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CHAPTER – 1

INTRODUCTION

Since the dawn of the civilization man has been striving to know the unknown. On the long voyage of exploration of unknown, man has collected uncountable pearls & pebbles and tried to preserve them. Undoubtedly, this is a very fundamental attitude of mankind that initiated the concept of preservation of thought contents or knowledge, that concept of preservation gave rise the concept of library latter on and that knowledge are bringing in various form of library collection.


Collection Building

Collection Building is a vital process in creating and building of a library collection to serve study, teaching, research, recreational and other needs of library users. The process includes selection and deselection 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. Over all Collection Building encompasses many library operations ranging from the selection of individual titles for purchase to the withdrawal of expendable materials. Now, the library collection does not mean the holding of particular library which it own only, but which it can collect on loan from some other sources as well as can have access to collections and databases, conventional or electronic. Collection Development and Collection Building, these two terms usually use synonymously but the Collection Management differs very slightly. Collection Building is selection and acquisition of library materials considering users current needs and future requirements then but Collection Management is much more than Collection Building. It involves managing the use of the collection, its storage, it organization and making it accessible to users.¹

**e-Resources**

An electronic resource is defined as any resource which requires computer access. Any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD ROM, on tape, via internet and so on.²

Collection development has because doubly challenging in this increasingly electronic era. Librarian must contend with the exponential growth in the number of electronic resources worthy of inclusion in library collections. Over the past few years, a numbers of techniques and related standards have been developed which allow documents to be created and distributed in electric form. Hence to cope with the present situation, libraries are shifting towards new media- namely electronic resources for their collection deployments that the demand of users is better fulfilled.
University Libraries in India

The university library exists to serve the needs of the university to support education, learning and research and meet information needs of their academic and research community. These are the hub for information storage and dissemination.

According to University Handbook (31st ed.) we have 279 University-level institutions (AIU Members) (354 universities including non members). In addition, there are more than 12,600 colleges out of which 50% offer undergraduate course and 50% offer postgraduate courses.

Digital Environment

The advent of computer has also brought a revolution in the field of Library & Information Science. The conventional print material is going to convert is the digital form. Traditionally Digital means the use of numbers and the terms comes from digit or figure.

The digital environment means that every copy is a technological equal of the original. Absent printed output, content may exist without form. Paper becomes an interface, a volatile, disposable medium for viewing information on demand or a storage medium. It no longer serves a primary function as a communications medium. That attribute is performed by the computer’s monitor screen.

Today digital is synonymous with computers. Libraries are no exception to this first changing digital environment. Library in digital environment basically is a computer based system for acquiring, storing, organizing, searching and distributing digital materials for user access. E-resources are the primary attraction of readers in today’s digital environment. It is difficult to know what information exists, what format it is available and where to look for it. Libraries in Digital environment concern with digitization of existing library materials, connectivity to
the users in the world online and offline, integration with networking and availability with the World Wide Web.\textsuperscript{3}

In the last few years, librarians are hotly debating whether computers have any place in libraries, just as they discussed at the beginning of the twentieth century in respect of typewriters. Many research studies have focused on the use electronic resources or on their feelings about electronic and print resources in the university library. Today, the library community as a whole is realizing that apart from the immediate practical advantages, computers and information technology (IT) in general are the tools of new information era which was started with Gutenberg and lasted until the middle of the twentieth century (Cotta-Schonberg, 1989).

Libraries of all sizes and types are embracing digital collections, although most libraries still continue and will continue to offer both print and digital collections for many years to come. New purchases and purchases of journals, magazines, and abstracting and indexing services are heavily weighted toward digital, while digital books (e-books) are only the beginning to become a presence in library collections.

Libraries prefer e-Resource collections for many reasons, including, but not limited to digital journals which can be linked from and to indexing and abstracting databases; access can be from the user’s home, library or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and e-Resources collections are relatively easy to maintain, when total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs. Such a dramatic switch from print collections to e-Resources collections has an impact on library users and user’s perceptions of the university library.
The emphasis in libraries is shifting speedily from collections to access. Providing access to information has become the principal goal and activity, coping with technology and changes are the major driving forces of the emerging information age library. The explosion in the quantity, cost and communicability of information is a new phenomenon, which calls for new responses. Among these, responses must be a willingness to accept change. Producers of information are making more and more information available electronically and directly to the consumer in a more cost-effective manner. Consumers plug into the network to gain direct access to information in a variety of formats. The implication is that, the library’s role as a first-step, one-step or last resort information centre will change.

The famous line from Thomas Carlyle is that the true university is a collection of books may have been true in these days, but it is not true today. This is an electronic age where universities and the libraries that serve, must be more than a collection of books. Today, there are major shifts in libraries. These shifts have been summarized succinctly, that is from custodian of books, to service-oriented information provider, from one medium to multimedia, from own collection to library without walls, from in good time to just in time, from in sourcing to out sourcing, from local reach to global reach, and from we go to the library comes to you.

A library consists of the trio-the books, the staff and the users. A library is a social institution born in civilized literate society, grows and develops in response to social conduction and needs for equipping the people with necessary proportion of accumulated knowledge and preparing them for cooperative social life. It has been rightly said that the library is of the people, by the people and for the people and therefore, library is a service institution to the masses. According to
Ranganathan, library is a public institution or establishment charged with the care of a collection of books, the duty of making them assessable to those who acquire the use of them and the task of converting every person on its neighborhood in a habitual library goes and reader of book. The library is sometimes called as the memory of human race. According to Pierce Butler, “Library is a social organization necessary unit in the social fabric effectively planned and utilized for transmitting the accumulated experience of society to individuals members of the society through the instrumentality of books and other graphic accounting and holistic materials – maps, charts, phono records, microfilms, etc. Depending upon the nature of clientele and services, the libraries are categorized into public libraries, academic libraries, special libraries, national libraries and contact libraries.

University libraries are those which are attached to teaching and learning institutions and clear to the needs of different levels of academic community. It is considered to be an organ around which all academic activities resolve. According to Prof. Issac “Library attached to an academic institution like a school, college or a university is called an academic library. Its role to help promote the objectives of its parent institutions.

1.1 Higher Education System in India

Higher Education has undergone a radical transformation in the last few decades both in U.K. and U.S. Education is one of the most crucial services in the economy. The quality of life of society at large and individuals in the society largely depends upon the quality of education. Higher education institution in the country especially the Universities have been producing the required quality manpower as per demands made in the social system. Since the dawn of independence in India, higher education system has grown enormously. It expanded in an unprecedented manner note experienced by any other nation in the
world in recent times. The advent of information technology products like computer and internet have further made it possible to spread the higher education even in remote corners of the country.

The university libraries supplement academic institution and play an indispensable role in the dissemination of information and knowledge they collect, store and disseminate information and also performs the laboratory function by making its resources to be used by the academic community in the learning process. According to Deshpande, K.S. “University Libraries serve as resources for teaching, learning, publication and research programmes of institutions of higher education”.

University library seeks to promote the objectives of higher education. A university library is a part of the university system and thereby it aims to fulfill the objectives of its parent organizations. By accumulation and organization of books, manuscripts, journals, and knowledge in different formats the university library serves for the conservation of the knowledge and ideas, an active force in teaching, learning process, research and extension programmes of the university. The main objective of the university library is to meet the reading and informational requirements concerning teaching, research and other academic programmes of the university. Thus, a model university library aims to function as dynamic institution of education. The modern university with a large faculty, tremendous enrolment and huge resources is in a position to make significant contribution to different areas of knowledge. However, universities have become complex organizations, in a developing country like India, expectation is that universities should produce people who are committed to the development of the nation and its service.
1.1.1 Objective of University Libraries

A library plays a pivotal role in ensuring the success of higher degree of research. The important activities of university libraries include the Collection Development, Reference Service, Circulation, Document Delivery, User Education, and Access to Electronic Resources etc. Universities libraries are expected to provide cost effective and reliable access to information using the state-of-the art information technology tools.

The basic objective of the university library is to be as a dynamic instrument for explaining the expanding the horizons of knowledge. The library endeavors to make the legitimate needs and demands of the patrons, from the senior academics engaged in advance research to the fresh entrant stimulate and encourage students to develop the life long habits of good reading, study and research and to be the centre of university for educational and scholarly pursuit.

Objectives of a university library are as follows:

- Conservation of knowledge amassed from times immemorial,
- Dissemination of this knowledge through teaching and publication.
- Extension of the bounds of knowledge through research work by teachers and other research workers, and
- Helping the teachers and the taught to achieve the highest academic honours and a lifetime of good reading.

A university library is no longer a part of an ivory tower world, it is a potential service oriented institution, accountable for every aspect of its performances. The fundamental role of the library is education. It should not be operated as a mere storehouse of books attached to a reading room, but as a dynamic instrument of education.

- To acquire process. Organize and make available varied types of reading materials for meeting the needs of different levels of user;
To guide research scholars and provide them the resource useful for enhancement of research projects;

To keep the faculty members informed of the latest amount of resources through in their fields of specialization;

To establish a information centre in library and render readers advisory service as to enable them to make use of library resources;

To adopt new technology, e.g. computerization in certain areas with a view to provide purposeful service in minimizing possible time; and

To keep to authorities informed of the achievement and literary output of the university, to seek support and financial assistance;

Information technology has revolutionized the information handling activities in the university libraries during the past few years. The information society demands that all the relevant technologies, that are involved in information processing consolidation, repackaging and retrieval be merged so as to evolve an integrated system; capable of providing diversified services. In this direction the automation of individual university libraries is a first step rather a pre-requisite for the development of such an integrated university library and information system. The promising trend in the development of information services with effective networking of these libraries will facilitate the optimum utilization of information resources.

1.1.2 University Library Services

Indian universities constitute one of the larges higher education systems in the world and today in our country there are more than 318 universities / institutions, 16,500 affiliated colleges, 10 million students with 5 lakhs teachers. This vast academic community needs a wide variety of information services in the changing academic environment.
The popularity and use of any library depends upon bringing of right contact between a right reader and the right book at the right time. In other words popularity depends on the extent to which satisfactory of optimum library services are being provided to the readers or library clientele. Library services are two types – technical services and reader services.

