

1. Introduction

Library, being the nerve center of information resources accommodates different kinds of resources mostly as per users' perspectives to cater the needs of the users. Information constitutes the most valuable tool for decision making and reducing uncertainty. Information is the outcome of the human mind, which is known as knowledge. Information, thus, produced may be either abstract or concrete. It is also a message that can be transmitted by a transmitter to a receiver. Information basically acts as a trigger set a human being on an action plan and it may be very well compared with kinetic and potential energy where the former moves things and the latter is recorded and acts as the reservoir. Lack of proper, complete and authentic information seldom leads to disillusion and improper decision that bring a serious threat to the various developmental plans. Hence, the importance of information as a resource has been recognized for centuries.

The supply of accurate, dependable and authentic information at the need of the hour to the right person helps not only in accelerates the academic output but also minimize the wastage of resources. Information services are the prime components of all libraries irrespective of its type who provide assorted services in multiple ways. The library and information scientists usually provide information services on the basis of the collection of various types of information sources. The sources of information which are available in multidimensional forms add potential value for learning, teaching, and research due to their rich contents.

1.1 Taxonomy of Information Sources

Information has now become an indispensable of the society. In popular usage, the term information refers to facts and opinions provided and received during the course of daily life: one obtains information directly from other living beings, from mass media, from electronic data banks, and from all sorts of observable phenomena in the surrounding environment. A person using such facts and opinions generates more information, some of which is communicated to others during the discourse, by instructions, in letters and documents, and through other media. Information organized according to some logical relationships is referred to as a body of knowledge, to be acquired by systematic exposure or study. Application of knowledge (or skills) yields expertise, and additional analytical or experiential insights are said to constitute instances of wisdom. Use of the term information is not restricted exclusively to its communication via natural language. Information is also registered and communicated through art and by facial expressions and gestures or by such other physical responses as shivering. Moreover, every living entity is endowed with information in the form of a genetic code. These information phenomena permeate the physical and mental world, and their variety is such that it has defied so far all attempts at a unified definition of information (Encyclopedia Britannica; 2001 CD). The use of information not only nourishes the minds of the researchers but also has become a tool for the nourishment of the minds of common citizens. The outcome of all human activities are recorded and communicated through a variety of medias. This information transfer process throws up incessantly a great volume of information

sources embodied in a variety of forms, language, and quality. It is absolutely mandatory for an information system to respond to this environmental stimulus by acquiring these documents to meet the requirements of user interests. Due to the complex nature of the numerous sources, it is always a problem to select the information of value. As the saying goes, 'A thing well begun is half done', the picking of the most harmonious informant may make the difference between minutes on a task and spending hours or days, and sometimes even between success and failure. Information work, therefore, necessitates knowledge of the varieties of information sources, their scope and limitations, reference characteristics, and ease of use. The technological progressions have made information as an innovative basic resource that supplements the familiar natural resources of matter and energy. Amassed world knowledge takes on a new entailing and implications apportion and above all use of information in new and versatile ways.

The sources of information have been broadly been divided into five categories (Rajan, Subharao etc.; 1975;p.111.1 and Parker & Turley; 1975; p4). However, Non-Documentary Source of Information also can be well reflected in addition to the above.

- (i) Documentary;
- (ii) Non-Documentary;
- (iii) Organisations;
- (iv) Human;
- (v) Information Service; and
- (vi) Field Source

1.1.1 Documentary

A considerable amount of statistical data on the behaviour of its members is available in every literate community. Although these data have been accumulated primarily for the purpose of administration and historical descriptions, Social Science Research can make a good use of them. The scientific and technical literature has a definite shape, which is embodied in reports, papers, books, periodicals, etc. and needs to be divided into quite basic and fundamental categories. This categorization has been effective due to the information requirements of the scientists themselves. However, the Information Scientist's approach to the literature does differ from that of the Scientists or Technologists. His particular arsenal lies in his grasp through methodical study of the underlying pattern discernible in the literature, and his familiarity with the variety in which it manifests itself, with an understanding of the relationships of their forms with one another, their comparative reliability and their varying uses (Rajan; Subharao etc.; 1975; p.111.1.2). The documentary sources of information can be broadly divided into two groups by taking into account of their characteristics. They are, (i) Physical, and (ii) Information.

A. Physical Source of Information

The physical characteristics of documents as viewed by Dr. S R Ranganathan are of four types. (a) Conventional; (b) Neo-Conventional; (c) Non-Conventional; and (d) Meta Documents.

☞ Conventional

Recorded on paper in a natural language by writing, typing, printing or some other process connotes to the sense of conventional documents and these are the most acceptable form of documents which are very much in use. Such documents comprise Books, Periodicals, Maps, Atlases, etc.

☞ Neo-Conventional

The Neo-Conventional Documents are macro documents that include Standards, Specifications, Patents, and Data etc.

☞ Non-Conventional

Non-Conventional Documents as the name implies are recorded in non-conventional size, shape, or material. The audio, visual, audio-visual, microforms etc. are the examples of such family.

☞ Meta

Meta Documents are a recorded phenomenon made directly and it is unmediated by the human mind. It is an instrumental record of natural and social phenomena made possible by Instrument Technology, Photography, and Radar etc. Scholarly periodicals or journals in the conventional primary media sector play a predominant role in disseminating new information periodically. Mention may be made that, the journal was developed in the beginning of modern science about the middle of 17th century. Among the scientific communities, it gained momentum to disseminate the reports of various experiments and observations in research and slowly it engaged the attention of scholar community. The scholarly journal developed both as a vehicle for disseminating the scientific papers with new ideas, experiments, observations etc. by the scientists and also as a repository of the official records which formed a basis for generalizations in science. The scholarly journal, as it is known in the present era, however, comprises not only reports of original research or original observations but also incorporates the administrative and personal news relating to the special subject or society with which it is associated with abstracts, book reviews and reports of meetings etc.. Various names are impounded to these periodicals and all of them point either to the periodic way in which they are issued or to their historic origins such as, Bulletins, Journals, Proceedings, Transactions etc. It gives a direct proliferation of new information to the scholarly community.

B. Documentary Information-by-Information Characteristics

Information Characteristics can grade the documentary source of information into three domains, such as (i) Primary Source of Information; (ii) Secondary Source of Information; and (iii) Tertiary Source of Information.

☞ **Primary Source of Information**

Primary Sources of Information incorporates the recently generated information which neither has been reviewed, nor abstracted, or indexed. These are the products of the original research and developments and accounts for new applications of Science and Engineering to the technology and industry. Innovative data, new interpretations of previously known facts or ideas are the embodiment of primary sources of information. According to C W Hanson (IGNOU; p.11), the Books, Periodicals, Reports, Patents, Theses, Trade Literature, Standards etc. are some of the examples of such category. However, Grogan has added the Conference Proceedings and Official Publications into the purview of such type of documents excluding books from the scope. These materials are referred as the primary source of information as they are not passed through any filter mechanism like condensation, interpretation or evaluation and are the original work of the author. The primary sources are comparatively very large in number and it can be accessed with the help of secondary sources of information such as bibliography, indexing services, abstracting services.

☞ **Secondary Source of Information**

The publications under this category contain recognized materials i.e. the materials derived from or referring to the primary sources which are organized and arranged according to a definite plan. These sources primarily deal with the results of the analytical processing of information contained in the primary sources. The secondary sources act as repositories of digested data and it forms as bibliographical keys to the primary sources. The original information in this category is chosen, customized, and rearranged in a scientific way for trouble-free and error-free retrieval by the user community. The secondary sources can be divided into four types such as, (a) Access sources, (b) Review sources, (c) References Sources, and (d) Textbooks.

a. Access Sources

Access Sources refer to indexes of the primary literature that steer the user to find out the published primary documents. Such types of documents consist of indexes, bibliographies, abstracts etc.

b. Review Sources

Review Sources include survey subject/ fields, highlighting the significant literature of the field, giving a state-of-the-art report of the subject or annual progress/ advances etc. It is manifested in publications like annual reviews, progresses, advances, reports, treatises, monographs etc.

c. Reference Sources

The documents which themselves curb the desired information collected and selected from the primary documents are incorporated in this category. The information such as biographies, facts, formulae, histories, procedures, theories, etc. are usually resultant from the primary documents and are arranged systematically in some expedient order in such secondary documents. Encyclopedias, Dictionaries, Handbooks, Formularies, and Tables etc. each one having a characteristic feature is included under this category. The Index which is recorded under the purview of a

secondary source of information is arranged in a sequence according to the degree of processing applied to the primary data which provides enough information to indicate the original source of data. Likewise, a review is organized on large contributions into some kind of continuous exposition while, Handbooks, Reference Books, Encyclopedias etc. synthesizes the existing information in specified fields.

d. Text Books

Textbooks are considered as the second source of information as the information contained in the book carry the information from the primary source of information either published or unpublished. It is meant to a target audience.

