CHAPTER – 1

INTRODUCTION

Learning throughout the life has been a new concept and become a part of human life. The first step was the movement among labourers, called workers movement. It was originally routed during British period in United kingdom in technical institutes and many organizations. For example WEA (Workers Educational Association), who organized classes to improve the laborer’s Status and providing access to e-resources which are helpful in e-learning and improve social activities. It was also aimed to develop the skill of the laborers and knowledge. During last thirty years, it was more focus on e-learnings and uplift as driven by a shorter product life cycle. It was to increase the increase in access speed and effective implementation of new technology at the workplace. It also held in drive out instability of employment in industries. The main reason was to provide continuous learning throughout their life to update their technical skills and knowledge for educational and technical competence.

It is also obvious that human nature is to learn throughout his life, inspite of different circumstances and context. The majority of the learning come through informal education, According to the report IRL (Institute of learning research) The formal training is more required in financial matters not in academic matters. Most of the learning is given by the method of observation queries, trial and errors and more from helping desk which are largely dependent activities. But less attention is paid to informal education, which needs more attention as how to implement it.
It has been observed that more attention is not being given to informal learning, online learning by the institutions and corporates, particularly by the persons and experts of academic fields to product generation to academic community, and also to manage the knowledge to improve the computer in the learning process and activities. Moreover, little attention has been paid to online learning in educational technology among the users. Formal learning has been decreasing in educational technology particularly in work force in industries. In academic institutions the formal learning has been giving more attention an accessing the electronic resources in academic community in educational institutes and organizations.

There have been many debates at plateforms of national and international organization. There have been change in learning style and users behaviours for different pedagogical approaches particularly in learning context. All software applied or generated in educational institute have either preferred for different pedagogical approach or for different context. A learning process allow a person or users to configurator and improve the learning environment to suit their style.

The environment which does not create vacuum in learning products and users have become a problem before the learners many discussions have been organized at national and international level that exactly from competence point of view and come to the joint consent on the standard learning program, but it all was a wave which could not be a long and certain to solution. It is like a wheel which goes with the instructions of the commander and the attention paid. No longer a learner can be locked in a certain in courses to gain qualification, but they learn and, improve there process and style and possess competence to achieve their goal. It is also noted that formal education and access to e resources has never been in one direction and style. It changes by practice and experience.
1.1 Changing technologies

There are two developments in technology which I think are of particular significance for the developments of Personal Learning Environments- ubiquitous computing and the development of social software.

There has been always change when new technology comes and introduced and we avoid old paradigms in implementation, for example there have been many search engines but the use of them is change with the easy and speedy access quality. Moreover internet connectivity also change the users behaviour. It has given development of e-learning through digital and virtual libraries. Academic institutions dies control through internet based LMS (Learning Management System and virtual learning Environment (VLE). We have experienced that classroom teaching cannot develop knowledge speedily and economically. It is the online learning which has changed the society at large through e-sources and most sophisticated useful software’s.

1.1.1 The Changing ways we learn

Global gateways focus on teaching and learners development to access online resources particularly those resources which are available online and much more familiar in accessing.

1.1.2 Information Technology Update

The old GE 50 mainframe computer soon became a dinosaur as computers went through wave upon wave of innovation. Any of today’s desktops or laptops is far more powerful via 80-column cards, which in turn gave way to typing
instructions at an individual workstation, to today’s pointing and clicking in a windows-like environment. Developments in the near future are likely to see finger interaction replaced by voice communication.

There are other trends in information technology:

- The days of videotape are numbered. Multinational companies like Philips Electronics announced that they have ceased production of the video-recorder.
- DVD has replaced CD-ROM as storage medium, as is readily evident if you visit any video rental store.
- Dial-up access to Internet Service providers has been overtaken by broadband connections.
- The world of photography has changed markedly as still print and slide cameras have given way to digital cameras.
- Laptops are giving way to a new generation of powerful pocket PCs, Palm Pilots and PDAs.
- The world has become googlised as we google for information, and another new word from IT has entered our vocabulary. A recent newspaper report describing the release of an Australian hostage in Iraq said that his captors “Googled his name on the Internet to check his work before releasing him.”
- The occupation of door-to-door encyclopedia salesman has passed into history as their DVD counterparts or virtual copies on the Internet have replaced hardbound encyclopedias.
- Bankbooks and cheque books have become casualties of Internet banking.
The personal letter has almost disappeared having been replaced by instant SMS messaging on mobile phones using a new kind of English language.

1.2 Electronic resources: E-books, E-journals

The delivery of content via all electronic media, including the Internet, intranet, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM. E-learning is a broader concept [than online learning], encompassing a wide set of applications and process which use all available electronic media to deliver vocational education and training more flexibly. It is useful also to separate e-learning from distance learning, which generally include text-based materials as well as electronic media.

UNESCO uses the term ICT or information and communication technologies to describe: Digitized video, radio and TV programmers, database programmers and multimedia programmers.

In so far ICT include hardware, software and telecommunications, ICT is seen to be the means to support student learning via electronic media. E-learning then, is the growth in students’ understanding and knowledge when they utilize ICT in instructional settings. Thus in the context of teacher development – both the initial training of teachers and their continuing professional development – e-learning for teacher development includes all the courses, workshops and other activities, formal and informal, where student and practicing teachers learn about integrating ICT across the curriculum to support student learning.
1.2.1 Global Gateways To Online Resources

Globle gateways focus on teachers and learners development to access online resources, particularly those resources which are available online and much more familiar in accessing.