Technical services are also known as work behind the screen. In other words, technical services are the preparation for providing better reader services, which include acquisition of materials, classification, cataloguing, binding, weeding out of reading materials, etc. On the other hand reader services include circulation work, reference services, bibliographic service, information service etc. where the staff is in direct contact with the readers in providing library and information services.

A university library provides the following minimum services, that is lending services, bibliography instruction and library orientation, provision of general and specific information assistance in the location, searching of documents or bibliographies, preparation of abstracting and indexing services, reservation of documents, interlibrary loan, holding or library exhibitions, including display of new additions, current awareness service, reprographic service and translation services.

The university library offers various services require by its researchers right from concepts and analysis of the topic stage of research to the report writing stage. The following is a brief enumeration of the university library services to help its researchers:

- Bibliographical service (compilation of subject bibliographies relevant to the topic of research);
- Literature search service (either manual or on-line service from various data bases depending on the availability of the facilities);

- Current awareness services and SDI services to keep researchers up to date with the current advances in the subject field of the researchers, by providing monthly list of articles or contents pages of journals recently received; new accessions lists; in house abstracting and indexing services etc.;

- Document delivery services i.e., delivery the physical document to the user either from the library collection or from other sources. It includes ILL, online ordering, photocopying services, support of translation and communication channels like telefaximile etc.

- Reference and information services both short range, i.e. providing specific pieces of information and also long-range reference services by searching for current and retrospective literature, i.e. complex queries;

- Translation services i.e. either to obtain the required translation copies of the foreign language documents from the translation pools or translation banks. Like International Translation Center, Delft, British Library Document Supply Centre (BLDSC), London, ASLIB, London, National Translation Centre, Chicago INSDOC, New Delhi and

- Referral services a method of service to the scholars by directing them to the most like institutions, libraries or individuals who possess the information / documents when they are not in the stock of one’s institution library and cannot be obtained by ILL,

The university library extends the academic research supports at all levels and all stages of research. All such support is provided through different services stated earlier in fact, in offering such library services effectively and efficiently to
support the academic research, the following are essential pre-requisites on the part of the university library.

1.1.3 Levels of Evaluation

It is quite inevitable to evaluate and the type of services at two possible levels i.e. effectiveness, and cost-benefit.

The effectiveness should be measured in terms of how well a service satisfies the demands placed upon by its users. Such an evaluation can be subjective (e.g. conducted by gathering opinions via questionnaire or interviews) or objective (e.g. the measurement of success in quantitative terms), or a combination of the two. There are the ingredients through which the library services can be evaluated on the basis of gathering data from the users.

An evaluation of a system’s cost – effectiveness is concerned with its internal operating efficiency. Such a study measures how efficiently (in terms of costs) the system is satisfying its objectives, i.e. meeting the needs of its user, it will expose the staff efficiency and their credit facility in satisfying the user’s needs.

- Co-ordination between different units should be achieved.
- Information sources within a library system are made accessible to every bonafide user in the system. In actual practice, often, there are restrictions, created due to a sense of possessiveness on the part of the authorities concerned.
- Central catalogue of the total resources should be created along with local catalogue; in this connection a computerized catalogue may prove to be a boon.
- The hours of opening must be convenient of the users.
• Users need to be made aware of the existence of resources available at different locations, and
• All barriers to access must be removed or reduced.

1.2 Collection Development

1.2.1 Traditional Collection

Building suitable collections for scientific and technical libraries is a process of prime importance. Many users, when asked to evaluate scientific and technical libraries, will list the strength of the collections high on the major criteria. Science and technology collections are not the easiest ones to develop successfully in view of the complexity of the subjects involved, the large numbers of choice to make because of the sizeable quantity of books and journals from which to select and the difficulty of even knowing about certain gray area publications, such as important but elusive proceedings of meetings, little known government documents, or obscure papers which appeared as technical reports.

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

**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

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

1.2.2 e-Collection

The library environment is currently under going 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 out side 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.4
The classification of library collection in present electronic era is shown in diagram -1

**Library Collection**

- Possessed
  - Tangible
    - Accessible
      - Conventional
        - Books
        - Journal
        - Newspapers
      - Non-Conventional
        - Cartographic material
        - Reports
        - Patents and Standards
        - Dissertations/ Thesis
        - Photographs and Illustration
        - Drawings
        - Other graphic material
  - Non Tangible
    - Accessible
      - Digital Electronic
        - Cassettes
        - CDs
        - Multimedia
        - Floppies
        - DVDs
        - Cassettes
        - e-books/CDs
        - Handheld e-books
        - Optical discs
    - Instantly
      - WWW
      - e-mail
      - Online databases
      - e-books (online)
      - V-books
      - Blogs
      - Networks

**Diagram-1**
The formats of library collection in present electronic era is shown in diagram -2.

**Formats of Library Collection**

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

1. Newspapers
2. Journals
3. Annuals
4. Memories
5. Serials

1. Reports
2. Committee Reports
3. Commission

---

**Books**

**Serials**

**Print Media**

**Government and Inst. Publications**

---

**Microforms Materials**

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

**Collection**

**Non-Print Media**

**Miscellaneous Materials**

---

**Audio-Visual Material**

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

**e- resources**

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

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**Diagram-2**
Development in the field of digital libraries, Internet, electronic publications, CD-ROM etc. have forced the librarians to change the way they are functioning.

Function of Collection Development as analyzed in following diagram-3

1. User’s Analysis
2. Selection Policies
3. Acquisition policies
4. Resource Sharing
5. Weeding
6. Collection Evaluation

Diagram-3

In the content of recent development in IT, a mare development of collection is meaningless because much of the information can be accessed through networks.

Sizeable quantity of books and journals published can be judged from table. It can be seen from the table that in 1955 titles of books published were 532000 which increased to 1579315 in 2007. K.P. Barr argues that the number of currently
available scientific and technical periodicals which contain material of interest to
the practicing scientists and technologists is 137531. Whereas there are over
1, 26,000 periodicals listed in the database of Ulrich’s family of directories and is
increasing at the rate of 500 quarterly.

Table-1: Estimated World Book Production

<table>
<thead>
<tr>
<th>Year</th>
<th>World Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955</td>
<td>532000</td>
</tr>
<tr>
<td>1965</td>
<td>726000</td>
</tr>
<tr>
<td>1970</td>
<td>521000</td>
</tr>
<tr>
<td>1981</td>
<td>972000</td>
</tr>
<tr>
<td>1990</td>
<td>1026500</td>
</tr>
<tr>
<td>2000</td>
<td>1229000</td>
</tr>
<tr>
<td>2004</td>
<td>1531000</td>
</tr>
<tr>
<td>2007</td>
<td>1579315</td>
</tr>
</tbody>
</table>

Table-2: U.P. University Libraries: e-Resources Section

<table>
<thead>
<tr>
<th>S. No.</th>
<th>University</th>
<th>Separate Section</th>
<th>Computers</th>
<th>Printer</th>
<th>Software</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BU</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>CCSU</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
<td>Ingenta</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>CSJMU</td>
<td>Yes</td>
<td>4</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>DBRAU</td>
<td>Yes</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>DDUGU</td>
<td>Yes</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>DEI</td>
<td>Yes</td>
<td>6</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>LU</td>
<td>No</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>MGKV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>MJPRU</td>
<td>No</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>RMLAU</td>
<td>No</td>
<td>7</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>SSV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>VBSPU</td>
<td>Yes</td>
<td>20</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>
Table- 3: Separate Section for e-Resources

<table>
<thead>
<tr>
<th>Separate Section</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>5</td>
<td>41.7%</td>
</tr>
<tr>
<td>Yes</td>
<td>7</td>
<td>58.3%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

From table 2 it is shown that majority of the university libraries of U. P. (58.3%) have separate section while few libraries (41.7%) have not any separate section for e-Resources.

Table-4: Computers engaged for e-Resources in U.P. University Libraries

<table>
<thead>
<tr>
<th>No. of Computers</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 3 computers</td>
<td>8</td>
<td>67.4%</td>
</tr>
<tr>
<td>Less than 3 computers</td>
<td>2</td>
<td>16.3%</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>16.3%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
It is shown from the above table that most of the libraries (83.7%) have computers to access e-resources but few libraries (16.3%) don’t have any computer for this purpose.

**Table-5: Printing Facility of Downloaded matters**

<table>
<thead>
<tr>
<th>Printing Facility</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>4</td>
<td>33.3%</td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>66.7%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Most of the university libraries (66.7%) are providing printout facilities of downloading matters to shown in table no. 6 while (33.3%) are not providing this facility.

**Table- 6: Software using in e-resource Section**

<table>
<thead>
<tr>
<th>Software</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11</td>
<td>91.7%</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

As shown in the table 6 only 8.3% university libraries using software Ingenta for e-resources while 91.7% university libraries are not using any software to manage the e-resources.

**Table- 7: Staff for e-Resource Section**

<table>
<thead>
<tr>
<th>Staff for e-Resource Section</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff working</td>
<td>6</td>
<td>50.0%</td>
</tr>
<tr>
<td>No staff</td>
<td>6</td>
<td>50.0%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Libraries have insufficient number of staff to manage e-resources as shown in table no. 7 that only 50.0% library have only 1 or 2 staff but 50.0% library don’t have a single staff to manage the e-resources.

It is almost impossible for any university library in India to be comprehensive these days since the amount of literature published as seen above is so enormous and costly. The output of scientific and technical literature grows so rapidly that it would be neither feasible nor indeed reasonable for research libraries to acquire and stock all the scientific and technical literature produced throughout the world. Under the circumstances, particularly when limited funds are available a system must be evolved to maximize the benefits of limited investments without hampering the work of scientific research and development owing to the non-availability of the latest information. This aim can be achieved by ensuring that at least one copy of each significant scientific and technical documents produced all over the world required for scientific and technical development is available for use in one of the technical libraries in the country.

