 Problems of Collection Development

The collection development policies, collection development programmes, evaluation of collection development, the procedures and techniques of collection development, the allocation of fund for collection development and such other considerations are the basic principles of collection development in the ideal condition. Unfortunately, such ideal condition does not prevail in the libraries for many reasons. Every library faces the problems of collection development for some reasons. The problems of collection development are created mainly for three reasons—ineffective financial resources, non-availability of right materials in the market and shortage of accommodation or space for keeping the library holdings or ever increasing collection of the library. Another problem is created by the changes in users’ needs and requirements from time to time.

C. A. Gardner (1981) states the following problems usually encountered in developing a qualitative collection. These are:

- Increasing volumes of books and journals that come out from the ever-growing number of publishers.
- Relentless rise in prices of books and journals year after year that outstrip the rather fixed library budget.
- Fluctuations in the exchange rates of foreign currencies.
- Widening and changing scope of activities of the user groups.
- The restrictions on imports, especially of non-book materials.
- Unfair trade practices that are followed by some of the books sellers, distributors and publishers agents.

The reality, the librarians are facing, is that allocation of funds for acquisitions are almost always limited and for that reason collections are limited. To satisfy the needs and requirements of all the users, the librarian has to make careful and balanced collection development or the library must have enough funds to purchase any title on demand of the users. Collection management is the only way to meet the needs of the user groups in a particular library.

The problems of collection development are almost identical in the global scenario, whether the countries are developed or developing because the economy, technology and commerce are now global in nature. The traditional concept of the library as a storehouse of documents and holding oriented services is changing very fast. The new technologies, interdisciplinary and multidisciplinary research and non-print media changed the nature of the library collections. The crucial factors of increasing book price and journal subscriptions, availability of books and journals, especially foreign, created certain adverse situation in library collection development.

The global situation of the problems of collection development affects equally the Indian situation in general. Some more problems are there in our country. The book market in our country is not well organized in all the parts of the country. Even all the books published in India are not available in all the corners of the country by a well-knit marketing system. Except the large publishing houses or distributors, others
publishers cannot afford to give publicity about the books published because of high advertisement rates. Therefore, unawareness or lacks of information about all the published materials create the impediments in collection development.

3.8.1 Problems of Storage

Once the library building is constructed, the scope for further extension of library building is very much restricted. Collections will grow every year and, thus, the size of the library holding will be larger. In every library, the storage area is limited for holding of the books. This problem is aggravated by the situation that the bound volumes of periodicals are considered as books and as such, all the bound volumes of all the periodicals are considered as books. As such all the bound volumes of periodicals added to them, create acute shortage of space in the libraries and this situation adversely affect the collection development programmes in the desired way.

3.8.2 Problems of Financial Resources

An evenly balanced collection is the backbone of the library. The libraries are not in position to follow and implement effective collection development programme because of constraints of financial resources. The libraries in our country face many problems, such as cut in financial grants, non-availability of adequate fund for new acquisitions, ever increasing price of books, enhanced subscription rates of the periodicals, increase in number of core journals, enhancement of foreign currency rates and financial crisis of the parent institutions.

The problems of financial resources in real terms are global in nature and India is not immune to such problems. There are some additional problems in our country affecting the collection development programmes for financial resources.
Spectacular increase in railway freight, parcel and other postal charges, restrictions of foreign exchange along with increase in bank rates have made it prohibitive to acquire books and journals from distant places.

It is a common practice in our country that the parent institutions allocate the acquisition fund to the libraries at the close of the financial year ending, more or less. It provides limited scope and time to explore the possible sources for quick and balanced procurement of the mostly needed documents to suit the needs and requirements of the target groups. As a result, being anxious to spend the funds within the financial year, the libraries purchase some document not much relevant or needed having no other options to exercise. In this way, the libraries fail to acquire the right documents when those were available. If this unsystematic practice continues year after year, the library collection become poorly balanced and rarely to be called development of collection (Mahapatra, 1999).

3.8.3 Problems of Subscription of E-resources

The following are some of the common problems been faced in subscribing the e-resources -

- Lack of connectivity.
- Not user friendly, as the reader cannot take it where they would like to take involves some licensing issues with the publishers.
- Difficult to access in some situation like system failure.
- Multifarious information for a single topic.
- Stress.
3.8.4 Problems of Library Professionals in ICT Application

Information Communication Technology (ICT) is advancing very rapidly. In order to keep pace with developments in ICT field, library profession needs to move faster and gain competency in ICT use. The ICT infrastructure needs to be upgraded frequently to reap full benefits of new technology. Also the manpower needs to be continuously trained and retained in the use and application of new devices and equipment. Library professionals at all levels need to be appropriately helped in catching up with developments. Only then the fruits of new technology will reach the end users.