☞ Tertiary Sources of Information

The tertiary sources of information are obtained from tertiary documents which are otherwise secondary sources of information. Their function is to help the researchers in retrieving the secondary sources of information. The tertiary sources consist of information that is distilled from primary and secondary sources. By classifying and defining reference sources, the user gets an indication of their relative currency and the relative accuracy. The most vital characteristic of these sources is that it does not have subject information in them. Bibliography of Bibliographies, Directory of Persons, Organisations, and Guides to Literature, List of Books, and Research in Progress etc. are included in such tertiary sources of documents.

The following Table-1.1 clearly delimitates the different attributes of the primary, secondary and tertiary sources of documents.

Table-1.1: Sources of Information

Primary Source of Information	Secondary Source of Information	Tertiary Source of Information
New, Original or Interpretation of new facts is revealed.	Information derived from primary sources	Compilations of Primary and Secondary Sources
Unorganised and Unrelated information. Each unit of information is a separate entity.	Organized and arranged information, which is done according to a definite plan.	Information is organized and arranged according to an established shape for better understanding and retrieval.
Information is widely scattered.	Scattered information is collected.	Systematic representation of information.
Information is unassimilated into the general body of scientific and technological knowledge	Information act as repositories of assimilated and digested data.	It aids in searching for primary and secondary sources.
It does not support any bibliographical retrieval tool.	It provides bibliographical key to primary sources	No bibliographical reference retrieval technique is available.

The development and generation of information are dependent on the access, location, and dissemination of the relevant documents. The reference service, a vital service of the library takes much care of the function of making available the information in various forms in the library. The following chart reflects vividly the various publications covered under Primary, Secondary and Tertiary sources.

Primary Sources of Information: Periodicals, Research / Technical Reports, Conference Proceedings, Official Publications, Patents, Standards and Specifications, Trade Literature, Theses and Dissertations, Laboratory Note Books, Diaries, Memoranda, Correspondences, Personal Files etc.

Secondary Sources of Information: Bibliographies, Indexing and Abstracting Services, Reviews, State-of-the-Art Reports, Progresses, Advances, Treatise, Monographs, Reference Books, Encyclopedias, Dictionaries, Handbooks, Tables, Formularies, and Text Books.

Tertiary Sources of Information: Year Books, Directories, Bibliography of Bibliographies, List of Research-in-Progress, Guides to Information Sources, and Organisation, etc.

1.1.2 Non-Documentary Source of Information:

Non-Documentary source of information provides instant relief to the queries made by the user in a library system. The sources of information under this category can be classified into two broad ways such as (a) Formal, and (b) Informal.

The formal sources of information are available through properly established organizations, associations while, informal source of information covers the personal contacts, discussions with other (IGNOU; 1999; p.27).

The Non-Documentary Sources are classified for better indulgent into four categories, such as (i) Human Resource, (ii) Institutional Resource, (iii) Mass Media Source, and (iv) Audio-Visual Resource (Ibid).

☞ Human Resource

A human resource refers to any individual serving as a source of information. The information is channelized from the experiences confronted by human beings, which either might have been deduced from the historical research or past memories. This has been recorded as a major human resource of information.

☞ Institutional Resource

The Private, Public or Government institutions or organisations play a pivotal role in transmitting information of their respective sector, which is otherwise unavailable outside the premises of the organization because most of the literatures are unpublished. The history, past records, events of such setups when published or transmitted in verbal communication, act as a primary source of information. The

specialized information centers, referral centers, clearing houses, trade promoting councils, learned societies and associations, universities, colleges etc. act as a major institutional resource information center.

☛ **Mass Media Resource**

Mass Media plays a dynamic role in boosting information to the remotest area through various communication media, which is materialized through broadcasting and telecasting and nowadays, it is proved to be the most effective source of information other than the published document. In the non-print sector, the Radio, Television, Cassette etc. are the most important components in extending learning programmes through distance education. The trends towards innovations and improvements in teaching methods and efficient communication, towards individualization of instructions and an effective learning system for the masses, indicate the significance of the non-print media which is best known as 'Electronic Media' (IGNOU; 1995;p.9). Mass media extends its facilities not only in extending entertainment to the mass but also provides the most useful information and instructions in many new areas. Radio has proved to be one of the most effective means of communication and primary information source which is disseminated through the air.

☛ **Audio-Visual Media Resource**

In popular usage, the term information denotes to facts and opinions provided and received during the course of daily life. It obtains information directly from other living beings, mass media, electronic data banks, and all sorts of observable phenomena in the surrounding environment. Use of the term information is not restricted exclusively to its communication via natural language. Information is also registered and communicated through art and by facial expressions and gestures or by such other physical responses as shivering. The principal categories of information sources used in modern information systems are text, video, and voice. One of the first ways in which prehistoric humans communicated was by sound. The sound is a represented concept which reflects pleasure, anger, and fear. Sounds assumed their meaning by convention-namely, by the use to which they were consistently put. Combining parts of sound allowed representation of more complex concepts, gradually leading to the development of speech and eventually to spoken "natural" languages. (Encyclopedia Britannica CD: 2001). The audios sometimes take the shape of the primary source of information when the speech, panel discussions, conferences output, lecture programmes are recorded in shape of a cassette, CD etc. and are propagated for apportioning of information.

Sound recordings on tape, reel-to-reel or cassette and audio cassettes have been of immense assistance to the libraries especially in catering services to general mass including the blinds. Videotapes now replaced with videodiscs proved to be the most substantial and potential value of information even in the age of electronics era. Motionpicture films also donate a bunch for the communion of original information that lends itself primarily to visual presentation, but in most cases, films are used principally as teaching mediums (Encyclopedia Britannica CD: 2001).

1.1.3 Organisation as Source

An organization relates to a concept of the organized body comprising of people working together for a particular purpose(s). Apart from the individuals in the group, there may be associated collections of internal records, literature, and equipment. Organisations are very important source of information as it produces relevant information concerning to experience, official, research etc. The people in an organisation also contribute to the sources of information through their personal experience, publications, records etc. Organisations can be broadly grouped under four major heads (Parker and Turley; 1975; 18) that includes:

- (1) Commercial;
- (2) Educational;
- (3) Official; and
- (4) Professional and Research.

To discuss briefly the characteristics, the commercial organisations use to bestow details of their contact address and are available in an alphabetical sequence or by products or by the services rendered by them. (Parker and Turley; 1975; 18). In connection with the products and services, such organisations also use to publish literature, the function of which is to advertise or to instruct the readers about the use and maintenance of these products. The literature covered under this category comprise brochures, catalogues, data-sheets, maintenance manuals or even specially products books or reports, official records, statistics, correspondences etc. The educational organizations or institutions use to contribute a guide to both national and international coverage by furnishing information relating to assorted educational institutions, such as Universities, Institutions, Deemed Universities, Colleges, Libraries and Archives, Museums, Learned Bodies, Professional Associations, etc. along with a subject-index.

The guide to Professional and Research Organisations usually contain a list of organisations along with mailing details with a purpose to guide the researcher to find information on a particular subject, class of products, services, etc.

1.1.4 Human

The human or the people happen to be the principal and budding source of information abinitio. Approaching people directly is a quick way of retrieving information as well as getting access to their unpublished work. Such people are contacted for information as and when the called upon such information cannot be detected in the literature. They contribute as an expert in a given field of study or situation. However, in the present days, Conferences and Seminars also act as an abecedarian source of information. The scientists, faculties attending conferences, and seminars disseminate the most useful information to the students and researchers to excel their learning and research including the application of new technology in the working sector. Such people are popularly known as Technological Gatekeepers.

1.1.5 Information Service

The information service concerns to those organisations that supply information or at least references directly to the users. Such services range from answering simple telephone queries to the supply of computer generated printout of references such as providing references, Current Awareness Service (CAS), Selective Dissemination of Information (SDI) Bibliographical Services, Appropriate Search Terms, Search Profile, Abstracting and Abstracting Services etc. The organisations like BIOSIS, DATRIX, ESRO, INSPEC, ISI etc. are some of the foremost sources of information. Apart from these, the Information Brokers and Database Vendors also use to disseminate information to the users to a great deal and thus, act as one of the principal sources of information. Further, in the information age, information industry encompassing publishers, software developers, online information services etc. was established to cater the needs of the society with useful information.