In order to achieve this objective of acquiring of copies of significant scientific and technical documents. There arises problems faced by the university
libraries in Uttar Pradesh also. No doubt there have been separate sections
established in few university libraries but these sections are known as computer
sections and only basic appliances have been housed for users service. There are
still 4 university libraries in U.P. who have no computer section and running their
libraries on traditional methods.

One of the major problems faced by the scientific and technical research
libraries in India is the non-availability of selection tools for acquisition of
scientific and technical publications published in the world. Due to the increasing
costs of printing materials and technology, the cost of the scientific and technical
publications has been rising tremendously.

1.2.2 Scientific & Technical Books

The rising trend in the cost of scientific and technical books can be seen from
table no. 8.

Table-8: Collection Development Trend

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Works</td>
<td>91.39</td>
<td>84.02</td>
<td>78.08</td>
<td>84.13</td>
<td>76.23</td>
<td>74.39</td>
<td>19.56</td>
<td>22.60</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>4.78</td>
<td>9.84</td>
<td>11.95</td>
<td>9.15</td>
<td>13.78</td>
<td>14.01</td>
<td>28.42</td>
<td>39.78</td>
</tr>
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<td>Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

1.2.3 Scientific and Technical Periodicals

It is apparent to all those even slightly acquainted with scientific and
technical libraries those serials including journals are of prime importance to
such organizations. Despite their costs and the problems involved in selecting,
handling and storing such literature, serials remain the key source of information
for most scientists and engineers.
The problems of collection in scientific and technical research libraries in India can be solved to a great extent by forming a network of libraries based on a grid system with a central nucleus linked with several regional and local units located in the various geographical regions of the country such as a multitier organization of the network would consist of various levels of libraries as follows:

(a) National Science Library  
(b) Regional State Science Library  
(c) Branch Subject Library  
(d) Local Scientific and Technical Research Library

A policy for coordinating the acquisition of scientific and technical publications and their distribution among different scientific and technical research libraries is essential and urgent in order that (1) the libraries do not have unnecessary work, (2) there is no undue duplication of material among libraries, and (3) the available funds for the purchase of scientific and technical publications are allowed to go the longest way for acquiring maximum number of publications. The most important of this material should be available in the local libraries for directly meeting the requirements of their users.

The branch subject libraries supplements the acquisition of individual libraries coming under their purview, with highly specialized and costly material, the use of which will be shared by all libraries in that branch. The unpublished material like research and development reports, trade literature etc and little used material in local libraries is deposited in the branch subject libraries.

The Regional State Library builds up a collection of general works and maintains a general reference library. They collect and hold theses and dissertations prepared within their respective states. They act as regional coordinating agencies in the national cooperative acquisition programme. The
National Science Library builds up national collections by complementing the branch and regional collections and by filling up areas not covered by them. A large reference library and a collection of bibliographical tools would be the core of the collection in the National Science Library.

1.2.4 Collection Development in University Libraries

An anticipation of demand is a rule of collection of library materials. Materials acquired by a university library should have some relevance with the parent organization and to the potential need of its users. The main library collections for communication and information services in most of the university libraries are books including society publications, periodicals, standards, patents, reprints, trade literatures, maps, charts, films, slides, microfilms, microfiches, film loops, tapes, etc. Naturally, due emphasis is being given for the procurement of those materials. In the present day where specialization has become the order of the day, books render only the fundamental primary information. By the time books are published, the information contained therein becomes source of basic nature. The specialists/researchers of the day require the latest information in the fields of their specialization/research; therefore, it becomes imperative to acquire relevant periodicals, proceedings, transactions, reports, etc. Periodicals, proceedings, etc are much more important than books so far as latest knowledge is concerned. Libraries attached to the institutions of higher academic study and research-work cannot therefore afford to be without periodicals. Moreover, the books and periodicals collection should be of a reasonable size so as to serve as a base for any research and development work in particular fields of their interest. Some of the technically and industrially advanced countries publish their periodicals only in their own languages which create problems for the librarians and the library users who are generally ignorant of those languages. Now a days collections of libraries in advanced countries are transferred to microforms in place of paper document as large materials can be stored in a small space and the
pilferage may be minimized in this form. At present the growth of scientific and technical literature on a particular field is so enormous that it would be neither possible nor feasible to acquire all the technical and scientific and other literature when limited funds are available. As such, selection of literature is made as per budget allocation is very much required.\(^5\)

In developing countries like India, great responsibilities therefore lie on various types of specialists to keep themselves abreast of the latest developments on their fields of interest. There is also a tremendous upsurge in the inflow of literature and it is extremely difficult even for the research library and university libraries to procure all the relevant materials. As such, the question of selection of material is very much important as per budget allocation.

1.2.5 **Procurement System**

There are many libraries, documentation centres and information centres in India which prefer to procure periodicals directly from the publishers. The system involves four stages:

(a) Requests for proforma invoice from the publishers for particular materials.

(b) Submission of proforma invoices along with completed application form to the State Bank of India for release of foreign exchange.

(c) Remitting the foreign exchange along with order for that material to the publishers in the shape of the bank draft.

(d) Receiving the materials.

The advantages of this system are:

(a) Uninterrupted receipt of issues;

(b) Publisher being the prime source, there is practically no chance of over-or under-payment;

(c) No need for any further proof for the verification of rates; and
(d) There is less chance for the remitted amount being embezzled.

The system is however, not free from disadvantages, some of them are:

(a) Individual correspondence with each publisher at all stages which involves tremendous amount of file work;
(b) It is difficult to ascertain about the delivery against payment;
(c) Often when the supply is not received the question of supply or refund takes long correspondence;
(d) Publishers generally do not take that much interest for the supply of materials to the individual party as they take for the Agents; Perhaps, this may be due to less monetary involvement in case of individual party; and
(e) Standing order is not possible.

In U.P. university libraries there is stagnant budget those are basically allocated maximum amount for books, very few amount for periodicals and less amount for accessories. There don’t allocated say no budget for e-resources those are procured out of the budget allotted to books, periodicals, accessories or the equipments.

**Table-9: Annual Budget for Library Collection (in Lakh)**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>University</th>
<th>Books</th>
<th>Journals</th>
<th>Non-Book Materials</th>
<th>Accessories</th>
<th>e-Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BU</td>
<td>47.5</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>CCSU</td>
<td>24</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>CSJMU</td>
<td>80</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>DBRAU</td>
<td>15</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>DDUGU</td>
<td>54</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>DEI</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
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<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>LU</td>
<td>47</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>MGKV</td>
<td>5</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>MJPRU</td>
<td>35</td>
<td>7</td>
<td>0.5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>RMLAU</td>
<td>40</td>
<td>3.5</td>
<td>0.2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>SSU</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>12</td>
<td>VBSPU</td>
<td>60</td>
<td>15.5</td>
<td>0.5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>421.5</td>
<td>81.5</td>
<td>0</td>
<td>1.2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Table-10: Budget for Library Collection

<table>
<thead>
<tr>
<th>Collection</th>
<th>Rs. in Lakh</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>421.5</td>
<td>84%</td>
</tr>
<tr>
<td>Journals</td>
<td>81.5</td>
<td>16%</td>
</tr>
<tr>
<td>Non Book Materials</td>
<td>0.00</td>
<td>0.00%</td>
</tr>
<tr>
<td>Accessories</td>
<td>1.2</td>
<td>0.00%</td>
</tr>
<tr>
<td>e-Resources</td>
<td>0.00</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>421.5</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the above table it is shown that maximum amount of budget 84% allocating for books where as 16% amount of budget allocating for journals and
very few amount allocating for accessories. It is crystal clear that out of 12 universities not a single university has allotted a single rupee for e-Resources. But few university libraries collected e-Resources out of funds allotted for books, journals and accessories.

1.2.4.2 Collection Development through Agents

Collection development through agents is facilitating:

(a) The agent concerned consolidates the requirement and places centralized orders on behalf of individual parties;

(b) Recoveries from the agent who fails to supply the materials is easier;

(c) The savings of national foreign exchange: in case of direct procurement the party has to remit the full amount to the publisher but the Agents are getting some discount from the publisher, thereby, saving some foreign exchange of the nation;

(d) Certain Indian agents are now supplying the materials by registered post without any additional cost thereby avoiding any missing of materials; and

(e) Some Indian agents have now started air-speeded delivery of some of their agency periodicals, resulting the collection of information materials earlier.

1.3 Storage in Microform

At present, information storage medium, which is being extensively used largely in advanced countries is microform, mainly microfilm, microfiche and CD-ROM. Information covering more than 3500 pages can be put on a single CD-ROM. Budget may not be difficult as CD-ROM is cheaper than paper. The prices of the library materials are increasing day by day. As a result, we have to minimize the procurement of library materials as generally budget remains constant in most of the cases. But by procuring in this form we can acquire more
materials. Library is a growing organism, as such, most of the libraries have to face space problem. Microform copies offer saving of space cost. For proper utilization of library open access system is desirable. But in practice more pilferages are found in open-access system and it may not be totally stopped in case of close access system also. By adopting microform, the pilferage can be checked.

The term university libraries are generally used to denote libraries specializing in a certain subject or group of subjects. As a generic term it has been used to include different kinds of libraries, such as those of industrial and commercial organizations, libraries of learned societies and government agencies and departments.

In fact university libraries grew up as a result of scientific and technological advances for satisfying the information needs and reference and research requirements of a specific clientele often limited to members of commercial, industrial, cultural organizations and government departments and agencies. The purpose of industrial libraries for example is to assist in the information required by the management, production, research personnel of industrial undertaking in their efforts to compete successfully with their rivals. As a rule, this type of library is often concerned with ‘micro thought’ that is supplying very detailed and highly specialized pieces of information contained in periodicals, government and technical reports, cuttings, illustrations and even unpublished material for specific anticipated needs, although books also form part of their resources.

The chief aim of university library can be expressed as “to save the parent organization both time and money”. The general objectives can be summarized as follows:
(a) The production and distribution of bulletins containing information relevant to the product, etc of the company.

(b) To circulate the original materials to key staff according to their subject interest.

(c) To provide base for development and research.

(d) To provide staff to conduct literature searches on behalf of management.