Selected education web gateways from around the world –

<table>
<thead>
<tr>
<th>Web Gateway</th>
<th>Particular Focus</th>
<th>Developer</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICTs in Education</td>
<td>Distance education and ICT</td>
<td>UNESCO, Paris</td>
</tr>
<tr>
<td>Education Network of Australia</td>
<td>K-12 schools, vocational education</td>
<td>Educational, Adelaide</td>
</tr>
<tr>
<td>Institute for Information</td>
<td>And Training higher education</td>
<td>UNESCO, Moscow</td>
</tr>
<tr>
<td>Technologies in Education</td>
<td>ICT in Education</td>
<td>California State University, Los Angeles</td>
</tr>
<tr>
<td>Multimedia Educational Resources for Learning and Online Teaching</td>
<td>ICT for education and teacher</td>
<td>UNESCO, Bangkok</td>
</tr>
<tr>
<td>Knowledge Resources</td>
<td>Training</td>
<td>British Educational institutes</td>
</tr>
<tr>
<td>National Grid for learning</td>
<td>K-12 schools and teacher education</td>
<td>Communications Technology Agency, London</td>
</tr>
</tbody>
</table>

Two further web gateways that might have been included (Ask ERIC Education information and ERIC Clearing house on Teaching and Teacher Education) were closed at in 2003 and are expected to open in a new form at a late date.
UNESCO newly developed web portal on ICTs in Education offers an entry point to multitude of resources and sources dealing with education, particularly with open and distance education, teacher education and information and communication technologies.

1.2.2 Multimedia Educational Resource for Learning and Online Teaching

There are many resources which are available online for learning and teaching and specially designed for students and teaching in higher education institutes. Most of the institutions have provided free access to e-resources but they need registration specially for collection purpose. The material is peer reviewed and rated as and when they are included in collection. They are briefly annotated and categories according to their specific character. They are linked online through the internet. They noted with description, i.e. assignments and designed according to their specificity and character and used by the users in academic community.

1.2.2.1 Resources implications of learner support

Normally the vendor or producer provides service management to higher institutions with all authorities with management and administration for technical support and the reasonable budget. It is normally a practice among academic institutions which have a collection of e-resources.
1.2.2.2 Administration

There is ‘one stop shop’ generally made available for the users by linking services related to budget, quality management, marketing management, online or digital library and initiation with the academic community.

a) Education efforts:

Collection of learning material which is made available or provided as per standard and the demand of the users. It is maximized based on the need of the users and their interaction and standard. It also concerns with flexibility in accessing and mode of delivery for learning styles of each user. Such programmer encourages users in their projects and study. It may be web based material useful to users. It may also be encouraged through interaction, chat rooms and discussion board in order to make maximum use of the material.

b) Functional:

The material selected should be properly defined with their functions so that user can effectively learn and achieve their aim of the study. It will be more proper if experts and technologists consulted. They give more knowledge to users through their experience and satisfy the users to the maximum.
c) **Presentation:**

There have been efforts for more learning in I.T. environment in the field of management, information system and use of learning material. It is an effective tool of marketing as it engaged users from outset to their own interest.

d) **Access and motivation:**

The stage of learning starts as soon as the student starts their studies and open their programmer. There are students to whom the mode of learning is new and cause anxiety at every level. It is also necessary that interface is provided.

e) **Online socialization:**

Mckey has made a study that good interface provide good marketing approach. Student is motivated as well as pressure about the reality and the anxiety about e-learning. More over a good communication is required which support more use of resources through demonstration and display online. It is also thought that there are old and new students both who interact and gain knowledge and study the programmer at their place and at every time and avail facilities of e-learning by e-mail and access to internet. Student who have recently completed their programmers are anxious to learn more.

Online specialization means all efforts and process a new student make him familiar with electronic communication and e-learning programmers. Students and the faculty post their massages through bulletin board an electronic mail. FAQ has been proved more useful for e-learning and interaction between the teachers and the students.
f) **Information exchange:**

Information is changed and transferred among the users and learners it build a bridge between the social activities and cultural activities and their diversification. Information change provides user friendly environment among the users and discussion takes places. More over the experience of the learners also contributes to e-learning programmer. The informal change and exchange of experiences, technology and interaction also give weightage.

g) **Knowledge construction:**

During knowledge construction, the teacher merely acts as a facilitator. Each student is able to translate theory into practice and those students with comparative experiences will continue to build their knowledge using a variety of electronic communications.

**1.2.3 Knowledge packaging:**

Knowledge packaging is new concept and a strong tools in e – learning process. It facilitates a description of resources and the learning object. Each object involve each learning package suitable to the rules of navigation, which defines each part of package of e-learning process.

An architecture has been developed based on knowledge packaging format. This help in producing learning material based on the demand of the users, which can be exchanged easily and can be reused. There are authority tools developed for core authors. These authority tools are based on format of knowledge packaging format. It also facilitates the creation of contents, such as adaptive
contents, which are not as common format. It has some advantages like easy exchange, reuse in various applications and services. Such knowledge packaging formats are very much effective and implementation easy to facilitate the learners.

1.3 E-journals and knowledge development:

During past two decades the emergence of new information technology and cost of various resources like CD-ROM and online access has created financial problems before the libraries.

E-journals are publications and institutional product which exists in electronic format, while the full text identified the availability of the text of the paper based journals is e-format. It was also difficult to find graphic and image text. Further, it was felt to have advance computers and printers for graphic material. Every library develops their collection of e-journals within their available budget. This has helped is space saving also.

Print journals are generally in paperback format with temporary binding as these are read actively for the period of their periodicity. At later stage these are bound and preserved and read by the users on need. Document delivery system has changed the way of selection of journals. The price rise of journals has also created problems it find difficulty to keep space with the increase. The librarian also faces problems to meet the needs of the clientele. There are many libraries which do not circulate the list of journals, which could not express the trend and demand of the users.

There are many libraries who subscribe both print and electronic format of journals. In networked environment also the potential users will not have network access to print journals. May it be possible that libraries provide only electronic
journal ignoring the choice of the users or offer both version. On the other hand if library does not subscribe print journals, they charge high fee for CD-ROM version. Networking also create extra burden, such as license fee.