1.1.6 Field Source

The field source of information includes living persons, those who have abundant knowledge and such knowledge can be identified as indigenous knowledge. Such people act as a positive source of information who contributes to the social development data from them could be obtained through participation in observation, personal interview, conference, correspondences, and such other devices. It is critical for the intelligence analyst to know the source of information. Depending on the nature of a problem, certain sources are of great value and are therefore considered of high quality, while other sources, although contributing to the production of intelligence, are supportive rather than critical in nature (Encyclopedia Britannica, CD, 2001)

Thus, the source of information becomes imperative for a researcher to find out the research. Late Clyde Kluckhohn, a field researcher once aptly commented that ‘unless a greater proportion of available source of materials is collected and synthesized, the field of research will suffer materially. (Sadhu and Singh; 1983; p.44).

The various sources of information has been clearly depicted in Figure-1.1

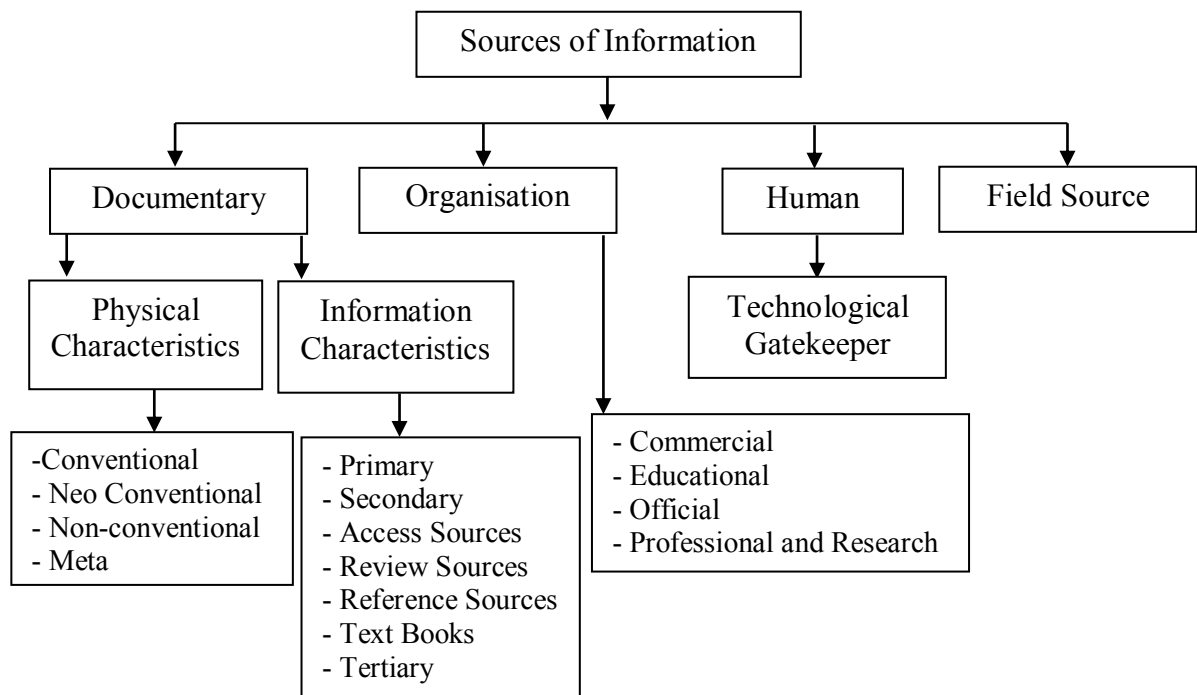


Figure-1.1: Various Sources of Information

1.2 Electronic Sources

Information accumulated, organized, stored, retrieved and transmitted electronically can be connoted with the term electronic information resources. E-resources broadly encompass to the information accessed through a computer which is useful as bibliographic guides to potential sources but, as of yet, they frequently appear as cited references in their own right. According to IFLA ISBD (ER) 1, 'An electronic resource consists of materials that are computer-controlled, including materials that required the use of a peripheral (e.g. a CD-ROM player) attached to a computer' and the items may or may not be used in the interactive mode. E-resources are primarily of two types such as (i) Data (information in the form of numbers, letters, graphics, images, and sound, or a combination thereof) and (ii) Programs: instructions or routines for performing certain tasks including the processing of data and programs such as, online services, interactive multimedia (Bavakutty et al., 2003) and the electronic products deliver a collection of data through text referring to full-text, e-journals, e-books, e-reports, image collection, and other multimedia products and a number of numerical, graphical forms. These products which are market-oriented are commercially available in a different electronic domain such as Internet, electronic bulletin board, e-mail, advertisements etc. Moreover, e-resources refer to that kind of documents in digital formats which are made available to the library users through a computer-based information retrieval system. E-resources is a very broad term that includes a variety of different publishing models, including online databases, sources from web pages, OPACs, e-journal articles, e-books, e-reports, e-databases, internet sources, print-on-demand (POD), electronic personal papers, e-mail messages, newsgroup postings, newsletters, government publications, electronic theses and dissertations, e-newspapers, CDs/DVDs, etc. In this context, the term

means “any electronic product that delivers a collection of data be it in the text, numerical, graphical, or time based, as a commercially available resource.” The librarian in such an electronic environment is expected to utmost care in implementing the same for the users in the library by developing skills and competencies.

1.3 Significance and Scope of the Study:

The library is the viable podium to serve the users with adequate resources both traditional and electronic to promote teaching and research. Further, it requires developing adequate measures to provide authentic information including information package using all types of resources including attending to the changing needs of the users from time to time. In such a perspective, the library professionals of both the libraries under study need adequate information literacy and equipped with plenty user-oriented resources to meet the demand of the users. Mizoram University (MZU) and North Eastern Hill University (NEHU) have been chosen for the study as, NEHU is the oldest university among the north east university which is very efficient for carrying out a research work and for comparison, Mizoram University was select because MZU was a sister university of NEHU but now it has an independent status. So, in one way or another, the services and functioning of these two universities have many in commons and MZU will be promoted to imitate new services to be at par with NEHU, therefore, among all the other universities in north east, these two universities have been selected as it is the most ideal area for a comparative study.

Further while, Mizoram University has a population of 1384 comprising of 163 Faculties, 1013 Students, 255 scholars constituting 32 M.Phil and 223 Ph.D., excluding 130 Non-teaching staffs, the North-Eastern Hill University has a population of 1371 constituting 314 Faculties, 856 Students, 201 M.Phil&Ph.Dresearch scholars. It, however, excludes the other users of both the university libraries i.e, MZU & NEHU. Due to heterogeneous group of the population of both the universities, the scholar has taken the faculties, and research scholars of both the universities to make homogeneous. As such, the total population size for the present study is limited to 933 which comprise all 163 Faculties, 255 research scholars including M.Phil of Mizoram University and 314 Faculties and 201 research scholars including M.Phil of NEHU. The study neither includes the users of Tura campus under NEHU nor any other users of both the universities including other central universities or any central institute libraries to make the study more transparent.

1.4. Research Design

1.4.1 Statement of the Problem

A library is a place where the users comprising of teachers, research scholars and the students or any other users search their required information and it is a viable platform of getting different types of information sources times immemorial to the current with the latest information and therefore, most of the information seekers approach the library at the first hand locate their required information due to its broad

and diverse collection and thus, it gives the most relevant, scalable, authentic and reliable information to them.

In spite of the best collection of library resources, it is still inadequate due to versatile needs of the users for inter-disciplinary research and prevailing of new disciplines. Hence, the library needs developing its resources to serve the users communities more effectively to meet their demands. Further, information collected by the library requires update so as to facilitate the users with current information to promote research and development in their subject field. Hence, the librarians' role is crucial and he plays a very dynamic role in collection development of library resources which, however, cannot be confined to traditional rather can be extended to electronic. Mention may be made that, e-resources are more effectively useful among the faculties as well as the researchers due to the rapid growth of information technology and rich resources are available which are in addition to the documentary resources. The problem of the study lays with the fact that, there is a dynamic change of the users' attitude with regard to access the documents. It could be remarkably noticed that application of ICT in the library led the users to go beyond the traditional resources and they espoused to electronic resources which again crossed the limit from e-book, e-journals etc. to open source, open directories etc. This became a challenging task for the library professionals to provide the users with adequate and authentic resources. The libraries covered under the study face enormous problems in satisfying the users' versatile need with regard to their collection development and e-resources as well. Added to this, the libraries covered under the study also are facing financial problem leading thereby, developing adequate e-resources.