The modern library service calls upon a wide range of materials with which to provide its service to users. The acquisition of these materials is a skillful job demanding the sort of dedication that a housewife brings to the running of her home. In spite of the fact that books are controlled as far as their price is concerned and cannot be solid to the general public at less than the cover price imposed by the publisher under certain terms, there are many ways that librarians can obtain reductions in prices both for books and for the many other materials that are purchased. There are various techniques used by librarians to stock their libraries.

The selection of material for addition to the stock of a library should reflect the needs of its users. It is however only too easy for librarians or information officers to pursue an uneven purchasing policy in which subjects in which they are personally interested is given precedence over the needs of the users.

1.4 **Electronic Resources**

The advancements in information technology, communication technology and information (literature) explosion all together have forced the libraries & information centres to go in for the changes in the information services. The use of CD-ROM database is fast becoming popular in the university libraries. Since last ten years, a few university libraries are using the on-line information retrieval for
rendering the information services. In the 21st century many libraries are likely to use the on-line information retrieval facility for the services.

1.4.1 Information Services

The information services include the current awareness services and such other services. The Glossary meaning of information service is “A service provided by, or for, a special library which draws attention to information possessed in the library or information department in anticipation of demand; this is done by preparing and circulating news sheets, literature surveys, reading lists, abstracts, particulars of articles in current periodicals, etc which it is anticipated will be of interest to potential users of the service”. Although the glossary meaning of the information services gives an idea that these rendered by the special libraries, these services no more are restricted to special libraries. These services are now rendered by the libraries of higher and professional educational institutions, and a few public libraries.

The abstracting service which is an important area of information service, is likely to have changes in its basic structure in the 21st century. At present the abstracts are being prepared and published in the form of abstracting journal by libraries, professional societies, some private and government agencies etc. There is a delay in the preparation of abstracts. The printing and publishing of abstracting journals takes some more time. By the time the abstracting journals are received by the users, there is a delay of about six months.

Bourne observes that, “The print equivalents of some of the CD-ROM products (for example, abstracting and indexing publications) are available in the developing countries. Thus the basic information is available. However the on-line services and the CD-ROM products often contain more sources than is available in the corresponding print product. Thus computer based searching of a database (on-
line or CD-ROM) can provide an answer, that might not be found in a search of a printed index, for example, because a particular index access point like report number or contract number is not provided in the printed index, or it might provide an answer in minutes to a topic, that would take hours to search in the equivalent printed index. This is a great way to increase the productivity of a limited number of skilled professionals”. The use of CD-ROM databases and the on-line information retrieval are expected to help a lot, for information services in India, to increase the maximum productivity, which is very essential.

The UNESCO publication which is meant to inform about the availability of the translations i.e. ‘Index Translationum’, which was so far available only in the print form, is now available on CD-ROM. To quote from the publicity brochure of UNESCO, “It comprises over 600,000 references covering every subject (literature, social and human sciences, natural and basic sciences, art and history etc.). It is important to note that this CD-ROM replaces the paper edition. This is the example of the highly used publication from the international agencies like UNESCO publishing the information on the CD-ROM. It is expected that many such publications from international agencies/organizations will be in the form of CD-ROM databases.

1.4.2 Current Contents-On Floppy

A few current awareness publications by commercial agencies firms are now available in the computer readable floppy form. The ‘Current Contents’ publication of Institute of Scientific Information, Philadelphia, is now available in both i.e. print form and floppy form. This is the change in the physical form of commercially available current awareness publication. Some libraries are subscribing to the ‘Current Contents’ in the form of floppy. Many more such commercially available current awareness publications are likely to be issued in
the form of floppies. This will necessitate many libraries to go in for the purchase of required computer hardware.

1.4.3 Computerized Databases Development in India

In some information centres, the information services are being rendered by the computerized databases. The example of the National Information Centre of SNDT Women’s University, Bombay, NCSI, Bangalore and all the sectoral information centres of NISSAT could be cited. Apart from these, a few libraries/information centres are also rendering the information services through the computerized databases. But in the 21st century it is anticipated, that the information service will be rendered only through the computerized databases. The information service will totally depend on the computer database. The computer technology and communication technology have changed the overall structure of the information services. To quote Rajagopalan, “Computer Communication, micrography and audio-visual technologies have made a tremendous impact on the organization and provision of library and information services”.

1.4.4 Standardization

The standardization in anything/activity/service is always advantageous. Same is true of information services. The users of information services find it difficult to use the information products which are not standardized. The standardization in future will be of great use, if the library/information centres starts functioning as a centre of the library/information network. There are different information/library networks being set-up in the country like INFLIBENT etc. If the database is created in the standardized format, it is easy to render the information services. The standardization is required more now than earlier. The libraries functioned as almost independent units earlier. But that does not hold well these days. The libraries/information centres will have to depend on
the other libraries/information centres for the information services and be a part of
the networks.

1.4.5. **Collection Development Policy**

A collection development policy establishes ground rules for planning, budgeting, selecting and acquiring library materials. These documents provide a framework for coordinated collection development programme throughout university libraries. Collection development policies also function as a guide to library resources for faculty, other users and other libraries by describing the scope and nature of the collection. A collection development policy is a written statement of selection principles and criteria, with guidelines on the depth of subject coverage and details such as language, geography and time period. The e-resources should be considered alongside printed resources such as e-journals, books and databases etc. and the library formulates an overall quality collection development policy covering all materials. Such policy includes:

- Outline the present collection’s strengths and weakness.
- Identify the reader community that the collection are aimed at and recognized their needs, which will be met by the policy.
- Make the policy decisions available to all involved in purchasing activities.
- Most importantly the policy should be open to changes and constantly reviewed and updated.\(^6\)

**Table-11: Collection Development Policy for e-Resources**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>University</th>
<th>Col Dev Policy Framed</th>
<th>Cataloguing for e-Resources</th>
<th>University Website</th>
<th>Own Library Website</th>
<th>Preserve e-resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BU</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>CCSU</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>CSJMU</td>
<td>No</td>
<td>-</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>University Library</td>
<td>Collection Development Policy Framed</td>
<td>University Website</td>
<td>Own Library Website</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>--------------------------------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>DBRAU</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>DDUGU</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>DEI</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>LU</td>
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<td>No</td>
<td>Yes</td>
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</tr>
<tr>
<td>8</td>
<td>MGKV</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
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<td>9</td>
<td>MJPRU</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>RMLAU</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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</tr>
<tr>
<td>11</td>
<td>SSV</td>
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<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>VBSPU</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

The above diagram shown that only 17% university libraries framed collection development policy.
Every university designed there website but only (12%) university libraries designed their own websites.

1.5. Objectives of the Study

The proposed study focuses on the policies and practices of development and management of e-Resources in U.P. State University Libraries and examines the various criteria for selection and evaluation of e-Resources.

Keeping these facts in the mind the objectives of the study are as follows:

➢ To reveal the present status of e-Resources in the university libraries.

➢ To find out collection development policies of e-Resources adopted by the university libraries and evaluate such policies and practices.

➢ To explore the current practices of selection and evaluation of e-Resources.

➢ To recommend practicable guidelines for improved collection development programme.

➢ To study the emerging new information environment that affects the collection development activities in university libraries.

➢ To make an overview of the existing collection development policies and strategies and their application to Indian University library environment.

➢ To suggest policies for collection development suitable to Indian University Information System.

1.6. Research Hypothesis

The following hypothesis has been incorporated for the present study:

1. Present status of e-resources is not so good in the university libraries in U. P.
2. Less amount of libraries designed the policy for collection development of e-Resources.

3. The steps for collection development of e-Resources not properly implemented.

4. The situation of the man power working in e-Resource section is very poor.

5. Evaluation of e-Resources is not going on and

6. Insufficient fund for e-resources.

1.7 Methodology

Methodology in research is a way to solve the problem, to unfold the probable answer, and to test the hypothesis stated. As there are many roads leading to a city, likewise there are many methods to solve the problems of research.

The main purpose of the present study was to study the electronic sources and services provided to the users of U.P. State University Libraries. The questionnaire based survey method was used for data collection. 12 questionnaire distributed to all 12 university librarian to get the information related their libraries. All of them returned the filled questionnaire but due to constraints of time, about 600 questionnaires were circulated among the users (students, researchers and faculty members) of 12 university libraries for users survey, out of which 425 users responded. The analysis of the data for the present study was done by applying simple percentage.

Chi-square test was used to compare an observed group of frequencies with an expected group of frequencies. This led to deduce the expected frequencies from the null hypothesis. However, the labels and figures drawn with the help of data collected through questionnaire have been interpreted and discussed in the exclusive chapter.
Tables

- Facilities available in the library.
- Information retrieval services rendered and used
- Level of satisfaction about various types of services in the library
- Various channels of accessing information
- Problems facing in using / searching information through e- sources.
- In addition to tables pie diagram and bar chart are also prepared

Figures

Despite one librarian’s statement that “electronic information is not even for libraries or librarians, but the end user”, it impact on libraries is becoming more intense. During the past several years, electronic publications and sources have been produced and used at an accelerating rate. From its inception in 1987, CD-ROMs in print has expanded from a slim volume to un-imaging titles.

1.8. Limitation of the Study

The study will deal with:

1. State University libraries of U.P.

2. All central universities like BHU, Varanasi, AMU, Aligarh, University of Allahabad, Allahabad and BBAV, Lucknow are not considered for study as these central universities have ample of budget and developed large. This can not find a proper comparison of the state of the art.