However, print journals are vital part of information collection. They are also complex and costly and cost increases continuously. For the last 15 years the cost have raised to more than double. Journals also share the largest budget which has compelled the librarian to cancel titles, but of which few more may be important for users.

1.3.1 Electronic journal:

E-journals is a source of scholarly communication through internet. There have been many e-journals format. E-journals (electronic journals) may be known with other names, i.e. online journal, electronic journals etc. An electronic journal:-

(i) Meets bibliographical definition of serials,
(ii) Accessible with the help of the computers,
(iii) Has features of a journals, magazines and newspaper.

During the last decade there has been much rise in accessing and use of full scholarly journals and continuing to rise continuously.

1.3.2 Characteristics of e-journal:

There are following characteristics of e-journals to decide their quality:

(a) Contents: It includes critical group of title and regular issues at certain interval or period. It is a scholarly publication and available for potential users. It is a version of print format and potential timeliness of appearance. It has equivalence to print issues.
Specific functions: E-journals should have easily searching facilities. It should be easily navigating with full text articles. Moreover, it should have link to other articles.

The increase in use of electronic journals has created many implications for print format. During last three to four years electronic accesses have exceeding much than print version of journals. On the other hand, there are views that electronic format have not replaced print format. Web has also not decreased the importance of print format suite the users, choose the source, format and method that meet their needs in time.

1.3.3 Evolution of electronic journal:

Web generally allows free flow of information. The current and scholarly information system still relies on intermediaries like librarian and publishers. The first electronic journal developed in 1980 and started with e-mail and FTP in plain text formats. There were users of internet and e-journals were not having more users. In 1990 the use of internet grew for potential readers and transform of information for scholarly communicated. During the period of 1991 to 1995 many delivery systems were introduced which effected the publications after 1997 as many major publishers were available and University libraries had infrastructure to support them. A suitable and adequate pricing system was developed and publishers took help of intermediaries. There have been some important developments, opportunities and challenges:

(i) New development of protocols for interportability

(ii) Digitalisation of publisher’s back files
(iii) Commercial publishers were freely available to users

**Access issues:**

The web has created an effective and sharp process of using e-journals to the authorized users who have license agreement or payment. The libraries started their services 24/4 remote access, which has been proved a strong selling point for e-journals. But there is still a need for the invention and methods to validate users:

(i) Which is simple to implement.
(ii) Does not impede access in any way
(iii) Does not breach the security of the content provider.
(iv) Does not violate the privacy of users.

**1.3.4 Collection of e-journals:**

Since last 5-10 years the libraries have been making efforts to migrate from print to e-print world of learning. The first effort was the use of CD-ROM to store digital products. These were first DOS based and evolved with window. CD-ROM becomes popular for indexing and abstracting services. Search engine were applied for searching and locating. It was also felt the need of network station. The collection of e-journal was more in need when publishers produced or published full text articles and wanted more and more access in computer stations. Producers converted scanned data of printed pages and converted into electronic format. Hazel wood outlined 15 myths about electronic journals:

(i) They provide better access,
(ii) Faculty and students consult journals more,
Users like e-journals,
They are quick in access,
Page integrity is preferred by users,
Users have knowledge about the publishers of e-journals,
It is cheaper to store and disseminate e-journals,
They are economic in saving money,
Publishers also aware the users about their publications of e-journals,
They avoid subscription agents,
Recent issues are preferred by users,
Scholarly journals are more in use and more are produced,
E-journals are always more current,
They provide graphic material also,
They save staff time.

In fact the requirement of e-journals depends on the demand of users as how much they are eager and ready to use. The other factors is availability of computers. There are many factors which effect collection development policy for e-journals:
Initiation for public relations,
E-journals should be put on trial,
Communication channel should be strong in academic work place,
Proper training and display.

1.3.5 Collection policy:

It is said that a vegetarian can cook a good vegetable dish without meat, but it is difficult to on-vegetarian to a testy, meal without meat. Similarly, a library
consist position of big deal transaction, alternative supporting publications and access and archiving. Big deal involved license for three or more years:

(i) Unwanted and unneeded journals should not be selected.

(ii) License should be obtained for short period so that necessary evaluation of e-journals may be made each year and unwanted journals could not continued.

(iii) Quality journals should not be discontinued. The journals more accessed by the users are valuable journals.

(iv) There may be few more costly journals and may affect the budget to delete many few low cost journals. But the costly journals should be evaluated under construction with faculty and researchers and subscribed.

(v) Short term benefits should be avoided to consider best deal for long term in the interests of library and users.

(vi) The budget influences the collection of e-journals. The limited budget may be more challengeable as to decide the best out of the mass and adjustable in budget provisions.

In view of the above a collection policy of e-journals should be based on following issues:

(i) Cost and value,

(ii) Reputation of publisher,

(iii) Easy accessibility,

(iv) Current issue,

(v) Comprehensiveness,

(vi) License restrictions,
**Decision stand**

Is access to the journal fee for every one

- Yes
  - Consult free access
  - Is excess free with print subscription
  - Does the library subscribe
    - SUBSCRIBE

- No
  - Is there a print equivalence
  - Does it meet the print Subscription criteria
  - Is there an attractive package orconsortial deal.
    - DO NOT SUBSCRIBE

**User’s play:**

Use is an important unit in collection building of e-journals. Users demand some specific journal sometimes, which they know are available in e-form. If not, in print form. If no request, the library takes the responsibility to identify the publishers and options to access. It will further determine the value of the journal and needs of the users. Publisher demonstrate the index of the journals and allow to access and finalise the case of subscribe. There are many sources to indentify the needed and valuable journals i.e. Ulrich International Periodical Directory, Standard Periodical Directory, Fulltext source online and act Web Publisher Listing and also act as journal subscription agents.

**Scholarly open Access journals:**

Open access journals are also available freely. Their need was felt because of :-

(i) Crisis in scholarly communication,
(ii) International movement of scientists and government,
(iii) Advent of internet capability,
(iv) Development of techniques and standardization of publications on web,
(v) Organised efforts of web based scholarly information.