1.5 Objectives of the Study:

The objectives of the study are to,

- (i) Identify the resources in the Central Library of both Mizoram University and North Eastern Hill University;
- (ii) Find out the usage of Library resources of both the Libraries;
- (iii) Exploring the problems encountered by the users while accessing e-resources;
- (iv) Changing behavior of users in information seeking and,
- (v) Make suggestions for the improvement of user-centric Library resource

1.6 Research Methodology

The Research Methodology adopted for the present study is based on the following two types to elicit the data relating to the study.

1.6.1 Questionnaire Method:

A structured questionnaire was designed with relevant questions relating to the study and was distributed to target population of all 933 constituting the faculty members and research scholars including M.Phil of both the universities i.e. 163 Faculties, 255 research scholars of Mizoram University and 314 Faculties and 201 research scholars of NEHU to obtain required data for the study. A total number of 712 filled-in questionnaires constituting 321 from Mizoram University (MZU) and

391 from North Eastern Hill University (NEHU) were received. Further out of 321 from MZU, 185 (58%) were received from Research Scholar and 136 (42%) from faculties as against 391 from NEHU comprising 163 (42%) Research Scholars and 228 (58%) faculties. The scholar also prepared a structured questionnaire for the librarian of both the universities under study to elicit information of the libraries pertaining to the study and both the filled-in questionnaires were also received. The data obtained through the questionnaires were analyzed to draw the findings.

1.6.2 Interview method:

The scholar further explored measures to obtain information through interview method to confirm the information provided by the libraries in the questionnaires by the target audience of both the universities under study and was incorporated in the findings.

1.7 Review of Literature:

The scholar made sporadic attempts to consult various literature relating to the study which were categorized into sub topic areas and some of them have been depicted below.

1.7.1 Higher Studies:

Allen (1982) in the paper on 'The role of the library in higher education and the implications for the external mode of study: An Australian perspective, Higher Education' discussed that the role of the library is necessary to support teaching, research, and learning. He argued that librarians should be treated as integral and takes active parts in the educational process.

Sharma (1986) in his book on 'Indian academic Libraries and Dr. S. R. Ranganathan: a critical study' discussed that academic libraries are considered to be the nerve center of academic institutions, and must support teaching, research, and other academic programs. He further stressed upon to provide maximum information with limited resources as academic Library play a vital role in the development of society.

Folster (1989) on 'A Study of the Use of Information Sources by Social Science Researchers' made a comparative study of information use by faculty and graduate students of both pre-preliminary and post-preliminary of the social sciences at the University of Wisconsin-Madison and found that, there are no distinct differences in information use among the different levels of researchers, journal articles were the most favored information source, while online tools ranked as the least-favored.

Whitmire (1996) in the paper on 'Academic Libraries: Their Rationale and Role in American Higher Education' discussed that the academic libraries are encountering and increasing accountability pressure from college and university administrators who are confronted with decreasing fiscal resources. He mentioned that it is no longer free from evaluation and assessment scrutiny and budget

constraints and cuts, and due to the changing nature of the college and university environment, it has to reevaluate its role and function in higher education.

Singh (1997) in the book on 'University libraries: a current appraisal' mentioned about the function of the university library and pointed out that, it is an integral component in the higher education system. She argued that in the absence of proper information and knowledge infrastructure education system cannot sustain and achieve its mission. She further, stated that studying at a university implies enhances the capability to search, evaluate and use relevant information.

Flavia (2002), the author in his paper on 'The role of student affairs and services in higher education discussed the importance of the higher education where the libraries are central to support teaching, learning and research programs. The author further mentioned that in developed countries, academic libraries are given greater importance than the university teaching. He stated that, both the faculties and students depend mostly on the library resources and argued for the provision of providing links to the scholarly information in the networked environment.

Rodríguez and Angelica (2002) on 'The role of university libraries in Latin America in the promotion of democracy and diversity' described need of the diversity of library materials in the collections. They further viewed that, the main values of librarians is intellectual freedom, free access to information and equity in access. Libraries, in general, promote values. They inferred that, even if one of the main goals of university libraries is to support education and research, it cannot abandon their role as a place where different social policies, theories, and ideologies meet. They emphasized on the study of different art and cultural.

Baxter and Marcia (2003) in their paper on 'Identity and Learning: Student Affairs: Role in Transforming Higher Education' identified that self-definition plays a crucial role in complex learning. They viewed that, the article offers a framework for making identity central in learning to promote learning and self- authorship. They mentioned about four examples of this framework in multicultural education, community development, academic advising, and teaching offer student affairs educators a foundation for leading educational transformation.

Mahajan (2005) in her article on 'Academic Libraries in India: a Present-Day Scenario' discussed education which aims to impart knowledge and makes good citizens. She submitted her views that, libraries are the repositories of knowledge and it forms an integral part of education.

Rao (2009) on the 'Role of University Libraries in the Scholarly Communication System' reported that, owing to technological changes in the information and communication technologies, particularly the Internet, many changes are taking place in the traditional scholarly communication system. He further described the importance and impact of e-journals on academic publishing and the need for universities to adopt 'open access' initiatives and create institutional repositories.

Das and Choudhury (2011) in 'Digital Library Initiatives in Engineering Colleges of Bhubaneswar City: An evaluative study' discussed that it is well recognized that libraries all over the world are undergoing a transformation, especially owing to the development in information and communication technologies. Traditional libraries are changing to the digital libraries and new libraries that are being set up are increasingly of the digital kind. As a result, there is widespread interest and consequently, a lot of research and development activities are being carried out in all over the world.

Evjen (2014) on 'The image of an institution: Politicians and the urban library project' studied about the political views towards public libraries and library development in three cities using qualitative interview turning the institutional perspective of rules, services, and organizations in the public libraries. He found out the significance and objectives of the libraries and also stated that the development of the library is linked to the development of the city.

Pradhan (2014) on 'Job prospects for LIS Professionals in Indian Higher Education Sector: An analysis of Job advertisements published in University News' explored the status of job opportunity in the LIS professions from a number of 167 LIS job advertisements.

Heting Chu (2015) on 'Research methods in library and information science: A content analysis' analyzed research articles from major journals of library and information science and found out that, the most popular methodology used for research like questionnaire, historical survey are replaced by content analysis, experiment and theoretical approach for doing their research work.

1.7.2 Information Seeking Behaviour:

Matarazzo, et al. (1987) in their report on 'The Report of a Task Force of the Special Libraries Association' stressed on services rendered by information professionals. While emphasizing on value-added services they suggested the approaches like measuring time saved, determining actual monetary savings or gains, providing qualitative, anecdotal evidence of value.

Buttlar and Wynar (1992) in their article on 'Cultural Pluralism and Ethnic Diversity: Authors as Information Users in the Field of Ethnic Studies' surveyed the publications of the scholars on ethnic studies journals, and found that journal articles, monographs, government documents, library catalogs, and newspapers are the most valued sources of information for this group. They further emphasized on citations, abstracts or indexes in print format, bibliographies, library catalogs, book reviews etc. The authors viewed that, the social scientists rely primarily on journal articles and informal channels of information, and are more comfortable with print than electronic resources.

Korobil, Tilikidou and Delistavrou (2006) in their paper on 'Factors that influence the use of library resources by faculty members' pointed out that majority of the faculty of Technical Educational Institution (TEI), Thessaloniki, Greece use fewer e-resources than printed sources for accessing their information needs. Their result

shows that the use of e-resources is higher in the School of Business Administration and Economics among those who hold a Ph.D. degree.

Marcum (2008) described that website includes a project overview, project teams, design and construction, live views of the Thompson Project, project update newsletter, and FAQs. He mentioned that according to the Library Director, the challenge of this project is to design a library for the 21st century that is beautiful, functional, and flexible enough to bring paper- and digital-based information services together.

Kundu (2010) in 'Information as a Marketable Commodity' discussed on the need and importance of information in present context and he suggested that traditionally known documentary sources of information can be treated as a kind of information products.