The major problems being faced by librarians are-

- Lack of dependable ICT infrastructure in most of the institutes;
- Inadequate collection;
- Information gap;
- Leadership gap;
- Lack of mechanism for linking or integrating the collection of one institute with other;
- Lack of proper reading space with necessary amenities;
- Lack of competency in the use of ICT gazettes;
- Lack of mechanism for training and retraining of library personnel;
- Lack of awareness about the safe disposal of end-life ICT gazettes and peripherals.

3.9 ICT Application in the Libraries

In India, the Bharat Sanchar Nigam Limited (BSNL) is responsible for providing and maintaining national telecommunication facilities and the Videsh
Sanchar Nigam Limited (VSNL) is responsible for providing and maintaining international telecommunication facilities. After allowing private sector entrance to the ICT sector in India, lots of ISPs, mobile phone service, etc. appeared with a competitive edge and improved quality. India has been able to achieve a modest success in making computer networks operational. Few networks still remain in the planning stage. The general data communication networks in India are INDONET, NICNET, GPSS, RABMN, I-NET, and ERNET; and some specialized library and information networks are INFLIBNET, BTISNET, ADINET, BONET, MANLIBNET, CALIBNET, MALIBNET MYLIBNET, and DELNET. In India, several information systems have been developed during the last two decades, viz., NISCAIR, the Defense Scientific Information and Documentation Centre (DESIDOC), the National Social Science Documentation Centre (NASSDOC), the Environmental Information Systems (ENVIS), and the Biotechnology Information Systems (BTIS).

**3.9.1 Advantages of Application of ICT in the Libraries**

There are number of advantages of the application of ICT in the libraries. These advantages have been discussed in the following sections-

**3.9.1.1 Time Saving of Professional Staff**

The libraries have so far resorted manual operations to perform even advanced functions and services, such as depth classification, advanced cataloguing, bibliographic services, literature search, indexing, abstracting, etc. These are the important but time consuming functions. Not only these are time consuming but they
also require enough professional staff to manage them. The advent of computer and information technology has minimized the need for depth classification and advanced cataloguing to organize reading material.

By applying the ICT, all sorts of works and processes can be performed in providing bibliographical services, literature search, indexing, etc. even transmission of full text resources and thus a lot of time of professional staff could be saved and the task would easily be handled by employing less number of professionals. It avoids duplication of efforts of staff to maintaining and managing information.

3.9.1.2 Quick, Accurate and Easy Access to Information

The ICT has enhanced the recall and precision value of information available in the library. Entire information available in various forms in the library could be accessed without wasting much time. Databases developed by the library are such an effective medium that enables one to ascertain very quickly as to what is available in the library pertaining to his/her interest. Since the use of technology has increased the possibility of access to the vast store of information from different angles, the probability of anything relevant being left out is not there.

3.9.1.3 Availability of Relevant and Condensed Information

The exponential growth of published information in every discipline has posed a challenge to the library personnel in storing, retrieving and disseminating right information to the right people at the right time. The pace with which information is exploding, it is difficult to obtain and select relevant bibliographic records from millions of bibliographic sources so easily. The effort in this regard proves to be time consuming process and delay in providing services. But the emergence and use of electronic media, such as CDs and other online databases have made the job not only
easy but have also brought about accuracy, speed and relevancy in the dissemination of information.

3.9.1.4 Quick Retrieval and Better Quality of Information Services

In the fast growing multi-disciplinary approaches, it is probably difficult to avoid the false drops in manually retrieved information. Sometimes, it happens that information provided by the use of traditional methods fails to achieve the required objective. The computer aided technologies have reduced these false drops and improved quality of information resources and services.

3.9.1.5 Avoiding Duplication of Resources and Works

This is possible simply because in house database help to check out available literature in the library without loss of time and thus the acquisition of literature is streamlined in the manner that duplication is avoided. Secondly, organization can also get into an understanding with similar organization to rationalize their resources and documentation works. The application of ICT has reduced the duplication of resources and works.

3.9.1.6 Use of Bibliographic and Full Text Databases through Networks

The development of the nation depends to a large extent on availability of and access to information. Through networks, the libraries and information centres of the technical institutes can search the bibliographic and full text databases at regional, national and international levels. In the present context of information world, no library and information centre can be fully equipped on its own to meet the demands
of their clients. They have to depend on the cooperative exchange of information and resources to achieve the desired goals of their parent bodies. There is thrust of exchange of information, programmes, database, advanced communication technologies and setting up of regional networks to establishment of International Information Systems (IIS) among the nations for better communication and exchange of information. Many developed countries have established and produced a large number of online bibliographic and full-text databases and networks.