1.3.6 Full text Databases:

There are many libraries providing ready access to many more e-journals through full text databases from the vendors of consortia owners. Library considered full text journals as their e-journal collection. In other words, it is an article collection. But users treat the databases as article collection. Users recognized it as journal with separate contents, volume number, issue number and table of contents so that every article may be linked and may be searched quickly and information may be accessed.

There is rapid change in market place which makes databases change frequently as such databases are not accurate for long. The following points will help in evaluating contents and usability.

(i) Whether full text includes each and every article of every journal. What are the criteria used.
(ii) If an article is delivered in plain text format, it is an specific database and whether it is sufficient to fulfill the needs of the users.
(iii) If graphics are available for each article, whether they are displayed with their quality.
(iv) If search interface is preferred, whether they are easy and usable?
(v) If articles are in PDF file, whether they may be accessed easily and print adequately.
(vi) The number of full text journals retrieved.
(vii) How deep are back files?
(viii) Whether catalogue record provided by the publishers is standard?
(ix) Whether database is updated?
(x) Whether articles are current?
(xi) How many full text journals are included in databases?

It is experienced that title listing are often inaccurate. It has lack of standards, confusing terminology, vendors sites are often out of date, same title list in two databases and sometimes two vendors list title similar and hence they are lumped together.

1.3.7 Access points to e-journal collection:

There may be more than one choice of access to electronic journal collection. In some cases it is only one, i.e. publishers or vendors site. The other may be consortium site. There are variety of gateway services which provide a search engine. Other ways are linking with indexing and abstracting databases, and also CAS services. There are few advantages with intermediary service to access e-journals. Search engine will also search the contents of the journals from publishers provide a uniform interface to users. The fee is also paid as subscription.

Use of e-journals in Scientific research:

The journals which are published only in electronic version of a print version. E-journal is a digital product which are published on internet or world wide web. It is almost different with print journals in editorial process.
Usage based selection:

In the modern age of information many things change and remain become the same. It is beyond the limits of the librarian to control the prices of e-journals. Publishers justify their higher prices which cause tight budget of libraries and libraries evaluate their budget provisions and current collection. They compare the journals with other similar journals with different aspects of quality of contents, publisher’s image and subject matter. Moreover they evaluate the need of the users. How and when they use, in what circumstances they use, the complexity of pricing structure, online searching, hyperlinks and server reliability. There have been many stages to evaluate the creditability of a e-journal (i) Value of both print and electronic version (ii) Value of the present collection (iii) Data provided by vendors (iv) subscription price (v) e-journal usage.

There are three approaches of assessment of the value of journal:

(i) Price of context of journals content,
(ii) Quality of context of journals content,
(iii) Price per page of journal content.

There are opinions that the value of print journals cannot be assessed with content evaluation alone, but the context of the amount of contents.

Potential purchase:

Potential purchase begins with peer products already in collection. The cost based usage determine how many full text accesses a potential e-journal or collection purchases receive in a year for it to achieve the same average licensed by the library.
Impact on print journal usage:

Academic libraries offer both print and electronic access to full text journals. There is factors count for selection decision:

(i) Relevance of the curriculum,
(ii) Standard core list,
(iii) Indexing,
(iv) Faculty research interest,
(v) Recommendations.

There are other factors which effect the use pattern of Desktop access:

(i) Online catalogue,
(ii) Bibliographical databases,
(iii) Full text journals.

1.4 Development of University libraries of Delhi:

Universities are the research centers and center of higher education conserving knowledge for posterity and fostering the ideas of national integration and social justice, with the help of their libraries which provide a variety of services to meet the information need of academics. A university library is a coordination of the collection, staff and services. Today internet has changed the whole scenario because of networking and other communication programmers.

The first step of development of higher education started with the recommendations of R. S. Radhakrishan Committee appointed by University Grant Commission in 1948-49 which recommended annual grant, open access system, working hours and organizational setup of a library. There should be program to be organized for students consciousness about books. Teachers were allowed grant to
purchase books, Bashiruddin Commission (1967) stressed for more grant for books, qualified staff and advance training programmers.

1.4.1. University of Delhi:

University of Delhi is a prime institute of India established in 1922 as residential university, with the then three colleges, i.e. St. Stephens College (1881) Hindi College (1899) and Ranyas College (1917). It had two faculties. Library was shifted to Vicery Lodge Estate. Sir Manrice Gowyer was first Vice-Chancellor, Now Delhi University library has been developed to Delhi University Library System.

The University of Delhi Library began in 1922 with a collection of 1380 gift books. The new library building was constructed in 1958 with a special donation of G.D. Birla. Prof. S. Das Gupta was first librarian (1942-1966) who was the first personality to upgrade the library. The library of Delhi School of Economics which was known as Ratan Tata Library started in 1949 was the partial depository of publications of United Nations and other International Organisation has a collection more than 35000 and also publications of state government and Central Government documents about 4000 documents. It also housed reports of various committees and commissions. This library was not confined to economics, but also a library of sociology, geography and commerce etc.

In 1970 the library was closed to undergraduate students as the Departmental libraries were developed for the purpose with all reading facilities. Four Zonal libraries were also established on four corners of the city. It resulted to make the central library as reference library. Central Science Library was also established separately under the system. All these libraries were integral part of the Delhi University Library System headed by the University Librarian. There has been
fewextension in library system. i.e. Braille Library for visually challenged scholars, with a special unit of Audio Book Research Centre with about 300 cassettes. At the time Delhi University jubally year, a separate unit of audio-visual library was also added to Central Reference Library with 450 video cassettes with high quality covering various disciplines in 1998-99. It was given full cooperation by UGC sponsored consortium for educational communication, IGNOU, Sahitya Academy and Tata Institute of Social Sciences.