Scott and Karen (2010) on the topic 'Mobile social networking as information ground: A study' viewed that, mobile messaging systems, particularly those that incorporate social networking capabilities, affect how individuals interest and how they exchange information. This paper reports the impact of a mobile-device-based social networking service that enables users to form groups and send both text and photos to co-members. Survey and system usage data from 19 participants over 16 months were analyzed using information ground theory, which focuses on how people share everyday information in informal social settings.

Kacherki and Kannur (2011) on 'Impact of Information Communication Technology on Job Satisfaction of Engineering College Librarians in Maharashtra' discussed that with the emergence of the internet, advances in communication media and such other developments in information technology and related fields have thrown greater challenges before librarians. The priorities of users in accessing information have been transforming from print media to electronic. Financial stringency forcing the librarians to devise means to ensure access to information rather than storing information. These factors call for change in the attitude in the minds of librarians in addition to the acquisition of new skills and knowledge in the field. Library professionals have to be properly and adequately motivated, developed, maintained and utilized to provide efficient services. For proper management and functioning of a library, the importance of a librarian cannot be ignored. Libraries can play a vital role only under the guidance of professionally qualified and well-satisfied librarian.

Lewis and Mallaiah (2014) in their paper on 'Use of information resources in engineering college libraries of Dakshina Kannada and Udupi Districts: A comparative study' made a comparative study on the use of information resources by students, faculty members and research scholars in the engineering college libraries and they found that the library users have a different level of satisfaction in different areas according to their respondents. Further, their studies revealed that the libraries need to be regularized or update their services in different sectors to fulfill their users' satisfaction.

Gupta, Gautam and Khare (2014) in their paper on 'Awareness and use of social media applications among library staff of power sector organizations' studied about the users of library staffs about the social media applications and their knowledge level of social media in their working environment and they found that, the library staffs are not much aware of the application of social media in their workstation and suggested for training on the use of this social media application in library services.

Savolainen (2014), in his paper 'Emotions as motivators for information seeking: A conceptual analysis' mentioned about the importance of emotion of information seeking. He mentioned that emotions play a dominant role as it activates the enthusiastic work. He further discussed that good emotion can motivate whereas, a negative mindset of emotion can become a complication in the life.

Balasubramanian and Vijaya Kumar (2014) on 'Attitudes of Faculty Members, Research Scholars and Students Towards Information Literacy' studied about the attitudes of faculty members, research scholars and students towards information literacy in Manonmaniam Sundaranar University and pointed out that, information literacy is the most convenient literacy in the present society as it manages and maintains all the problems and issues.

Davis (2014) on 'Women in STEM (Science, Technology, Engineering, Mathematics) and human information behavior: implications for LIS educators' pointed out that, information seeking behavior of women in STEM fields are increasing the users of library resources among women despite of increasing of new technologies.

Mansour (2017) on his paper 'An explanatory study into the information seeking-behavior of Egyptian beggars' carry out the importance of providing primary information and relevant information to the beggars. He summarized that the Egyptian beggars seek their information needs through perceptions, motivations, attitudes, habits etc. They seek for their information one day at a time and some of the beggars could not be able to seek their required information needs. This is due to the less awareness of the information which is very much essential for the beggars.

Drake (2017) on his research article shows a unique study about the transgender people those that are differ from lesbian, gay, bisexual and queer (LGBQ). The study was done to a total number of 102 transgender below 40 years of age. It carry out that the transgender need a specific literature about the transgender, gender identity, gender neutral etc. and a single stall bathrooms for them which they would found themselves comfortable. The major point about the research is that they insist a remote process to be established for changing their names.

1.7.3 Electronic Resources:

Singh and Sharma (2002) in their paper on 'Electronic Information Resources in Academic Libraries: Some Key Issues' stressed on use of electronic resources which are gaining momentum among the scholars as cost-effective. They discussed that these are having an edge over the print sources. The authors addressed some key issues related to the collection development of electronic information sources in an academic library environment.

Bhatt and Madhusudhan (2004) on 'University Libraries in India and Electronic Journals: The Role of Consortia-based Subscription of E-journals for the Effective Use of Financial Resources Electronic Journal' mentioned about the role of higher education which plays a key role for the development of society because it not only emphasize on the need of creating the enlightened citizenry for the country but also establishes itself as a potential instrument of social and national reconstruction. Libraries function as an essential integral component in the higher education system.

Beard, Dale, and Hutchins (2007) in their paper on 'The impact of e-resources at Bournemouth University' observed that the use of electronic resources is widespread amongst students and staff of Bournemouth University in the United Kingdom.

Bharati and Zaidi (2008) in their paper on 'Use of E-Journals and E-Databases of UGC-Infonet Consortium by Faculties Members and Research Scholars of Aligarh Muslim University: A Survey' mentioned about the benefits of UGC-Infonet by the scholars and professors and in their study, they identified the extent of awareness of UGC-Infonet among the users. Their study indicated that most of the respondents are not aware of the UGC-Infonet which is due to lack of training and orientation and proper internet connection and this resulted to use of print documents by many users in the library.

Sanjeev and Sharma (2010) on 'Use of Electronic Resources at Punjab Agricultural University Library: A Study' revealed that Information Technology has revolutionized the field of library and information science. They mentioned that modern library collections are not restricted to print media only but add e-resources to their collections. They viewed that, with the increasing cost of print publications, most of the information seekers opt e-resources as, it not only changed the information seeking and dissemination patterns but also it is essential in view of providing most recent, relevant and authentic information. Thus, they initiated for accepting changes in the library to meet the educational requirements of all categories of users for teaching, publishing, coursework, study, research, information etc.

Sharma, and Sharma (2010) on 'Perception and preferences of e-resources among faculty members of national institute of technology (NIT) Kurukshetra' found that, e-resources are the essential part of any university and research library in the era of e-learning. They further viewed that, e-resources are the latest means of teaching, learning, and sharing. The present paper examines the use and impact of various e-resources among the faculty members of NIT, Kurukshetra.

Dutta (2010) in 'eLearning and its Prospects' discussed that the key characteristic of information and communication technology is the ability to provide flexible access to information and resources. He while discussing mentioned that, flexible access refers to access and use of information and resources at one point of time, place and pace that is suitable and convenient to individual learners rather than the teacher and the educational organization. He emphasized the advantages of ICT where, the educators are presented with eLearning with a view to reducing institutional expenses while increasing institutional revenues, or both.

Singh (2010) on 'Digital Libraries: Some Vexing Issues' mentioned that it is a high time to welcome all the emerging technologies with an open mind to implement to survive in the competitive environment. She further viewed that, all the developments create new opportunities and challenges for which the librarians must prepare accept and move with the changing hue. With unique challenges being faced by digital libraries, we foresee many active and high-impact research opportunities for researchers in information science, computer science, and management information systems. We believe that Internet, the Web, data mining, knowledge portals, and visualization are best considered as the 'catalysts' for creating a human-driven, systems-assisted transformation process rather than as 'silver bullets' for solving an institution's basic problem. It cannot be effective if it is not implemented and utilized properly by its owners and users, and without considering its larger organizational and social context.

Sarangthem, Babita Devi and Singh (2011) in their studies on 'Developing ICT Skills by Social Scientists to Survive in Digital Information Environment: An Assessment' mentioned that there have been a lot of changes and developments in the nature of information resources, their contents, format, accessibility, and availability due to applicability of new ICTs. A paradigm shift is also seen in Library and Information systems. This gives a great impact on the user's community. Social Scientists are also not an exception to this. In such a situation users need to develop themselves with the new digital information environment.

Daulat (2014) in the paper on 'Trends in acquisition and usage of electronic resources at Indian Institutes of Technology libraries' found that, the users of IIT libraries are more prone to the e-resources as it has become the most demanding form of information sources and there is a stupendous growth of users who make use of e-resources.

Seena and Pillai (2014) in the study on 'A study of ICT skills among library professionals in the Kerala University Library System' deduced that the professional awareness and skill level towards information and communication technology (ICT) in Kerala University Library is moderate. They suggested for training to make the best use of the Libsys library software and make use of the ICT in the library services.

Chuanfu, et.al (2014), in their paper 'The preferences of authors of Chinese library and information science journal articles in citing Internet sources' studied using 8 premium Chinese LIS journals from Chinese Social Sciences Citation Index (the observation group) and 10 journals in other disciplines (the control group) from the same database and found that, compared to the disciplines in the control group,

LIS articles in Chinese journals are preferable while using the internet sources and it is increasing for supporting the research work. They also highlighted that the information available on the internet for supporting their research work and for guiding the students and librarians need to be developed.