3. There new state universities, which have been recently established, are also not considered for study e.g. Amity University, Noida, Manglayatan University, Aligarh and Sobhit University, Meerut etc.
The study will be limited into the following universities:

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<td>1.</td>
<td>Bundelkhand University, Jhansi</td>
<td>1975</td>
<td>BU</td>
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<tr>
<td>2.</td>
<td>Ch. Charan Singh University, Meerut</td>
<td>1965</td>
<td>CCSMU</td>
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<td>3.</td>
<td>Chhatrapati Sahuji Maharaj University, Kanpur</td>
<td>1966</td>
<td>CSJMU</td>
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<td>4.</td>
<td>Dayalbagh Educational Institute, Agra</td>
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<td>DEI</td>
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<td>5.</td>
<td>Dindayal Upadhyay Gorakhpur University,</td>
<td>1957</td>
<td>DDUGU</td>
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<td>6.</td>
<td>Dr. Bhim Rao Ambedkar University, Agra</td>
<td>1927</td>
<td>DBRAU</td>
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<tr>
<td>7.</td>
<td>University of Lucknow, Lucknow</td>
<td>1921</td>
<td>LU</td>
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<td>8.</td>
<td>M.J.P. Rohilkhand University, Bareilly</td>
<td>1975</td>
<td>MJPRU</td>
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<td>9.</td>
<td>Mahatma Gandhi Kashi Vidyapith, Varanasi</td>
<td>1921</td>
<td>MGKV</td>
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<td>10.</td>
<td>R.M.L. Avadh University, Faizabad</td>
<td>1975</td>
<td>RMLAU</td>
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<td>11.</td>
<td>Sampurnanand Sanskrit Vishvavidyalaya, Vns</td>
<td>1956</td>
<td>SSV</td>
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<td>12.</td>
<td>V.B.S. Purvanchal University, Jaunpur</td>
<td>1987</td>
<td>VBSPU</td>
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Chronological list of U.P. State University Libraries

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<th>Sl. No.</th>
<th>Library</th>
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<td>1.</td>
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<td>DBRAU</td>
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Location of above universities are shown in the following map
1.9. Review of Literature

Induction of information technology in the pedagogical process has brought a new challenge for academicians. Several studies have emphasized a strong need for computer literacy among academic staff so that they could access information through electronic sources. A computer literate faculty member is expected to be benefited from CD-ROM databases, effectively use OPACs and online services, and confidently explore the amazing world of Internet. Many researchers believed that use of computers in pedagogical process would help improve the quality of education as well as assist in intellectual worth.

Chu (1994) [7] examined age and gender differences among scholars using e-resources, and reported a negative correlation between age and r-resources use. The study also finds out that young researchers are more interested to use e-resources. He also studied the faculty use of e-resources in a university library.

Adams and Bonk (1995) [8] found out that university faculties are eager in using electronic information resources and point out that the libraries should procure e-resources to provide effective information services.

Johnson (1996) [9] revealed that libraries today are more than shelves with books. Increasingly, libraries are providing patrons with access to electronic resources, such as CD ROMs and online services. CD-ROMs provide end-user access to electronic materials. Libraries pay a fixed price for access to the CD-ROM database, allowing patrons and librarians unlimited access to these materials. He also stated that it is a good idea to purchase CD-ROMs and e-resources if those items are heavily used in library. Now day’s library materials are often heavily used in library. Now days library materials are often available in multiple formats like print, CD-ROM and online formats. Among these electronic resources are more preferable than others. It must be fallowed the selection criteria of e-resources like extensiveness of the content, types of access points, quality of
technical support, method of printing and conditions of licensing agreements should be considered.

Amudhavulli (1997) [10] studied the problems of electronic sources such as integrating them with traditional forms, costs of acquisition versus access, determining what collection development really means in the electronic environment regarding collection development in traditional libraries and how it can be tackled in IT environment. He also studied the problems those are facing by the collection development issues like finding out what is available, evaluating the sources available and acquiring and serving the sources required. He pointed out that ‘collecting electronic information is more problematic than collecting printed documents. Also collecting printed documents is not without its problems as well.’ Nevertheless, collection development, whatever form it takes, still requires policies and strategies governing the acquisition program.

Aptagiri (1997) [11] discussed the constraints and criteria for collection development in libraries and information centers and examined the internet as a world-wide source of information and as scope for electronic collection development. The role of Internet as more the just.

Bali (1997) [12] has suggested an appropriate Collection Development plan for NISTADS library. Her experience is an indication of challenging tasks in Collection Management to meet the ultimate information demands of users. She also traced on resources sharing to develop the library collection.


Parameshwaran (1997) [14] defined Collection Development in University Libraries and discussed centralize and decentralize pattern. He also
opined that all the staff members of the library should be involved in the Collection Development Policy to develop a balanced collection.

Rao (1997) [15] revealed that the impact of CD-ROM databases, internet and digital libraries on collection development is quite significant. Challenges in this regard are discussed in his paper and argued that it is necessary to conduct a survey of available sources on various networks. Effective techniques are required to search and store the downloaded data. The policy for collection development should take care of recent advances in information technology, and its impact. He concluded that IT has its impact on collection development and it is necessary to monitor what is available on various networks. It may also be necessary to search frequently such networks and download the relevant records depending upon the local interest. Effective techniques may have to be developed for storing and searching search downloaded data. Since electronic publications, including the CD-ROM databases are increasingly becoming popular, the policy towards collection development should take care of such trends.

Seetharama (1997) [16] discussed that the impact of information technology on collection development and collection management. He also discussed about the changing role of libraries and librarians in handling traditional as well as electronic resources.

Wajih (1997) [17] explained the changing phase of Collection Development regard of information explosion. He discussed about cooperative collection development policies suited to the current philosophy of providing access to information through a sharing mechanism stressed upon the need of improving the quality for library services through it and also discussed its advantages.

Wakhare and Jaleel T (1997) [18] discussed about the collection development in the Internet era with the help of some of the sources available in
the Internet. It also argued that the Internet itself is a better tool for accessing the collection rather than processing. He concluded that in the context of networks, there would be need to think of information resource development rather than collection development. Well defined policy should be formulated in the present situation to need the information hungry and impatient. Nevertheless, the librarian should provide services which should encompass and enriches the potential of the Internet.

White and Crawford (1997) [19] opined that electronic resources are becoming increasingly important to libraries of all types and sizes. Addresses the development of an electronic information resources collection development policy to guide the librarians at Penn State Harrisburg in the selection of electronic reference resources. Instead of focusing on how well a given item fits into or supports the collection, the policy gives general guidance on the selection of electronic resources. The general collection development guidelines for electronic information resources include relevance and potential use of the information, redundancy of the information contained in the product, demand for the information, case of use of the product, availability of the information to multiple users, stability of the coverage of the resource, longevity of the information, cost of the product, predictability of pricing, equipment needed to provide access to the information, technical support and availability of the physical space needed to house and store the information or equipment.

Tenner, Gyeszly, and Rholes (1998) [20] In a research paper entitled “Electronic and traditional sources for a newly established branch library: Product availability and user preferences” the author emphasizes the trend toward electronic publishing of journals holds out the promise of greater availability of these materials without regard to physical location either of the collection or the patron. In concert with faculty from the departments of political science, economics and the George bush school of Government and public Service,
reference and collection development librarians developed a score collection for this facility. A review of journals requested by the faculty served at PSEL revealed that not enough of these titles were available electronically. Further, what was available electronically often did not include the full-text, cover-to-cover completeness necessary. Faculty preferences remain for the print versions, citing problems with coverage, reactions to electronic journals. Issues explored include: access to e-journals: reading habits; financial implications; and the future roles of librarians, subscription agents and publishers in the electronic environment.

Devika and Madali (1999) [21] reveled that new forms of documents such as electronic resources and web based documents are available to provide services to the users. She also tried to fiend out a place for these new forms in the collection development policy for libraries and information centres and concluded that Collection development policy for inclusion of electronic resources should be carefully and meticulously designed. Electronic sources by nature unique and varied. The introduction of electronic sources should complement the present collection. Complete replacement of traditional sources by electronic sources may happen gradually over a considerable period of time.

Montgomery (2000) [22] describes the background and development of the migration to an electronic journal collection by the W.W. Hagerty library of Drexel University, Philadelphia. Starting in 1998, the transition was a key component of the library’s strategic plan, and with a few exceptions, journals are purchased in electronic- only format whenever possible. Drexel’s collection now Consists of only 800 print subscriptions and 5,5000 electronic journals. A newly created position of electronic resources librarian acts as a focal point for the integrated development of gall electronic resources.

Seetharamaand and Ambuja (2000) [23] stated that the term ‘Library management’ has been changed as ‘Information management’ now it is called as
‘Information technology management’. IT has made management of information a relatively easy task thus helping in quick and easy access to information. The growing impact of IT has some how completed librarian to use IT effectively to render service and with the growing number of e-resources, it has become imperative for information professionals to redefine the process of collection development.

Chartron (2001) [24] stated that library consortia created for the purchase of documentary resources is a topic of current interest that has led to a certain amount of reorganization in terms of the management of scientific libraries. This new method of acquisitions, particularly as regards of databases and collection of e-journals adopted by so many libraries of in North America, Europe and Australia. She concluded that consortia for the purchase of e-resources are being created in France but this process continues to lag behind many European countries.

Rao (2001) [25] discusses that the developments taking place in the scholarly communication system by reviewing the published literature on journal subscription, It examines the role of different players in the scholarly communication process such as authors, commercial publishers, libraries, universities, and learned societies, their problems and efforts in meeting the new challenges brought in by the internet. The study also explores the need for adopting electronic media for scholarly communication in place of printed journals considering the advantages such as accessibility, speed, cost and acceptance by the academic and research community. At the end it provides general guidance to authors, publishers and libraries to develop mechanisms for mutual bereft and foster the scholarly communication process in new environment.

Srishaila (2001) [26] stated that with the advent of electronic information and with it the chaos, Internet needs the science of library professionals to bring in some order and thus make the existing resources more accessible and more widely used. Librarian need to exploit technology to build a bridge between traditional
library systems and digitized documents. Attempting at indexing and cataloguing e-documents is a step forward in this direction.

Szu-chia (2001) [27]. The Author discusses the results of a continuous study of access issues related to electronic journals currently distributed via the Taiwan Academic network (TANet). Data are reported on the accessibility of electronic journals, the status of electronic journal archives, the subject coverage, the indexing and abstracting services, and the various data formats used by electronic journals. The findings illustrate the practical issues that can arise when users attempt to retrieve the texts of electronic journals. The implications for academic and research libraries are also considered.