The Delhi University Library System is largely funded by University Grant Commission. Its few unit libraries are also separately funded by various ministries for collection development and research programmes. Tata foundation also donates some funds to these libraries for specific purposes like Dutch Guilders donation, Prof. Barring fund for books and research. However, all these libraries functioning under Delhi University Library System are facing financing problems to carry on their services and research facilities.

There are 35000 post graduate students and 7000 teachers and 5000 research scholars belonging more than 40 departments. However, the libraries of Medical Science, Technology, Ayurveda, Unani Medicine Departments are not covered under Delhi University Library System.

(a) Budget:

The budget of Central library of humanities had following budget for 2011-12.

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<table>
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<tbody>
<tr>
<td>(a) Books</td>
<td>32700000/-</td>
<td></td>
</tr>
<tr>
<td>(b) Current periodicals (print)</td>
<td>54500000/-</td>
<td></td>
</tr>
<tr>
<td>(c) E-resources</td>
<td>37500000/-</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>124700000/-</strong></td>
<td></td>
</tr>
</tbody>
</table>
(b) Staff:

The library has more than 400 staff members for its routine operations.

(a) Librarian 1
(b) Dy. Librarian 6
(c) Assistant Librarian 11
(d) Professional Assistant 62
(e) Semi-Professional Asstt. 66
(f) Others 246

Total 392

There are one assistant librarian in each departmental libraries. There is one Dy. Librarian, Incharge in each Zonal library, Central Science Library.

(c) Membership:

Eligible members are Faculty members, Research scholars, Post graduate students, M.Phil. Students and Non-teaching staff. The total membership is 3200 in 2014. The membership categories are shown as under:

(a) Teachers 110
(b) Visiting faculty 17
(c) College teachers 221
(d) Research Associates 15
(e) Ph.D. scholars 235
(f) M.Phil scholars 249
(g) P.G. students 2100
(h) Non-teaching staff 121
(i) P.D. Diploma 39
(j) Special members  19  
(k) Consultants  115  
**Total:**  3241  

(d) **Collection:**

The central library has a rich collection as under:

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books (Art library)</td>
<td>1480000</td>
</tr>
<tr>
<td>Current journals (i) Print</td>
<td>930</td>
</tr>
<tr>
<td>(ii) Online</td>
<td>4000</td>
</tr>
<tr>
<td>Bound journals</td>
<td>123000</td>
</tr>
<tr>
<td>Ph.D. Thesis</td>
<td>16630</td>
</tr>
<tr>
<td>M.Phil. Dissertation</td>
<td>14730</td>
</tr>
<tr>
<td>Manuscripts</td>
<td>680</td>
</tr>
<tr>
<td>CD-ROMs</td>
<td>2650</td>
</tr>
<tr>
<td>Other (Persian, Urdu)</td>
<td>33780</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1712400</strong></td>
</tr>
</tbody>
</table>

The Central library have some special and rare collection like:

(a) Foster’s Glossary Vocabulary (1799)  
(b) Proceedings of the Royal Society (1688)  
(c) Greenwich observation (19th century)  
(d) Catalogue of British Museum in 250 volumes.  
(e) Catalogue of congress in 300 volumes.  

(e) **Automation:**

The computation of central library was started in 1999 and yet to take up perfectly. All libraries of the system have been automated. The Union catalogue of
all libraries under system is still to be finalized. Central library has taken steps to mechanization of book-shelving, book tracking and stock taking systems under automation plan.

(f) Building:

The present building is palatial building and old one. But it has become inadequate so far physical space is concerned. This problem is faced by almost all libraries of Delhi University Library System.

(g) Central Science Library:

The Central Science Library came in existence as a separate library, bifurcated from central library in 1981. Previously it was a part of central library. The need was felt to make a separate science library in 1999 under the recommendation of Sir Care M. White, to serve the departments. He also recommended for a separate building for science library and a science librarian be appointed central science library has a separate three storied building with carpet area of 22559 sq. feet with a sitting capacity of 200 students. Previously, it was put under the Dean of Science. But since last 10 years it is functioning under the control of University Librarian headed by a Dy. Librarian.

(h) Collection:

Central Science library has a collection of about 2 lakhs of books and bound journals. More collection is also is CD and floppies form purchased or received along with books. Library is subscribing 350 foreign and Indian journals other than 8000 online journals.

(i) Open access collection:

Stock area is open access for general book collection. There is an OPAC of general collection and open for consultation online.
(ii) Text book collection:

There is a separate text book collection diversion for recommended, prescribed and relational reading. There is collection of text related material. One copy is retained for consultation only.

(iii) Periodical Collection:

The central science library has a rich periodical collection and housed in 1-2 floors subscribing 350 learned and scientific periodicals including indexing and abstracting journals like chemical abstract, current contents, mathematical reviews, physics abstract. There have been many other online journals subscribed by this library. The users are also given necessary help in searching through National Union Catalogue of Scientific serials in India and DELNET and identifying the availability of the journals in other libraries also.

(j) Internet facilities:

The Central Science library has connectivity with internet and such facilities are available to all members of library without any discrepancy of subject, teachers, students of colleges and the university. Library has a wide-networking which has connectivity to all science stream clientele only. All internet facilities of e-mail, browsing and downloading are open to all members.

(k) User orientation:

CSL organized many programmers for user awareness and orientation. The awareness was by many Medias like circulars, notices on notice board and through university websites. Helpdesk was also available for users awareness. Many computer terminals are also available free to access information by the users. Lectures, extension lectures, workshops are also organized by the library.
1.4.2 Jawaharlal Nehru University (JNU):

JNU is a central university established in 1969 under Jawaharlal Nehru University Act 1966 (53 of 1966). Its objectives in the act are national integration, secularism, social justice and a democra tive way of life. Above all international understanding and scientific approach to the problem of a society. Its objective was also energetic endeavor to renew knowledge through self-questioning.