Noa (2014), in his paper 'The effect of personal and situational factors on LIS students' and professionals' intentions to use e-books' examined that, the differences between information professionals and LIS students' in using of e-books in the organizations. He found from the studies that, there is a major difference between the groups concerning to computer competence, motivation, and challenge. He also added that technology acceptance model and other personal characteristics will make the importance of e-book and individual characteristics when dealing with the technology acceptance.

Thelwall and Maflahi (2014) on the topic 'How important is computing technology for library and information science research?' pointed out the importance of computers in LIS research. They found that the use of computers is increasing regarding their title, abstract or keywords from 1986 to 2000 and most of the LIS researchers are using computers and inferred that the computers as a key aspect of the LIS identity.

Suresh Kumar (2014) in his studies on 'Mobile Technology for Library and Information Services' expressed the importance and the impact of new technology in the library. He discussed the importance of mobile devices in the libraries which deeply involves in lifestyle.

Baladhandayutham and Ramamaheswari (2014) on 'The Impact of Information Technology Innovations on Information Resources and Services: A Study with Special Reference to Women's Colleges in Madurai' discussed the importance of information technology in the present days for the effective and efficient use of the library resources. They pointed out that, in the modern society, it is more preferable to use IT and other electronic materials than those documentary sources for getting the required information in a very less period of time.

Gupta and Seth (2014) in 'Usage of Social Networking Tools in Higher Education with Special Reference to College of Jammu Division (J&K), India' explored the usage of social networking site among the faculty members of Jammu Division (J&K) and found that, majority of the faculty members are using social networking site but not promoting as an educational orientation through college websites.

1.8 Research Gap:

A detailed analysis of the review of literature visualized that, many authors have projected their findings in multiple areas like, content analysis, information seeking behavior, emotions, motivations, social media, ICT skill, mobile library services, e-learning, e-journals, e-resources, higher education, university library, cultural pluralism and ethnic diversity, open access but update work in the given field of study is lacking. Hence, the present work will substantially add value to fill the gap for wider benefits of the users.

1.9 Chapterisation

The present study has been divided into six chapters. Chapter-1 of the study discusses on Introduction, Taxonomy of Information Sources, Documentary, Physical sources of information like, Conventional, Neo-conventional, Non-conventional, Meta and Documentary information by information characteristics, Primary Sources, Secondary Sources and Tertiary Sources of Information, Non-Documentary sources of information, Organisation as source, Human, Information Service, Field Source, Electronic Resources. The chapter also includes Significance and Scope of the Study, Research Design, Statement of the Problem, Objectives of the study, Research Methodology, Review of Literature and Chapterisation followed by references.

Chapter 2 discusses the user studies and overview. In the chapter, the introduction approaches to the user studies and collection development, planning a user study, various characteristics of user cognitive condition, user education, various factors associated with user education, methods, different models of information seeking behavior are discussed followed by the conclusion and references. Chapter 3 of the study relates to growth, development and organizational structures of university library of Mizoram University and North Eastern Hill University where the role of different central universities in North East region has been discussed which is also followed by conclusion and references.

Chapter 4 of the work discussed on library resources and services in Mizoram University and North Eastern Hill University where focuses have been given to Mizoram University and North Eastern Hill University. The chapter includes the different functional services of central of Mizoram University including staff position, regulation of the library, general library rules and code of conduct, guidelines for internet services etc. The chapter also includes the regulations of North Eastern Hill University central library rules and code of conduct including the functions and units of the library. The resources and services provided by the library, e-resources, staff position, and list of print journals have also been discussed. The discussion is followed by conclusion and reference. While Chapter 5 of the study exclusively deals with the data analysis and findings Chapter 6 of the study focus on the suggestion and conclusion followed by references and a comprehensive list of bibliography.

1.10 Conclusion

Need-based library resources have pragmatic to provide the services to the users which not only expand the knowledge horizon of the users but also contribute in accelerating the sustainable research and development, especially in higher education. The resources irrespective of the types are mandatory in the library which contributes to developing a knowledge-based society. From the dawn of civilization the library has been acclaimed as a knowledge centre and in the present century, its need has been well felt by the user communities to get the authentic, reliable, useful and distilled information from a vast array of resources available in electronic form. The application of ICT in libraries immensely contributed in developing the e-resources which are the demand of the day among the user communities. The library in ICT umbrella could provide the services in many ways to make the learning process easier.

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- <http://www.nehu.ac.in/library/ebooks.html> (accessed on 18th October 2015)
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2.1 Introduction

The behavioral approach of a user to the information system defines the concept of user studies where the user makes an effort to bring about the interrelationship of various concepts of information relating to his study. This is a mandatory component for irrespective types of users to search information through literature available either prints or electronic form or both. It is a recognized mechanism for searching for information which ultimately leads to derive satisfaction or dissatisfaction among the users (Kumar, 2004). In view of the above discussions, the user study can be equated with the information seeking behavior.

The user studies are mainly about the study of the library users about their level of understanding about the library resources, library services and acquaintance with accessing and using the library resources. The study rests on the library collections in the way that maximum benefits could be reached to the users.

In the information domain, there is a plethora of information in electronic form which suits the needs of the users irrespective of the subject. The library whether academic or special, in spite of best user-centric collection developments, could not attain to the satisfactory level and this is primarily due to the availability of multidimensional resources in a digital environment. The web, widest dimension of the stack holder of electronic resources not only facilitate with e-resources but also supplements with the audio-visual resources. But, in spite of the availability of such information on Internet domain, the academicians or the users as a whole fall prey into the clutches of the wrong track as they are not aware of authenticity, reliability, scalability, and usability of information. On the contrary, the libraries in ICT environment have been able to provide the distilled information which rather best suits the user's needs. The user study implies to the notion of the use of demand or needs for information and it is molded by different aspects.

It essentially implies the study of the use of the demand or need for information. Invariably, the users access the resources from the library for different types of academic works but sometimes, due to the non-availability of the same in the library or due to the adoption of new technology in the library, he moves to other libraries which may be either public or special to access the resources of his choice and hence, in this perspectives the works of the users are delayed which otherwise can be told that, the library in the event of any change, alteration, adoption to the technology etc. needs to provide adequate guidelines to maximize the use of resources. Further, the library periodically needs to know the changing behavior and or information requirements which are essential so as to develop user-centric development of resources and mechanism needs to be employed to optimize the use of resources.

User study relates to a scientific approach to the various characteristics and behavior of the users while approaching the library for searching of resources and the study of the users is performed to ascertain the interrelationship among concepts used in the field. The user study is directly linked to the effectiveness of the library and information services as they aim at the satisfaction of user needs. The key concept in the user studies or information needs is information seeking behaviour. It essentially

implies the study of the use of the demand or need for information. The study can be carried out employing many methods such as questionnaire, schedule, interviews, observations, administrative records etc. (<http://www.emeraldgrouppublishing.com/librarians/management/viewpoints/users>). However, Kani-Zabihi *et al.* (2005) pointed out the following methods which justify the user studies. They mentioned the importance of the user study on the usability perspectives where the users find his/her need-based information. The methods pointed out by them includes,

- ☞ Diary Studies,
- ☞ Questionnaire
- ☞ Observation,
- ☞ Usability testing,
- ☞ Focus Groups,
- ☞ Interviews and
- ☞ Transaction logs.

The user study facilitates in bringing about a proper planning and designing of an information system for effective access, operation, and retrieval of information in the given area of studies (Kumar, 2004). The potentiality of an information system primarily depends upon the system characteristics that rest on the user and the length of use of information.

2.2 Approaches to User Studies

The user study has been pragmatic in a library system to ascertain the information need and the library, in-turn needs to facilitate authentically, pinpointed and reliable information to the user. Sridhar (1981) stressed upon the Maslow's theory of need hierarchy and discussed its application in libraries. The theory, according to him is divided into five labels in a hierarchical order.

- ☞ Psychological needs
- ☞ Society and Security needs
- ☞ Belonging and Social Activity need
- ☞ Esteem and Self- Respect
- ☞ Self-Actuation and Fulfillment.

All the theories as discussed above project a sequence of domination to an individual. While planning the information services in a library, it is essential to undertake the interest of the users' needs and also to determine the strength and necessity of the information requirements of users. While designing the user study, it is indispensable to adopt three following factors.