3.9.1.7 Saving of Space

The library being a dynamic organization keeps collecting resources which goes on accumulating. At the same time, other activities also expand. These cause space problems. Efforts have been made to solve this problem by using various information technologies. The present information technologies such as microfilms, microfiches, slides, audio/visual media, CD-ROMs, DVDs, optical discs, internet, etc. are the media and their use in libraries of technical institutes would help the information specialists and librarians to overcome the space problems arising due to the storage of multi-volume reference sources for their accommodation and management in the available space. The Encyclopedia Americana and the New Encyclopedia Britannica are the best examples which occupy only a small space in CD-ROM in comparison to the hard and print copy.

3.9.1.8 Knowledge Sharing Workspace

Sharing of knowledge across the organization and its units is significant approach of the application of ICT in libraries. Platform of sharing of ideas, insights
and knowledge that resides among the intellectuals can be developed to nurture, strengthen and regenerate the knowledge. Web space collaboration applications are new tools which enhance the communication and knowledge sharing capabilities for intellectual works.

Other collaboration tools such as e-mail, web conferencing, discussion groups, alerts, workflow and document sharing are essential components of knowledge sharing. These tools offer resource sharing among scientists, researchers and technical personnel of various units across the organization. Web space eliminates the geographic boundaries by providing online workplace to the team of scientists, faculty, research scholars, planners and intellectuals working in the organization to accomplish the mission together online and to collaborate on policies, procedures, documents, issues, discussions, complicated tasks, evaluations and assessments.

3.9.1.9 Impact of ICT on User Behavior

The impact of ICT on user behavior and attitude has been tremendous. There is a sea change in the user’s behavior and attitude in information searching and use. In the present electronic environment, user is highly impatient and time conscious, wants information just now or never. So, libraries are forced to change from physical to virtual environment and make available tools and techniques so that flow and use of information is simple as well as effective. As printed materials have their own merits, they have not been replaced completely by e-resources. Therefore, libraries have to continue functioning in a hybrid environment (Thakur, 2006).
3.10 Collection Development in ICT Environment

In library collection, e-resources have become the buzz word and on the other hand, pose new challenges for library professionals to manage the electronic information resources properly. The rapid growth of e-resources and the complexity in managing these resources have posed new challenges for the LIS professionals. Now we are living in digital environment and obviously it is changing the nature of all three elements of library i.e. collection, users and staff in every library. To grow forward to the time of this electronic age, at first effect on entire user community who are giving the more preference than traditional print collection to e-resources.

The ability of computers to store and process vast amount of information coupled with the ability of communication technology to transmit this information from one location to another. The value of ICT-based resources and services are that it can be easily shared, distributed, updated, manipulated, and rapidly searched. These resources are available in static physical forms such as CD-ROMs, or in a fluid form like the Internet.

There is a great impact of ICT on the functioning of all types of libraries. The services of libraries of technical institutes have been drastically changed due to the impact of ICT to serve its academic community. There are various prospects in the application of ICT in library activities to provide pinpointed, exhaustive and expeditious information from within and outside sources to the users in anticipation or
on demand. It has become imperative to have an understanding of the prospects of application of ICT in libraries of technical institutes of Assam and also the impact of the attitude of library users and library professionals toward ICT so that appropriate measures can be adopted to improve the services in a better way.

By the application of information technology in the process of library work, the job of the library staff becomes easy, interesting and pleasurable. Electronic technologies and collection development are two of the top concerns in library and information science today. The challenges of integrating electronic resources and technologies into the process of collection development are many, and many-faceted. Beyond task-oriented considerations, such as the selection process itself, there are large-scale management issues to consider such as budget, policy, personnel, and technology.

The recent advances in communication technology, networking, use of internet and electronic products have brought about a revolutionary change profoundly affecting the library’s landscape. It has affected the selection, acquisition and information transfer process. The technology is mainly being used for communication, database searching, bibliographic and full text searching. It has also changed the concept of archiving (Kumbar and Hadagali, 2005).

The ways of accessing information and library operations have undergone metamorphic change. The shift of this paradigm may be highlighted as in Table 3.1.
Quality assessment of e-resources is more difficult than printed materials. Therefore, collection development of e-resources is essentially more complex than the printed resources. Moreover, librarians have been dealing with print resources for centuries and are familiar with their acquisition procedure and practices which are well established and standardized, whereas acquisition of e-resources still remains fluid.