Tonta (2000) [28] discussed in his paper that the amount of information sources available through both printed and electronic media are ever increasing. Even libraries with considerable collection development budgets are having difficulties in coping with this increase. In this paper author reviewed the state-of-art of Turkish university libraries and summarized the efforts aiming to set up a university library consortium to provide consortial access to electronic information sources and services. The author also discussed about some issues and problems which are presumably delaying the establishment of such a consortium and he also concluded that Turkish university libraries are trying to expand their electronic information sources and services through consortial agreements with publishers and vendors, even though no formal consortium is in place yet.

Swarna et al. (2002) [29] suggested in his study that there are several high quality, free e-journals existing in web and these e-journals is being under used due to lack of publicity, user habits not being accustomed as yet to the electronic media and low visibility. The libraries would do well to publicize such journals that they fined scholarly enough and librarians may provide access to them through their home page. And even take the responsibility of archiving them.
Chowdhari (2003)[30] opinioned that Collection Management policy is required to provide guidelines for consistently developing Collection, evaluation and maintenance of resources for easy access to quality information suggested a Collection Management policy that links the objective of Collection Development and the information gateways in Social Sciences in India.

2003 Goudar and Level and Myers (2003) [31] observed that collection development activities are an important and ongoing component of every library. With intranets and web authoring tools, digitizing the collection development workflow enables libraries to have an increased level of efficiency and accessibility. This article made the outline, creation, development and implementation of web accessible collection development tools. These tools integrate procedures, forms, policies and library organization websites. A coordinated collection development website may consist of online tools, web resources, work-flow processes, instructions and other information for selectors and library staff as well as information for library patrons.

Maheswarappa and Ebnazar C. (2003) [32] studied on the use of internet resources and services in Gulbarga University. In this study they found a great deal of first time and exploratory use of Internet in Gulbarga city. Further study is required to see if patterns of use change as a function of time and user satisfaction increases.

Manjunatha and Shivalingaiah (2003) [33] revealed that in the age of digital evaluation escalating price of electronic information, resource sharing is critical for effective functioning of libraries. Increased availability of information in digital format and high costs of journal subscription compels the libraries to work together. Technical advancements provide a platform for digital resource sharing and offer many opportunities for librarians to become more technical and
professional. His work also attempted to identify the needs and factors influencing the electronic resource sharing and presented requirements and strategies for effective resource sharing in academic libraries.

Nyamboga and Kemparaju (2003) [34] discussed that the challenges posed by the accelerating pace of change in the world of information especially in developing countries and stresses the importance of managing the change by focusing on collection development (inclusive of electronic resources), training & development skills of the information professionals and also library users. It also examined and provided general views on how libraries and information centres should approach the situation in order to accomplish and acquire at least simple electronic resources while talking into consideration the library and information policy.

Salinas (2003) [35] discussed how libraries have and can address digital divide through collection development. He also discussed how collection development has changed in general through emergence of digital technology. He also concluded that libraries have always been leaders in creating change and the digital era brings yet another occasion to leave a mark.

Singh (2003) [36] emphasizes the need of knowing, how to evaluate CD-ROMs and online reference sources, enumerates the important characteristics of reference sources and finally describes various criteria in detail which can be used for evaluation of e-resources. She also stated that for evaluating e-resources, one should be very critical of any information found on web, and it should be carefully examined most important thing about internet sources is to know links given to other web pages are current as well as the qualitative in nature.

Vaughan (2003) [37] examined the short-term effects of online availability on the use of print journals. He compared reshelving of print journals with the introduction of online journals. The study concluded that there is a diminished use
of print journals with the introduction of online journals. This study is also
discusses the problems encountered in managing online resources.

Vohra (2003) [38] reviled that in the current electronic information
environment emphasis is towards excellent collection than large collection and
development effective means of gaining access to remote databases. Today
Internet has established itself as the store house of all worlds’ resources in the
electronic form. The paper examined the impact of the information technology on
libraries, especially development of digital libraries, Internet, electronic
publications, CD ROMs etc. Electronic information resources have brought in new
system of storage, retrieval, preservation & conservation and computerized
information system & services. Policies and programmes relating to collection
development should be in the context of current information environment.

Maharana and Dutta (2004) [39] discussed about the policies and practices
of development and management of e-resources in the select R & D libraries of
Kolkata city. They discussed about collection, policy statement and effective
management and examined various criteria for selection and evaluation of
collection.

Inamdar (2004) [40] stated that the conventional libraries are now in
transforming phase. The techniques of accumulation / gathering of information,
processing it and way of disseminating it among the readers have also drastically
been changed. The librarians, there fore, have to get acquainted with the new
trends of fruitful training on library automation and electronic information
handling which they are lacking. An attempt has been made to draw a strategic
plan for electronic information handling for library professionals. He also
suggested some points to the librarian for information handling technology
strategy are undertake a systematic assessment of readers information competence
to develop a bench mark, develop a model list of information competence skills
for readers, develop pilot information competence programs of course, utilize
computer software that enables the librarians for information competence and develop a workbook and checklist to assist the subordinates for information competence.

Johnson (2004) [41]. The author discusses that the introduction of electronic journals and electronic versions of journals has made serials collection management more complex. Libraries may want to offer a particular journal in both print and electronic formats, but find that it is often not financially feasible. As budgets become tight, librarians have to choose between one format or another. In order to make the decision about what format to purchase, Librarians need to know the format preferences of the users. To determined these preferences. Library professionals can use several methods, such as user surveys, usage reports, and educated guessing.

Pandit (2004) [42] in one her paper stated that Collection Development is a vital process in creating and building a library collection. It is a well planed activity for which a well defined policy is essential. She also concluded in her paper that digital resources are affecting collection management policies and they are drawing attention to two areas that how do collection managers react to the changing information need of users. Other is with more and more resources available in the digital format, the collection development has to include these resources, thus making them easily accessible to the users. The policy should include these resources enabling their selection, acquisition preservation and distribution.

Pelmet and Azeez (2004) [43] discussed about the need of e-publishing. Electronic journals and electronic books play a crucial role in the changing scenario of libraries and information centres. They also discussed about the emerging technology of electronic publishing. E-publishing is the publishing process where the manuscripts are submitted in electronic form, edited, printed and distributed to readers via computers and the network of networks of computers. It means that e-publishing realizes the dissemination of information
through electronic media in all its various stages. This paper covered e-journals, e-books, advantages of e-journals and e-books, publishers of scholarly e-journals and important e-publishing initiatives.

Thakur and Thakur (2004) [44] revealed that technology has been an important driving force for changes. Emergence of Internet, portal technology and rise of e-resources has brought a revolution in the information storage, processing retrieval and dissemination of all forms of information worldwide.

Varalakshmi (2004) [45] analyzed in his study about the present collection development procedures under the impact of electronic information environment. He also stated that the digital electronic materials offer reduced production costs and more sophisticated method for use. Interest of the university libraries in India is to strike a balance between print and electronic resources. The study reviewed various solutions that have been proposed to solve the issues of collection management in India and abroad. He also suggested policies to be considered for effective planning of collection management in the digital environment.

Venkadesan, Jagannath and Puttabasavaiah (2004) [46] stated that the library environment is currently undergoing a rapid and dynamic revolution on leading to new generation of libraries 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 hand to support this demand at lightning speed by way of e-publication as well as online access. As a result, a large number of e-resources are published all subject areas. Therefore, library needs to adopt electronic media for its collection development in a better way to fulfill the requirements of users. He also described in details, the steps taken by the library for a comprehensive e-resources access package model so that the researchers reap the maximum benefits by giving access to reasonable level to meet their information requirements for academic and research activities.
Abdulla (2005) [47] described the nature and scope of the journal migration, as well as the impact of this decision on the library and its user community. He also discussed about the development of e-journal, at UAFU and highlighted the impact of e-journals on the library and its users. He also stated that the UAFU libraries are still in the stage of building an effective electronic resource base. The electronic resources committee plans to facilitate studies related to the nature & degree of use.

Jose and Pacios (2005) [48] The author shows the impact of consortia purchased periodical publications on document supply services. These services have undergone considerable changes over the last five years, first decreasing but now recovering. It focuses mainly on the impact of electronic journals in libraries, their effects, and proposed actions. Second, as an example of the new behavior, presents the document supply service data, as collected on one hospital’s health-science library in the last four years.

Mounissamy, Kaliammal and Swaroop Rani (2005) [49] revealed that e-resources offers today’s users with many opportunities that were not available to predecessors. The e-journals service for the users, it is extremely important to show the accountability because e-journals are quite expensive and are leased rather than purchased. Present study was undertaken to know the level of use of the available electronic journals, how faculty and students feel about various issues relating to e-journals and whether attitudes change depending upon gender, age, access place and branch of study etc. They concluded that the younger generation has accepted the digital reading culture. Low-level problems, especially delays in gaining access and impediments to moving about, with in and between journals are major de-motivating factors in the use of electronic journals. They also stated that some of the problems are with in the control of the publishers and can be alleviated by the publishers like length on screen reading, double column layouts, the adobe Acrobat software does not support user-friendly journals usage.
It is slow to deliver articles. There are some factors those are not under the control of the publishers of e-journals such as network delay, increasing traffic and inadequate bandwidth etc. are to be taken care of by the subscribers.

Ferguson (2006) [50] tried to examine in this paper about the change of University of Hong Kong Libraries from a mostly print collection to a mostly electronic collection. The paper finds that the change to a mostly electronic collection has been successful. It has brought new problems involved with keeping up with the technological issues. Both students and faculty are pleased with the new collection. This change can make a large number of resources available to users at a reasonable price. There are, however, new jobs to do and new skills to learn. This paper presents an excellent example of how a library can move to an electronic collection while continuing to provide quality services to its users.

Kaur and Verma (2006) [51] surveyed in this study to know the use of library service and awareness of electronic resources. This paper also examined the interest of the users about internet, infonet, CD-ROM databases and other services provided by the library. It observed that users use fewer amount of e-resources due to lack of awareness of various electronic sources and suggested that library should provide user education / awareness programe for the users of e-resources.