- ☞ Objectives
- ☞ Population
- ☞ Resources

While the objectives relate to the description of using the library and to know the user behavior towards information, the population sticks to the list of topics that the user need from a library. Finally, adequate resources need to be developed to support the information need adequately to the user for teaching, learning, and

research. In the process, the library needs a user-centric collection development to suit the needs of all categories of users. In the prevailing ICT horizon, the library further needs to develop sufficient electronic resources to supplement the information need for the users.

Gorman, (2006) viewed that, the libraries focus on transmitting the information recorded in documents and it also determines the modes of transmission of a message which may be either through traditional or electronic or both. The library in a traditional way disseminates the message using written form, telephone or through personal endeavor while, in electronic form, it uses various mechanisms such as e-mail, website, social networking sites. This is essential in view of the fact that, the library is for all and is social teaching institutes which foster education, research, training, and development.

The user studies as viewed by OCLC (<http://www.oclc.org/research/themes/user-studies.html>) stress upon the access to the library resources through technology as the libraries are greatly influenced by it. It further, emphasized on providing the services with behavioral evidence about the individual perceptions, habits, and requirements. The Council on Library and Information Resources (<https://www.clir.org/pubs/reports/pub105/section2.html>) in its report discussed the importance of user studies to all classes of users. It, while justifying the importance of such studies, articulated the thoughts of providing training in a scientific approach through research methodology by the library experts both inside and outside the library on the web. To be more specific, CLIR excelled its proposition to all participating libraries to provide user studies through external agencies such as Websurveyor.com and Zoomerang.com so as to facilitate the users more oriented to the computers for the optimum use of resources. The Digital Library Foundation (<https://www.clir.org/pubs/reports/pub105/section2.html>) underlined for conducting a survey to determine the trends of the users' perception of the library resources. For multiple purposes, as noted below, it conducts survey to evaluate,

- ☞ Patterns, frequency, ease, and success of use
- ☞ User needs, expectations, perspectives, priorities, and preferences for library collections, services, and systems
- ☞ User satisfaction with vendor products, library collections, services, staff, and Websites
- ☞ Service quality
- ☞ Shifts in user attitude and opinion and
- ☞ Relevance of collections or services to the curriculum

Wildemuth (2003) equally submitted his arguments in user studies for the adoption of extension methods which lead to the general approach of the population and intensive method to understand the behavior pattern or interest area of the users (<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.197.7266&rep=rep1&type=pdf>). He proposed to undertake the user studies through structured and survey methods for general observation of the users so as to develop a constructive planning by the library for maximizing the benefits to the users. Kawatra (1985) pointed out the objectives of the state-of-the-art of the user studies in the following directions.

- ☞ Ascertaining the information seeking attitude of the users;
- ☞ Indicating the gaps in user knowledge;
- ☞ Proposing various attitudes of the users to explore research; and
- ☞ Outlining the useful techniques for undertaking research.

Menzel (1966, p.43) defined the term is user studies that can be interchangeably used as information need studies, information transfer studies, information behavior studies, communication behaviour studies, etc. According to him, the studies are carried out taking the users into perspectives. The common concern for such studies relates to the information searching from library resources. Vagianos (1971) pointed out that, the chemists are the expert in their own fields and they know the library better than the librarian. They find the information from the library in three ways i.e. (i) Current Information, (ii) Specific Information and (iii) Exhaustive Information.

The current information even if could be achieved through the personal contacts but they search literature as the primary source. They also search specific information concerning to a research problem available through the literature in the library and they also search exhaustive information through relevant information exist on a subject. Hence, the user studies for such scientists are quite different from others and librarians need to be quite abreast with the resources to impart training such users.

2.3 User Studies and Collection Development

The user studies have an integrated relationship in collection development where the library needs to study the users' attitude and give emphasis on developing the users' centric collection. Collection Development, especially in academic libraries, requires certain guidelines and principles as it accentuates the inequalities of the collections and brings about the strength and forms the basis of confidence among the professionals to provide the services to its patrons (Mishra and Ngurtinkhuma, 2015). The collection development, being central for various academic departments in the library, however rests on the recommendations of the faculties and the students representative who prepare an authentic and constructive list of reading materials pertaining to curriculum and to support the teaching, learning and research and is submitted to the librarian who exercises his intellect in determining the duplicate. The acquisition section of the library in addition to the recommended list of the faculties also take into cognizance the suggestions of the students and on the basis of the budget, finally, constitute the list for onward action in the matter. It may be mentioned that for a sustainable and healthy documents collection, a consistent collection development policy is an impediment as it provides the ground realities for framing a constructive planning, utilization of the budget, selecting qualitative documents for maximum utilization etc. It also provides a basic framework for coordinated collection development program in the university library (OlatunjiOlaajo, and Akewukereke; 2006). According to Eguavon and Ochai, a collection development is a planned, systematic development of a collection based on the objectives of the library (OlatunjiOlaajo, and Akewukereke; 2006). In this perspective, it is viewed that, a sound and consistency collection development policy not only act guiding

principles for accumulating the user-centric resources but also helps the other libraries to take the same stand in developing their resources. Moreover, it also performs as an indicator of strength and weakness of the resource collection of the library. Even if, there is a universal practice for the academic libraries in collection development it, however, differs to some extent in the academic libraries of developed countries. While tracing the collection development policy in the University of Texas it can be discussed that the university library amasses materials in all formats to suit the need of the patrons with special emphasis on teaching and research. Further, importance is bestowed upon acquiring current materials, with a special emphasis on increasing access to online scholarly resources (<http://www.lib.utexas.edu/admin/cird/cird.html>) so as to provide the same to its patrons online.

The involvement of the user in collection development of the library not only develops the strength of library resources but also adequately supports for teaching, learning and research purposes. The users are central to the library system hence, the user-oriented collection along with the strong background theory of principles makes the user to adapt themselves easily to the library practices (Kawatra, 1992). The unnoticed and redundant literatures are carefully sorted out by the library as the users' attentions are meager to it. Through proper user studies, the library can develop a sound collection and fill up the necessary gaps with value-oriented literature to provide more options to use the library resources by the user. Therefore, it is imperative that the user studies periodically need to be conducted so as to obtain various dimensions of present information needs as well as future requirements of the users.

The user is the key element for the authentic functioning of the library, just like the vendors without customers have no benefit on his business; likewise, the library without any users has no value of keeping a large amount of information even though they might be very informative. Therefore, it is a must to have the user studies at the time of designing a system or a service of the organization. The growing of the information center or the library depends much on the satisfaction of the users, and to provide their satisfaction the authorities must be aware of what they are looking for and whether they get their requirements in the specific fields.

2.4 Planning a User Study

Planning is an important aspect of the user study which needs to properly design so as to understand the user properly which will form the basis of future collection development of resources, infrastructures to accelerate services. Sridhar (2002, p.32) has outlined the following ways for a constructive planning of the user study.

- ✿ Selection and formulation of research problem and working hypothesis;
- ✿ Literature survey;
- ✿ Overall design or planning the strategy of the study;
- ✿ Sampling and sampling strategy or plan;
- ✿ Data collection;
- ✿ Measurement and scaling techniques;

- ✧ Pilot study;
- ✧ Processing and analysis of data;
- ✧ Testing of hypotheses;
- ✧ Interpretation, generalization and realization of objectives; and
- ✧ Preparation, writing, presentation, and dissemination of research results

2.5 Users Cognitive Condition

The major purpose of the user study is to carry out the necessities of the services in the library which opens an avenue for the library in designing the new level of their services and providing the specific requirement of the information to the information seekers in a very short time. Therefore, understanding the users whether they are the faculties, research scholars, students, scientists, technocrats, bureaucrats etc. is an immediate measure for the library which is directly associated with the resources and services. Some of the characteristics of users can be discussed as follows (Kawatra, 1992).

⇒ **Individual Characteristics:**

The factors or variables in the receivers or users of information that effect (i) their perception of the problem faced and their definition of needed information and (ii) the specific ways they are most likely to use information and their capacity to use a given type of information.

⇒ **Stages in the information diffusion or transfer process:**

This relates to the amount of knowledge an individual (or group) has about a specific idea or innovation. Information needs at various stages are different and thus information products and services have to be adjusted for each stage.

⇒ **Environmental or social characteristics:**

The factors or variables in the social systems, (the norms, situation, reference groups, etc.) have an important effect on (i) individual behavior and (ii) communication in general.