Librarians alone are not in a position to take decision in selection of serials particularly when these are being licensed under consortium pricing. The cost of e-resources are not fixed as of printed resources which varies depending upon the
various variables like number of concurrent users, level of access, nature of the institution, different renewal policies, etc. The whole process of e-resources is comparatively more challenging.

Collection development of e-books has its own problems of acquisition due to unpopular pricing model, publisher’s embargo, etc. Reading of e-books is still not as convenient as printed books. Packages of e-books are costly. In the present scenario, e-books and printed books complementary and supplementary to each other are having their own advantages.

Libraries of technical institutes need to develop separate collection development policies for each type of material for proper decision making. All types of material that are in use and in demand have to become the part of e-collection. Libraries of technical institutes shall have to continue their dual collection development policies in hybrid environment in which printed and electronic resources both e-journals and e-books together with additional benefits of accessing open sources.

In brief, it may be stated there are many models as the publishers which may further vary from vendor to vendor. There are different subscription rates depending upon various factors like number of users, availability of inter-library loan, duration of subscription, level of use, on standalone system, on Local Area Network, with IP address or on proxy server etc.

3.10.1 Institutional Repositories

Institutional repositories (IRs) are online databases of scholarly materials such as articles, reports, datasets to enable and foster sharing, discovery, and archiving of
scholarly resources produced at a given institution. IRs contain and organize a variety of scholarly content such as reports, articles, books, visual images, datasets, course materials, and audio and video resources. IR systems are designed to collect, manage, distribute, and preserve academic products of educational and research institutions. Responding to this ICT trend, institutional repositories (IRs) provide a set of services for the management and dissemination of digital materials created by an institution and its community members.

3.10.2 Role of Library Consortia in ICT environment

The formation of any consortia is based on the fact that a group of libraries has a combined set of resources which is greater than the resources of any single member library. With the advent of internet, all types of libraries have started forming consortia to provide common access to electronic resources across the internet. The consortia arrangements enable libraries save money, survive financial constraints, and eliminate redundant resources and activities.

The emergence of internet, particularly the World Wide Web (WWW) as a new media of information delivery has triggered proliferation of web based full text online resources. The cost of the e-resources is quite high and it is beyond the reach of almost all libraries to subscribe required e-resources within available budgets. This is another challenge for Indian libraries that are already facing the problem of increasing cost of the publications and shrinking budget. This to lead find out alternative models, hence library consortia with the support of state funded agencies emerge in India.
Library consortia reflect shift from organizational self-sufficiency to “collaborative survival mode” among the libraries.

The advantages of library consortia are as under-

- Promote collaboration in different library activities;
- Better sharing of existing resources and jointly acquiring new resources at great saving;
- Negotiation and finalizing the terms and conditions with the publishers
- Streamlining and consolidating technical services through compilation of union catalogue;
- Professional development and training;
- Promotion of new standards for managing usage statistics;
- Undertaking digitization projects, setting standards for best practices and providing training in them.

3.10.3 Necessity of ICT in Libraries of Technical Institutes

Libraries are considered to be the heart of the educational institutions. These play a vital role in teaching and learning environment of the information society. The information needs and urgency in acquiring the needed information has made libraries to change rapidly. The rapid development of ICTs during the two past decades has had many points of contact with education and training. The development of technology is planning new demands of expertise, and it is also leading to the increased use of information technology in teaching and learning, wireless connectivity.
The main purpose of application of computers in our libraries is to automate the library operations, services to increase productivity and efficiency in handling records and finally disseminating information efficiently. The application of computer to the library collection allowed to access and store information and discharge its various functions, CD-ROM on areas like cataloguing, public access to catalogue and reference work very quickly. Computers have brought in new impact to the library and information usage. It is used in various fields of library activities.

It is the fact that today almost all types of libraries are involved in a period of revolutionary change. Several changes and developments have taken place in the advanced of information technology and everyone can feel its effect on the libraries. India is the currently fourth largest economy in the world that is attracting global demand for its information technology and software services. In a learning environment, the librarians provide access to online resources as well as serve as information literacy trainers. Since the librarians are the knowledge workers or navigators who plays a very important role in education and research.

The reasons of ICT application in the libraries of technical institutes are given below-

- To speed up accurate and reliable data transfer.
- In future, there is also a danger of non-availability of hard copies of documents, particularly the secondary sources that are available only on CD-ROM. Knowing this, continuing education about ICT for librarians is essential.
• Due to escalation in prices of periodicals and books, no library can afford to acquire all the publications. Resource sharing through networking is the only option. To participate in the network, computerization of libraries is a prerequisite.