The main role of the JNU has been:

(i) The foster the composite culture of India.
(ii) To develop the language, Arts and Culture of India.
(iii) To facilitate students and teachers from all over India.
(iv) To promote awareness and understanding of social needs among teachers and students.
(v) To organize integrated courses in humanities, science and technologies in education program.
(vi) To promote inter-discipline studies.
(vii) To establish department for study of language, literature and life of foreign countries.
(viii) To provide facilities of participating in academic programs by the students.

The university is situated in 1000 acres of campus will lust green, host dense forests, bird watcher paradise etc.

(a) Central Library:

The central library of Jawaharlal Nehru is one of the most modern and well equipped university libraries of India. It has rich bibliographic resources containing books and non-book material. It has a collection of more than four lakhs volumes relating to all disciplines.
The library situated in the heart of academic complex.

(b) Collection:

The library has a collection of consisting of books, periodicals, serials and non-book material. The library collection is housed in tower building. The collection has specialization of science, social science and humanity collection, Text book, collection, united nations collection and Russian collection and government publications.

The library has special collection of eminent scholars as under:

(i) John Mathai Collection (gift)
(ii) Prof. Gyanchand collection (gift)
(iii) Exchange collection with international agencies.

(c) Budget:

The total budget of central library is 1750 crores in 2013-14:

(i) Books 37,83,200
(ii) Current periodicals 51,18,000
(iii) E-resources 84,88,800

Total: 173,90,000

(d) Staff:

There are 88 staff members serving the library. Category wise breakup of the staff is as under:

(a) Librarian 1
(b) Dy. Librarian 2
(c) Asstt. Librarian 9
(d) Professional Assistance 5
(e) Semi-professional Assistance 15
(f) Others  

<table>
<thead>
<tr>
<th>Others</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total:</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

(e) Rules and Regulations:

Library have framed few important rules and regulations for the smooth running of the library and guidance of users. They are:

(i) Only members are allowed to use library.

(ii) Entry in library with identify card.

(iii) Membership to be renewed each semester.

(iv) Member can avail loan facilities against readers ticket.

(v) Books are issued for the certain period as decided by the library.

(vi) Borrower tickets are not transferable.

(vii) Shelving of book is not allowed to member.

(f) Services:

(i) There is open access system in library.

(ii) Reference desks are established at every floor, housed the collection of different disciplines.

(iii) Circulation work is done on ground floor.

(iv) Documentation unit provide service of indexing and online services.

(v) There are facilities of OPAC and e-journal access to the members.

(vi) Book Bank facilities are provided.

(vii) E-mail and OPAC records are available through DELNET.

(viii) Search is allowed through INFLIBNET.

(ix) Online journals can be accessed through UGC-Infonet and JSTOR.

(x) Newspaper clipping services are available.

(xi) Xerox facilities are available.

(xii) Archival facilities are available.
Blind students are provided Braille literature, tape recorders and tapes and also typewriter on request.

Lockers are allowed to M.Phil. and Ph.D. students.

Internet facilities are available 24 x 7.

Access to CD-ROM books and journals are allowed to members.

(g) Automation:

The library is fully automated. It is a member of DELNET and INFLIBNET. Library is a part of JNU Wide Area networks. Databases can be accessed from all nodes of network. Library has also its local network with strong server and more than 50 terminals in library. OPAC has covered as database of books, serials and other collection since 1990.

However, library has developed press clipping as image on internet. There is also a plan to provide continuous refreshing courses to library staff to update them professional development as to provide effective service.

1.4.3 JAMIA MILLIA ISLAMIA (JMI):

Jamia Millia Islamia University has been established for specific purpose of developing Indian Culture and civilization. It was established in 1920 at Aligarh during the Khilafat movement in India. There was non-cooperation movement in India to bycott the British System of education. This University was encouraged by renounced nationalists like Mahatma Gandhi, Maulana Mahmud-Ul-Hassan, Mohammed Ali Hakim Ajmal Khan and Dr. Jakir Hussain. They were all founder members of Jamia Millia Islamia. This university was started under the stewardship of Dr. Zakir Hussain. It was among the few institutions of national
importance and based on the doctrines of Mahatma Gandhi and his constructive program in the field of education. In 1925 the Jamia was shifted from Aligarh to Delhi. Now it has developed to be a full-fledged university and a research Centre in higher education and trying to integrate the physical and mental development of the academic community.

In 1963 this university was declared as Deemed university and UGC started finding to its various programmers. Later university grant commission recognized it as central university as per Jamia Millia Islamia Act 1988 and passed by the Parliament on Jan. 26, 1988.

The main objectives of the JMI are:

(i) Extension of research facilities.
(ii) To provide academic environment to its students.
(iii) To promote the studies in various disciplines from junior level to Ph.D. level.
(iv) To reconstruction of courses.
(v) Introducing new courses.
(vi) New methods of teaching and learning.
(vii) Developing the personality of secularism.
(viii) Upholding the principles of secularism, national integration and international understanding.

(a) **Central library:**

The central library has been named after Dr. Zakir Hussain and known as Dr. Zakir Hussain central library under university library system. It has many departmental libraries. It has a collection of more than 3 lakhs of books and bound volumes of journals. It has 3000 manuscripts, 200 microforms and 17 special collection donated by eminent scholars including Dr. Zakir Hussain.
The Library is fully computerized and automation in housekeeping operations. It has developed OPAC to access electronic resources including books, MSS and special collection. University library is also supporting programmer of academic courses. University library has been running a course of Bachelor of Library and Information Science for professional librarians.

Library is serving its clientele from 9:00am to 5:30pm in all working days. Reading room is open for 15 hours from 9:00 am to 12:00 pm in all working days.