Lohar and Roopashree (2006) [52] analyzed the use of electronic resources and how the electronic resources are improving the academic carrier of the faculty members of college and universities. They also tried to find out the problems facing by the faculty members at time of accessing the e-resources. And concluded that the main intention of the use of electronic resources of faculty members is the academic interest. The speed of availability and the ease of accessibility of information make the faculty members to use electronic resources in academic environment.
Olaojo and Akewukereke (2006) [53] stated that collection development is a planned, continuous and cost effective acquisition of quality, relevant materials to meet the needs of users and the objectives of the library. Collection development is not only growth in volumes and titles but in the quality of acquired materials in enhancing effective information delivery. It is only from this perspective that the word ‘development’ could be meaningful in relation to collection development. He also discussed about the collection development policy which establishes ground rules for planning and budgeting, selection and acquisition of library materials. He also mentioned about the ALA standard as discussed by Carter as three elements of collection development policy are general overview, which is the introduction and general collection; detailed analysis of subject collections and a miscellaneous section.

Sanchez Viganu and Presno Quesada (2006) [54] discussed in this article about the topic of collection development in a digital environment. Developing digital collections is a logical consequence of inserting information technologies in organizations. The usual route towards other models of libraries has allowed the development of the digital collections as a source of Digital Libraries. The current information society requires collection development to guarantee suitable resources in information organizations. The authors also gave a new way of looking at the development of digital collections. In this paper they proposed a cycle to create a digital collection starting from the established precepts for traditional collection development.

Ameen and Haider (2007) [55] the main purpose of this paper was to explore some major challenges in the area of collection management faced by university libraries in Pakistan. The challenges regarding collection management in university libraries in Pakistan are: handling the hybrid character of collections, service to users, training of collection management staff, collection evaluation, resource sharing and preservation. This paper provides an example of the
challenges of university libraries in a developing country which must plan and develop a customized paradigm of library service which combines the traditional and modern services.

Amudha and Mary (2007) [56] opinioned that the electronic revolution affects the tradition of the academic and research library as an institution that collects and stores information and makes it available to its users would be obvious and is indisputable. Due to technological development, libraries are in the main, moving from holdings to access strategies. This implies that collecting policies are significantly changing and that libraries need to disseminate widely information on their collecting policies. Collection development process is more complex and should be well balanced. It enhances the commitment to meet the organization’s goal and reduce the biasness. Thus act as guide to the library staff and other stakeholders in building the collection as core so as to enable other library programs.

Elam (2007) [57] a survey of art historians was done by the author to ascertain their use of e-resources. The paper discussed the impact of electronic resources and digital image databases on the research methodologies of today's art historians. Although art historians depend on using the library for research, many have a rather limited awareness of electronic resources and have not fully developed the skills to utilize them to their fullest potential.

Golean (2000) [58] tried to provide a concept of learning theory and presented a cursory overview of why education activities, like teaching and scholarly research, use of internet resources need to be first grounded in the concepts of learning theory. It also explained the status of conducting scholarly research in the field of education using the internet and web at that time. It also highlighted about the several categories of educational internet resources like commercial databases, govt. and educational web resources. It also provided a brief speculation concerning the possible future of internet and web information in
future educational research and scholarly activities. He concluded that the internet should be collection of tools that can be incorporated into the instructional design of any educational program or library information literacy program, which augments the individual’s learning styles and skills.

Gowda and Shivalingaiah (2007) [59] made an opinion poll, collected from the respondents and reviled that whether the electronic resources have changed their way in searching the information. Majority of the respondents favored the usefulness of the electronic resources and agreed that they have changed their way of finding the information.

Harper and Norelli (2007) [60] the paper discussed about how the motivations for business partnerships and faculty-librarian collaborations are similar. A conceptual model suggests that the depth of the BFL relationship significantly enhances electronic collection development outcomes. Literature concerning strategic business alliances, faculty-librarian collaborations, and collection development was examined to determine whether principles that are applied to strategic business alliances can also be applied to BFL collaborations. A case-in-point is included for illustration. The authors find out that the specific principles of strategic business partnerships can be applied to BFL collaborations aimed at improving electronic collection development. In addition, driving forces such as assessment, communication, and technology influence the nature of alliances across the business and academic arenas. They also demonstrate how BFL collaborations can be made more effective through the application of business principles. BFL collaborations can positively influence electronic collection development in a variety of ways. The paper offers a new and unique conceptual model that improves understanding of the nature and depth of BFL collaborations in the context of electronic collection development.
Kaur and Satija (2007) [61] discussed various trends in collection development in digital environment. The changes that have occurred in acquisition, retrieval and storage of information due to technological developments have been discussed. Also discussed limitations, restrictions, and problems being faced by librarians and readers due to the same. The way these developments have affected the academic environment and changed the role of librarian has also been portrayed. With more and more resources are available in digital format, the collection development has to include these resources thus making them easily accessible to users. He also concluded that the day is not so far off to visualize all Indian libraries with huge digital collections and latest technology to access the e-resources.

Milik (2007) [62] revealed that despite the series of disadvantages or demerits posed by the world of e-journals, thus is a must for modern teaching being world. In due course of time with move technological development and economic enhancement of the Indian users and providers of university, college etc. these problems may overcome. This e-journal should be popularized in the academic culture of India.

Pricilla Rani and Geetha (2007) [63] opinioned that the electronic resources are becoming more and more available in the libraries. The print media is now being digitized, which increases the availability of books and journals in the electronic format.

Rajput, Jadon and Sahu (2007) [64] revealed that the users of IES have developed their educational work and academic carrier by using Internet services. The speed and availability and the ease of accessibility of information make the users to use Internet resources more frequently. They also made a commend that this study helps the librarian and his staff to know the importance of Internet resources and services in academic environment.
Singh, Kapila and Pateria (2007) [65] stated that the concept of library is changing very fast due to impact of ICT. Now the libraries will not have only printed collections but also digital resources, which are not seen physically. The technology has forced the library to digitize information. Keeping in view of all this libraries will need redefining or reengineering as they may be named as Knowledge Management Centers, Cyberary, Ebrary, Virtual library, Digital Library. No doubt technology will play major role in changing the shape of libraries in the time to come yet basic material will remain the same. Whatever the technology may come and find use in the library for the benefit of users to access the information as a fast mode of communication and whatever nomenclature may be given to library, but it is a hardly matter that the print media will hold the vein of library for the society.

Tholkappian & Chandran (2007) [66] observed one of the bottle lines between the traditional bibliophile ‘and modern technology is drawn over the concept of e-book. The production and usage of e-books is growing at a fast pace and warrants serious consideration, especially in libraries and information centres of Indian Universities.

Adams and Noel (2008) [67] described how circulation statistics may be used to evaluate collection development policies. The circulation statistics of books acquired by a science library in a specific year are analyzed by publisher, publication date, and subject. This paper finds that older books circulated more than recently published titles purchased at the same time. Circulation averages varied considerably between publishers.

Asok Kumar, Saravanan and Balasubramani (2008) [68] examined the use of electronic resource by scholars and identified their acceptance toward e-learning. It focused particularly on how frequently the scholars are using the e-resource. The study also determined the purpose of using electronic resources.
They concluded that still few scholars are depending on printed information sources and consulting indexes, abstracts and journals in the library, but they must adopt the current transformation the scientific communication systems, which is now progressing at a speed they can not easily escape. The e-publishing will continue to evolve, mutate and change as technology and society evolve.

Bharati and Zaidi (2008) [69] described the use of e-journals and e-databases subscribed by UGC- INFONET consortium by the users of Aligarh Muslin University. Besides extensively covering the use of e-journals and e-databases, the paper also examined the utilization and satisfaction levels of users with respect to e-journals and e-databases. They concluded the e-resources are highly useful for the research and academic community in the present electronic environment. They also suggested that the academic community the authorities of the university library must conduct the user awareness programs to train the research and academic community in the maximum utilization of these electronic resources more effectively and efficiently at the AMU campus.

Chopra (2008) [70] stated that the survey of faculty members, research scholars and students regarding use of e-resources is very encouraging. Awareness of e-resources is must for the users of any university library. He also stated that manuscript writing continued for thousands of years. Invention of printing press was considered a great revolution but advent of information technology has absolutely changed the working of all spheres within a decade and libraries are no exception. Libraries of India have accepted the new role. Gaur Nanak Dev University, Amritsar is trying its best to use the e-resources.

Dhiman and Goswами (2008) [71] emphasized the need of traditional libraries in digital age. Today, libraries are moving towards digital age, but the importance of traditional libraries can not be ignored. It highlights some of the problems of digital libraries in digital environment. They also stated that digital
libraries, virtual libraries or electronic libraries may provide better services and quick information to their users, but this is the fact that still there is a need of traditional libraries due to our economic condition, literacy rate an un-acquaintance and unwillingness of readers in using the electronic resources, traditional libraries will remain be an essentially to play its social and cultural role in much better sense than digital, electronic or virtual libraries.

Gupta (2008) [72] tried to examine the usage of e-journals by the research scholar in the university of Lucknow. The survey revealed that all research scholars are aware of e-journals and most of them use both printed and e-journals. She also stated that all though so many problems are facing by the research scholars to access the e-journals but overall maximum are shifted with the use and accessibility of e-journals. At last she connects e-journals can not replace with traditional sources.

Henry, Longstaff and Kampen (2008) [73] tried to illustrate, outcome and result of a collection analysis done by a smaller academic library. The collection was evaluated using an online analysis tool combined with a physical inventory of the collection. Peer group comparisons revealed some of the problems with this particular collection were also widespread among the comparison libraries. The value of the e-book collection to patrons was clear, not only did e-books provide resources to remote students; they help compensate for shortfalls in the print collection. The catalog more accurately reflects what is on the shelf and also what is reported to OCLC. Access to the collection has been improved and enhanced. Steps were taken to refocus the library's collection development procedures and management. The changes made have led to increased faculty involvement in selection and a more balanced, more comprehensive collection management plan. For any library considering whether they can or should do an analysis, the article illustrates that the benefits are well worth the time and expense. The analysis had a positive impact on collection development and management.
Krishna, Sharma and Mishra (2008). [74] stated that a very valuable source of quickly accessible and accurate information are on-line databases which can be very significant in research work of every field. Internet is a most effective electronic media for selection, collection, storage management and dissemination of information of universe of knowledge. Finally it reveals that the users of the college have become more conversant with use of internet along with other e-resources and electronic media for information access.