• Many international databases like DIALOG, MEDLARS, INIS, AGRIS, etc. are delivering the information electronically. Unless the libraries are automated, there is no possibility for accessing the information from these global level databases.

• The literature in almost all the fields is increasing tremendously and in a multidimensional way. Because of this growth, manual bibliographic control is not feasible and ICT is needed.

• The information seeking behavior of the users is also changing according to their varied needs. To meet the changing needs, storage capacities of information and retrieval techniques should be improved.

• The quality, user friendliness, effectiveness, reliability and regularity of library services can be much improved through ICT.

• With the help of ICT, it is possible to gain local, national, regional and international reputation.

• To be able to provide round the clock access and service to users.

• To provide regular updates on topics of interest to users.

• To promote teamwork across geographical distance.

This is particularly true of library and information personnel whose role in an academic institution is to provide support to the teachers who must impart the skills needed to keep pace with the rest of the world and prepare for the future (Anao, 2003).
3.10.4 Impact of ICT in Libraries of Technical Institutes

The quality of work and activities has been greatly changed by the presence of application of ICT. ICT holds the key to the success of modernizing information services. ICT have changed the libraries of technical institutes in a profound way.

ICT has impacted on every sphere of library of technical institute activity especially in the form of the library collection development strategies, library building and consortia. Libraries of technical institutes are using modern ICTs to automate their core functions, implement efficient and effective library cooperation and resource sharing networks, implement management information systems, develop institutional repositories of digital local content, and digital libraries; and initiate ICT-based capacity building programmes for library staff and information literacy programmes for library users.

ICT infrastructure is considered as the most dominant paradigm of development in the recent years. ICT have become dramatically and strategically important in modern civilization. ICT has immense possibilities in library services, operations and resources. The libraries have found it very difficult to acquire, arrange, process and disseminate information in traditional ways. So, librarians are compelled to plan, organize and communicate the huge information according to the needs of users with the help of ICT. The use of ICT in libraries has tremendously increased because it provides enhanced user satisfaction, cost effectiveness, faster and simpler programmes, rapid responses, and easier operational procedures. It is the desire of a modern library to apply and enjoy the benefits of up-to-date technologies in its every day functioning and future development.
Today, libraries of technical institutes are functioning under constantly changing environment and face a variety of complex challenges like information explosion, ICT revolution, network evolution, shrinking library budgets, escalating prices of documents, high level of user expectations and so on. ICT offers a wide range of opportunities, which could provide solutions to some of these major challenges. Rapid advances in modern technologies have greatly improved the capabilities of storage, processing, retrieval, repackaging, communicating, sharing, and managing the explosive growth of information effectively and economically in libraries.

Use of ICT in the libraries of technical institutes have become inevitable in an era of information explosion and the emergence of a wide range of new technologies in order to satisfy the changing complex information needs of users. Libraries and information centers have been using ICT based resources and services to satisfy the diverse information needs of their users. At the same time, it is found that the use of ICT has become increasingly important in libraries of technical institutes. Libraries of technical institutes are switching over to ICT based resources and services at an accelerated pace. E-journals, CD-ROM databases, online databases, e-books, web based resources and a variety of other electronic resources are fast replacing the traditional resources of libraries of technical institutes.

ICT has brought unprecedented changes and transformation to libraries of technical institutes and information services, conventional LIS such as OPAC, users’ services, reference services, bibliographic services, current awareness services, document delivery services, interlibrary loan, audio visual services and customer relations can be provided more efficiently and effectively using ICT. The libraries of
technical institutes find itself in a time of tremendous challenge but it is also a time of boundless opportunity to use ICT creatively to enhance service delivery to its user.

From the above discussion, we may sum up that the librarian must have the skills right from selection of resources for both print and e-resources. They need to think about the availability of different resources in order to deliver the best information to all users in the least possible time. They also need to expand the range of resources for the benefit of users especially to include those available in electronic format, viz. web-based or web accessible information resources. Librarians must not only identify and facilitate access to electronic information resources; but also educate library users about how to access them and when to use them.

It can be said that the collection development is a decision making process, planned on the basis of objectives, scope, goals and programme of the institution. The financial condition of the libraries to hold collection development programmes in particular, is alarmingly inadequate. In such situation, there is no way out but to resort to the library cooperation and resource sharing of the libraries in a region by organizing a consortium either at regional level or at state level. A numbers of same kind of libraries may also participate in library cooperation programme for cooperative collection development.

The challenge we to face is not a ‘paperless society’ nor the ‘electronic information centre’, but the challenge is to maintain, nurture and optimize the resources of the libraries with the help of new technology. Hence, we must be ready emotionally, professionally and financially to accept and make good use of ICT in the libraries of technical institutes.