(b) Budget:

(a) Books 3393000
(b) Current periodicals 5089500
(c) E-resources 10367500

**Total:** 18850000

(c) Staff:

The library consists of more than 65 staff members to manage library operation and services as under:

(a) Librarian 1
(b) Dy. Librarian 2
(c) Asstt. Librarian 8
(d) Professional Assistant 8
(e) Semi-professional Assistant 10
(f) Others 33

**Total:** 65
(d) OPAC (Online Public Access Catalogue)

Library has developed OPAC and nine computers have been put for this work. Users may access this database anytime. Library staff has been deputed to guide the users.

(e) Inter Library Loan Services:

Library offers Inter Library Loan (ILL) service to its clients. This service is more effective for books. This service is provided by the library on no profit basis. This is a good media of resource sharing services using computer networks.

(f) Reprographic service:

It is one of the important necessities before the students and research to have printout and photocopy on need. Library provide photo state/reprographic services.

(g) G. Gate:

It covers more than 1000 e-journals including 1000 free online e-journals and 6000 e-journals of 17 subjects online. It contains more 2 million articles in databases section and providing full text of the articles at publisher’s site.

(h) IEEE Explorer:

It is a database of engineering subjects. It contains more than 950000 documents and over 12000 publications. It has 2 million full-page PDF files.

(i) Manuscripts:

The library has more than 3000 manuscripts on multi disciplines in general and on Persian, Arabic, Literature and Islamic studies in particular. The collection is mentioned as under:
(i) Ankhan and Aduriyat at Qalbiya (Islamia) 665 AT
(ii) Masharique Anwar (Hasan Sanaani) 967 AH.
(iii) Al-Quaines at Muheet (Mujaduddin Firozabadi) 1097 AM
(iv) Malli-el-Huinaim (Junaid al-baghdadi)
(v) Mali-el-Shaname Hind
(vi) Gulshan-e-Raz (Mahmood Shobistani) AH.
(vii) Rag Darpan (Persian translation by Faqirullan during the region of Jahangir)
(viii) Tuzak-e-Jahangiri (carriers seal of Mughal king Mohd. Shan).

(j) Automation:

Dr. Zakir Hussain library is fully automated in a networked environment to be on forefront in application of information technology for promoting library service in academic community in Jamia Library is equipped with Libsys on Digital Alpha server. It followed MARC 21 base on bibliographic database and option to run with ORACLE database, installed on open network.

(k) Centre for Information Technology:

It is a computer center established in 1985-86. Local Area Network was installed in 1995 covering more than half campus. The campus wide LAN consists of DEC Alpha server and a Fiber optic Backbone. The network connects 23 departments and officers of Jamia through nodes.

(l) Centre for Distance and Open Learning (CDOL):

The Distance learning programmers was introduced in commemoration of Golden Jubilee (1970) of Jamia Millia Islamia. Its cum was to teach Urdu by means of different languages. Jamia has prepared its own literature for correspondence course.
1.4.4 IGNOU (Indra Gandhi National Open University):

IGNOU is a central national university established in 1985. It is named after the name of the then Prime Minister of India Smt. Indra Gandhi. It was established under Indira Gandhi National Open University Act 1985 passed by the parliament. IGNOU is the largest university in the world functioning in the field of distance and open university and provide higher education opportunities to the Indian nationalist and the people of other countries. It serves the society and encourage them for expansion of more literacy by encouraging and coordinating in this work. It has set up standards for distance education and to strength then human resources of India. It has developed research and teaching, extension of education and training.

IGNOU has contributed to search countries in the development of their literacy mission and distance learning and provided consortium on open and distance learning (SACODIL) and Global Mega University Network (GMUNET) which was initiated by UNESCO. The big achievement of IGNOU was the international seminar on Open University in collaborated with Ministry of Education and Social Welfare, Ministry of information and broadcasting, University Grant Commission and Indian Nation Commission for cooperation and UNESCO. The Seminar’s recommendations were:

(i) Established of Open Universities in all countries of the world.
(ii) To develop new methods of learning and teaching.

Government of India formed a Eight member working group on open university in 1974 under the leadership of Prof. G. Parthasarthi, the then Vice Chancellor of Jawaharlal University. This Committee recommended to establish one open university with jurisdiction of whole India including remote corner of the country. The working group also recommended process of instructional and management
process of open university i.e. (i) Admission procedures (ii) age relaxation, (iii) reading material preparation (iv) setting of core group scholars (v) establishment of study centers (vi) formation of curriculum programmers (vii) Live contact with teachers.

In 1985 Government of India decided to establish an University of Distance Learning and the result was IGNOU. In 1999 this university started its virtual campus in India to deliver computer and I.T. courses via Internet.

IGNOU library:

IGNOU has three tier systems at Headquarter at Maidan Garhi, New Delhi. It has 59 Regional Centers, 5 sub-regional centers in various states and 1621 study centers. It has a library and documentation division and a central library at Head quarter and sub libraries at every regional centers and study centers. Central library cater needs of the academic community, support staff and students. Regional centers took into the requirements of libraries like staff, students, academic councellors and academic coordinators to meet the requirements of the students. These centers are started on the basis of the strength of students.

Central library is equipped with Libsys software, an integrated library management software package with all modules like housekeeping operations, and users service. The library has developed web OPAC for online catalogue search by author, title and subjects through keywords. The basic objectives of IGNOU library are:-

(i) To make strong collection development in all disciplines.
(ii) To provide facilities of learning, reading, reference, information and documentation services.
(iii) To develop special collection of distance education at Central library and regional centers.
(iv) To serve the users and satisfy their needs.