Pandhey (2008) [75] stated that among three important functions of librarian namely collection, storage and dissemination of reading material, the collection plays vital role of the libraries. In order to meet the user’s requirement the staff of the library must keep in mind Five Laws of Library Science given by S. R. Ranganathan. Keeping in view these laws every library must build and develop their collection so that it can help in furtherance of education and help its users step into a world of adventure and learning.

Rao et al. (2008) [76] stated that internet are likely to play more important roles in many aspects of medicine in the future. But for the health care professional and the health consumer, accessing accurate information on the web is not easy. This paper makes an effort to list the selected web resources on medical sciences which are useful for learning, teaching, patient care and research activities of the medical institution. They also concluded that with so many web sites available on medical and health related information, it is impossible for any user to get the information user seeks in the shortest possible time. The URLs of selected web resources mentioned in the paper will help in locating health related information for medical professionals, students and librarians. However, in most of the cases, free access to the full text may not be possible as one has to be a paid individual or institutional subscriber.

Singh, Nazim and Singh (2008) [77] reported the result of a survey conducted at Jamia Millia Islamia University to determine the extent to which
users are aware and make use of online journals. The study also examined the
seared pattern of online journals. They concluded that online journals have
become the vital part of information for various needs as well as important for the
research community. It is proceed that online journals save time of the users. They
also suggested that due to lack of training among users and proper infrastructure in
the library users are not properly using the e-resources so the authority must
conduct training programs for users. This study helps the librarian to know the
importance of e- resources and it helps them to improve the services related to
online journals.

Tappeiner and Lyons (2008) [78] stated that the relevance of building video
game collections in academia to support research and learning on campus and to
propose useful criteria for building video game collections in academic libraries.
The authors examined collection development policies of selected academic
libraries as well as research discussing the cultural, historical, and educational
value of video games. The authors also examined video game playback devices,
games and their packaging and popular game web sites. The authors outline
selection considerations for developing video game collections and propose the
following criteria for selecting games: physical characteristics, teaching and
learning principles present in the games, subject matter and content, and the
cultural and historical value of a game. They concluded that establishing video
games in libraries is not a new topic, but most discussions have been focused on
public libraries or the entertainment value of video games in academic libraries.
They focus on games as serious objects of study in academia and provide best
practices for video games collections development.

Teel (2008) [79] aimed to discuss significant outcomes of change and
improvement in a collection based on the inventory outcomes. Featuring a case
study of the East Carolina University Joyner Library Teaching Resources Center,
application of the shelf analysis data is used to develop a long-range plan for
implementing changes and improvements in the collection development process and outcomes are discussed and explained. Through assessment, budgeting and collaborative collection development, successful outcomes were accomplished significantly improving and increasing services and resources for users. The results of an initial inventory project conducted in the East Carolina University Teaching Resources Center improved the relevancy, accuracy, reliability and circulation of the curriculum collection. Using the data from the initial inventory to conduct further assessments, this case study discusses significant outcomes that were accomplished by implementing long-range strategic planning. This article substantiates that a collection inventory provided the catalyst for instigating major changes in the curriculum collection development of the Joyner Library Teaching Resources Center.

Tripathi and Jeevan (2008) [80] discussed the different barriers to provide electronic resources and services to the distance learners and also gave some valuable suggestion to overcome on those barriers like implementation of resources and services; promotion of resources and services; infrastructure at the study centers; and orientation and user education programs.

Upadhyay and Chakrabarty (2008) [81] described the use of online journals and databases and their awareness among researchers of IT- BHU. It examined the awareness of researchers and use of online journals databases available through UGC-INFONET, INDEST consortia. They also highlights some suggestions given by the users for improvement of online resources like some more awareness and training campaign programme is required with the help of experts from the online publishing agency; time of using to access the e-resources of the library should be increased and; some required e- journals must be subscribed by the library those are much more useful for the users.

Veenapani, Singh and Devi (2008) [82] stated that the e-resources are highly useful for the research and academic community in the present digital
environment in which the UGC–INFONET has to play a significant role to assist the academic community in the provision of this unique service to academic and research community. They also suggested that for the improvement of the system required to be translated in to reality by the authority of Manipur University so that effectiveness and accountability of the same can be maintained to serve the users community in a better way.

Vishala and Bhandi (2008) [83] stated that electronic publishing is an important media of the new Information Technology. E-journals are attracting readers’ attention in today’s networked environment. These e-resources are main vehicles used by researchers for scholarly communication. The present study revealed that there is increased acceptance of e-journals by the university academicians and also by the information centre. The study also demonstrated that all the librarians are fully acquainted with the benefits of e-journals and agreed that the electronic journals have and will continue to have an impact on the library services, library staff and on the information services. They concluded that e-resources have changed the way of research is done and the information obtained through electronic form has greatly improved the results of the research.

Analysis of Literature:
Review of related literature is very essential for any research work. The study of related literature implies locating, reaching to and evaluating reports of researches. 77 literatures reviewed for the present study which were similar with the present research work analyzed below:

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<tr>
<th>Table -12: Review of Literature</th>
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<tr>
<td><strong>Area of Literature</strong></td>
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<tr>
<td>Access of e-Resources through consortia</td>
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<td>Evaluation of e-Resources</td>
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<td>Staff for e-Resource section</td>
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<tr>
<td>Users awareness for e-Resource</td>
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<td>Collection Development of e-Resource</td>
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<tr>
<td>Problems of Collection Development of e-resource</td>
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<td>Preference of Electronic collection &amp; Print collection</td>
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<td>Preference only e-Resources</td>
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<td><strong>Total</strong></td>
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Above table shows that 30% literature discussed about policy & practices of Collection Development of libraries in under the positive impact of electronic information environment. They also stated that Collection Development is a vital process in creating & building library collection. It is a well planned activity for which a well defined policy is essential. The policy should include the e-resources enabling their selection, acquisition, preservation and distribution. 22% literature disused about the preference of e-Resource than print media. Users of university library have become more conversant with the use of internet with e-Resource and electronic media for information access. They also stated about the increased
acceptance of e-resources by the university academicians and information centres. They are agreed that the conventional libraries are now in transforming please. But 9% literature discusses about the problems faced by the university library in building the collection of e-resources than print media due to stagnant budget, lack of trained staff, interest of parent organization and also users attitudes they also revealed that e-resource are in stage developing stage in India and may more problems are arising to develop this new media due to IT. They also pained that e-resource cannot replace with traditional collection. 12% literature discussed regarding the preference of e-resources along with traditional print materials. E-Resources are highly useful for the academic and research work at the present digital environment. Users are more interested for both printed and electronic media which are ever increasing. Another 12% literature disused the changing pattern of user need, users awareness of e-Resources which is must for every university library. Electronic information sources are the prime attraction of readers in today’s networked environment but it is difficult to know what information exists, what information it is available and where to look for it. So the librarian must arrange the awareness program to explain how a library can move to an electronic collection while continuing to provide quality services to its users. Only 8% literature discussed about the availability and accessibility of e-resources through consortia. They also show the impact of consortia purchased periodical publications on document supply services. Only 4% literature discussed about the evaluation of e-resources. They also show that what types of barriers are there in building of collection through e-resources in libraries. This process helps the librarian for considering its renewal or otherwise such as the actual usage of the resources. The reliability of the interface, the response of the users, the cost of e-resources etc. Only 3% of literatures discussed about the library staff who maintained the e-resources in library. The library required the well trained staffs that are able to maintained and provide the effective service to its users. So it is crystal clear from the above analysis that most of the work and maximum studies
almost 1/3\textsuperscript{rd} of the area covered collection development and collection building of e-resources.

**Conclusion:**

Collection Building activities are an important and ongoing component of every library. The historically paper-driven environment of this work is changing to digital environment. With intranets and web authoring tools, digitizing collection building workflow enables libraries to have an increased level of efficiency and accessibility.

Information dissemination hitherto, available to documents or print media was plagued by obsolescence. Electronic revolution has transformed the society of people into information savvy. To facilitate electronic media to work, knowledge resources have necessarily to be converted from print media to machine-readable data thus paving the way for emergence of e-resources. So e-resources are the replica of the print forms in digitized forms.

In order to disseminate information in an on-line mode to a wide spectrum of machines and people who have access to them, the print version is scanned in an optical scanner connected to a computer. The scanner in turn converts the information into digital form and enables computer to capture the same and stores in its memory. The data thus stored is retrievable or accessible by any any machine that is Internet connected. This connectivity is bringing the world together and making it a Global village for sharing information resources.

Modern librarianship has to recast its role to become aware of the issues connecting electronic resources. Librarians must take the necessary initiative and lead in changing the present digital environment scenario of information storage and retrieval to barrier free access of e-resources. Librarians have to not only
acquire the e-resources but also organize them for optimum access with adequate and appropriate navigational structures to enable their clientele to exploit the resources to derive maximum advantage.

In library collection, e-resources has become the buzz word, which on one hand so the development and impact of the technologies on libraries where as 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 has 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. University, the top higher education institute also changing their collection print media to e-resources; to organize, develop and manage that type of collection they require trained staff.

This is the main intention of this topic to find out the actual situation of collection building of e-resources in university libraries. How much they are accepting this new technology. How much e-resources they are developing for their user community as well as how extent the users are accepting this new media. How much budget they are allocating for this segment. The staff of the library how much capable to do this job. What is the level of satisfaction of users community regarding e-resources. Than it will so the crystal clear picture of e-resources in university libraries.
References:


77. Singh, Pankaj Kumar, Nazim, Mohammad and Singh, S. M. (2008). Awareness and use of online journals by the faculty members, researchers and students in the faculty of natural sciences, Jamia Millia Islamia