(a) **Budget:**

The library budget is following:

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>1147500=00</td>
</tr>
<tr>
<td>Current periodicals</td>
<td>3978000=00</td>
</tr>
<tr>
<td>E-resources</td>
<td>3374500=00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8500000=00</strong></td>
</tr>
</tbody>
</table>

(b) **Staff:**

Library consists of 22 staff members:

<table>
<thead>
<tr>
<th>Role</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Librarian</td>
<td>1</td>
</tr>
<tr>
<td>Dy. Librarian</td>
<td>1</td>
</tr>
<tr>
<td>Assistant Librarian</td>
<td>4</td>
</tr>
<tr>
<td>Professional Assistance</td>
<td>2</td>
</tr>
<tr>
<td>Semi-professional Asstt.</td>
<td>6</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

(c) **Services:**

(a) Reading facilities
(b) Circulation facilities (Lending)
(c) Inter library loan services
(d) Users guidance service
(e) Bibliographical services,
(f) OPAC facilities
(g) Availability of E-resources
(h) CD-ROM search service
(i) Microform search service
(j) Online databases access facilities
(k) Reprographic services
(l) Lamination and spiral building services

(d) E-resource available:

(i) E-journals and Databases
(ii) ACM Digital library
(iii) Bioline International
(iv) Bio Med Central
(v) Directory of Open Access Journals
(vi) Electronic library
(vii) Free Full text.com
(viii) High Wire Press
(ix) E-library
(x) EBSCO
(xi) Emerald insight
(xii) IEL Online
(xiii) India Stat
(xiv) Jrls of Digital information
(xv) New Journals
(xvi) Open J-Gate.com
(xvii) Public Library of Science
(xviii) JSTOR
(xix) Lawyers Collection Magazines
(xx) Lecture notes on Maths
(xxi) Math Science Net
(xxii) Project Muse
(xxiii) WTO E-library

(e) Indexing and Abstracting Databases:
(i) LISA
(ii) J-Gate

(f) E-books:
(i) Alex Catalogue of Electronic Texts
(ii) Authoraina Public Doman Books (Fiction)
(iii) Bartleby.com
(iv) Bibliomanio
(v) Complete works of William Shakespeare
(vi) DLIST
(vii) Crado Reference
(viii) Idea Ref. Resources
(ix) Net Library
(x) Free books
(xi) Free books.org
(xii) Internet Public Library
(xiii) The Online Book Page
(xiv) Project Gutenberg
(xv) Read Print site

(g) Subject Gateways:
(i) Bubline information service
(ii) Copprint
(iii) DMOS: Open Director Project
(iv) E-print Network
1.4.5 Guru Govind Singh Indraprastha University, Delhi:

It is an affiliated and teaching University established by the Government of Delhi state in the year 1998. It is dynamic and growth oriented university to promote and facilitate the studies. It undertake research programme with focus on professional education in all emerging areas of higher education in disciplines of engineering, technology, management studies, medicine, pharmacy, nursing, education and law etc aiming to produce quality manpower. This University conduct various courses and award various degrees like: B.Tech., M.Tech., M.C.A., M.Sc., B. Arch., BCA, BBA, MBA, BMC, B.Com., B. Pharma, BPT, BHMCT and Ph.D. The admissions are done on the basis of admission test.

The GGSIUD is recognised by University Grant Commission under section 12 B of UGC Act. It has affiliated more than 86 institutions of Delhi and nearly areas as on today which includes self –financing institutes, Government institutes, Centre of learning and education and University maintained institutes which are running various academic programmes, strictly adhering to the norms and standards set by the university.
University Information Resource Centre (Central Library):

University Information Resource Centre came into existence in Sept. 1999 with the objectives of acquiring, preserving and making available all resources: print and non-print electronic resources to support the academic, instructional and intellectual needs of the University academic community. The University Information resource centre is well aware with modern technologies and services provided and strining to establish dynamic links to the global resources available through consortia, subject access, open access archives with the help of internet. The centre also understand the importance of cooperation with other libraries under resource sharing programmes like consortia and continuing to nurture existing cooperative relationship and initiating new ones to the benefit of the University students, researchers and the faculty within a short span of five years, the center has been ranked top under the sub parameters scores of infrastructure.

University Information Resource Centre has its own website to access information about various rules and regulations, services of the resource center. It is providing Xerox facilities and document delivery services. The Centre also serve about 2200 members with full air conditioned reading and consultation reading halls.

E-resources:

The UICR has developed reasonably good and qualitative collection building of library resources including print and non-print collection and also print and e-print journals. The advent of new technology and users rapid demand for information initiated to collection development of e-resources, which complemented print media and gave birth to hybrid collection. The important e-resources are UGC-INFONET (15 publishers, over 33000 journals, Encyclopedia Britannica, Biological Abstract etc., INDEST online (169 journals, Science Direct
661 journals, Nature 16 journals, and free online journals (FOAP e-journals) against print subscription.

The UIRC conducted a survey in November 2005 to May 2006, to understand the user’s behavior and attitude when they use these e-journals for their teaching, learning and research activities. It has subscribed EBSCO databases comprising five databases, Business resource complete, Communication and Mass media complete, LIST Abstract, Green file. Other databases available are Emerald Management, Hein Online, Journals and Magazines (E-journal 11829). There is Webopac through DELNET and INFLIBNET.

1.5 Objective of the Study:

The main objective of the study is as under:

1. To study the collection development of e-journals in university libraries.
2. To evaluate the transit of e-journals from print to electronic format.
3. To evaluate the trend of change from print to electronic version of e-journals.
4. To evaluate the use of e-journal and the services provided by the university library.

1.6 Scope of the study:

The study will include all university libraries of Delhi as under:

(a) Delhi University library system (DEULSD)
(b) Jawaharlal Nehru Library (JNULND)
(c) Jamia Millia Islamia Library (JMILND)
(d) Indira Gandhi National Open University Library (IGNOU)
(e) Guru Govind Singh Indraprastha University Library Delhi (GSIPLD).
1.7 Hypothesis:

The following hypothesis has been proved:

(a) The impact of e-journals is more on users than print journals.
(b) The transit from print to electronic has been satisfactory.
(c) The trend has been changed to modernization and application of I.T. in regards to e-journals.
(d) The libraries are providing satisfactory services to its users.