⇒ **Communication characteristics:**

The elements related to use and diffusion of information, particularly including (i) Information sources, (ii) Information structures, (iii) Information forms, (iv) Communication channels, and (v) Information systems. These are correlated with other variables.

In view of the heterogeneous group in the library, the characteristics of the users are also different and in an academic library, it becomes too difficult to decide their information need and seeking behavior. While studying about the user studies, normally they are classified into different groups in terms of their age, professionals, backgrounds, status, etc. so as to transform their working behavior in the organization and this grouping will make it easier to ease the problems faced by the users.

2.6 User Education

The user is the focal group of any library and academic library is no exception to it. The user is the real customer to the library where the later develops huge collections for their benefits. Therefore, the library massively collects a wide range of information sources to suit the varied interests of the user. It also adequately develops infrastructures to make the resources available technologically to the users. This is a growing process and there is a trinity relationship such as resources, librarian, and user. The library acts as an intermediary agency to provide the resources to the users. The library further, all-outefforts, not only to organize the resources scientifically but also plan to provide them to the users. However, to make the resources amenable, the library provides adequate know how technique to the users to access the resources. Hence, the user education is essential so that, the users can search and make the best use of the resources. The library in the event of prevailing of ICT has started providing the electronic resources also. The users who are new to the system need to keep abreast of the changing library situation, the arrangement of multifarious resources, housekeeping operations through technology and other services. User education is the solution to these emerging problems in the library.

While Fleming (1990) outlined the user education in a library as an amalgamation of instructional programs to make optimize the use of library resources more effectively, Mellon, (1988) discussed that, user education is compulsory in the library so as to make them abreast of library resources and its use both through manual way and also using technology. The primary aim of the library is to make the users self-sufficient to handle the resources. In other sense, this is the capacity building among the users. While Clarke (1999) justified the need for user education to extend strength and confidence to search and use the library resources to accelerated their learning. Nancy (1984) focussed on the use of resources and continuing education program through self-made.

In the age of information and communication technology, the academic libraries are extending admirable services and also promoting user education through skill development. The skills that a user according to Nur' Aini (Suleiman, 2012) needs to develop are as follows,

- ☞ Basic library skill
- ☞ Library briefing
- ☞ Library research skill
- ☞ Online databases searching skills
- ☞ Legal research skills
- ☞ Using In-house databases
- ☞ Navigating the internet for special purposes
- ☞ Searching CD ROM databases

2.7 Factors Associated With User Education

User education relates to the program organized and practiced by the library professionals periodically to impart information to the users about the library resources and the way to access and locate it. As it is the most important program,

importance needs to be stressed upon by all the libraries where the users are the target group to make use of the library resources. Even if some expert users are there in the library, they still need to be imparted with the training along with the beginners to keep abreast in the present environment. In the process of providing the training, the librarian also keeps track on their characteristics.

In the prevailing state of Information and Communication Technology, the libraries could not reckon only to provide the services within the library rather, it extended its horizon of services outside using the technology. This is coupled with the organization of resources and collection of electronic resources. Hence, other following factors are essential to be noted while providing the user education.

☛ **Motivation**

It is a term generally used by the psychologists to state about the study attitude of a user. This results to an output of the user to the training provided by the librarian. This also results in changing the behavior of the users in using the resources. In the event of the technology-oriented library system, its importance has been more pragmatic as it involves a practice of accessing the required resources from a heave of resources available in electronic form along with the traditional resources in the library. Orientation to the technical operation is essential by the user in a library as it facilitates the users to choose the right piece of literature or information which are available through databases.

☛ **Perception**

Perception recognition can be described as the association between an incoming set of information or structure, and a recognized 'template' that is stored in long-term memory (Neisser, 1967; Rummelhart, 1977; Wickens, 1987). For example, the user can perceive written words because they have a template of what each word means in their long-term memories. User's perception is affected by various factors with the result that one user will perceive things differently from another.

Perception is affected by the overall quality of the stimuli presented and a general receptiveness at that particular time. The quality of the stimuli is affected by a large number of factors, such as the duration and frequency of their presentation. In the case of written cues, the size of the text, glare, display characteristics, character representation and the format (VDU, book and so on) also have an effect, as do the duration of an event, its loudness, intonation, and accent with verbal stimuli. A general receptiveness is equally affected by many factors – for example, age, motivation, level of arousal, intelligence, attentiveness, health, and his familiarity with stimuli. In addition, environmental factors such as noise level, the presence of vibration, inadequate lighting and poor thermal conditions can affect both the quality of the stimuli and a user's overall receptiveness.

In order to ensure that performance is not degraded, it is necessary to increase the likelihood of incoming stimuli being perceived. Thus, it is important to ensure that the stimuli presented to the user are not distorted in any way and that conditions are such as to enable the user to remain alert and receptive. In other words, managers must consider carefully the design of software, hardware, workstations, jobs and the environment to ensure optimal conditions. All these are discussed in considerable

detail in later chapters. Perception can also be increased, to some degree, by increasing stimulus expectancy (Wickens, 1987). For example, an online searcher can often read the content of a line of information even though it appears only momentarily on the screen. This is because he expects to receive certain prompts and can recognize them at a glance by the overall shape and pattern of characters. Stimulus expectancy, in this case, is increased by the familiarity of the material.

Perception is not an automatic process in the library especially rather, it involves efforts and technique which are applied by the librarian to achieve success. It is a mental process of the librarian which is employed to attract the users to the library (Sehgal, 1998).

☞ **Learning**

Learning involves a mechanism with an intention to maximize the use of literature in a given state of library collections and it is recognition of the familiar features of a library system (Gibson, 1965). This process ultimately leads the users to search and use the documents.

☞ **Decision-Making**

Decision-making is a process of selecting the right documents as per the user's requirement and it solely depends on the prevailing situation. The library takes a decision suitable to the users need (Sehgal, 1998). Typically, the types of tasks which involve decision-making are those that demand high-level intellectual skills, including setting objectives, allocating resources, diagnosing environmental conditions, defining and choosing courses of action and interpreting patterns of events.

2.8 Methods of User Education

The user education can be provided in multiple ways (Kumar, 2004).

☞ **Permissive Style**

The users can be imparted with the instructions in a lenient manner so that, he can well understand the practice being followed in the library and also about the arrangement pattern of literature including search mechanism on the computer. This results ultimately in the users to get access to multiple resources which help in developing a sense of the productive value of the resources. The permissive style also includes group discussions, heuristic approach, computer-assisted instructions etc.

☞ **Lecturer Method**

This is equally an acceptable method which, however, rests on the theoretical application and the users can understand about the library system at a length. The lecture methods also comprise lesson plans, demonstration, tutorials, program instructions, workshops, seminars etc.

Thus, the user education has a practical utility where the professional and skilled staffs are engaged not only to make them aware of the prevailing situation of the library but also make an effort to make the users known about the way of searching of information through established and recognized information seeking models. Information seeking models has a direct benefit to the users and it contributes equally an indispensable component of user education system.

2.9 Information Seeking Models

Model is an accepted and recognized a pattern in seeking information from an information cloud. Many library scientists have contributed their intellectual thoughts and designed information seeking models focusing primarily on choosing the right documents by the users. The Information Seeking Models strictly operates to on the principle of retrieval where the user from a good length of resources can search the desired resources. The user, however, has to formulate the exact information need that can be accepted by the retrieval mechanism (http://aspoerri.comminfo.rutgers.edu/InfoCrystal/Ch_2.html).

2.9.1 Wilson's Model of Information Seeking Behaviour

A model as discussed relates to a customary mechanism of the framework which enables the users to redress his/her problem while searching for authentic information from a heave of literature and it establishes a linkage between the resources and the users. Many library scientists have devised many models in information seeking behavior which is having a practical value in searching of information and such models operate in a library environment which facilitates the users to locate and use the desired information resources.

Models of information behaviour, however, appear to be fewer than those devoted to information seeking behavior or information searching. The Wilson's model of 1981 is shown in Figure-2.1. It was modified by Wilson which has been shown in Figure- 2.1.1. Further, in 1996 and 1999 Wilson (Godbold, 2006) developed two other models of information seeking behavior by the users and the same have been shown in Figure-2.2 and Figure-2.3 respectively below which explicitly discusses various parameters of information seeking.

Wilson (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>) developed the model which has a broad coverage of the information needs of users and further concentrated to draw upon a model which is specific to the information needs of the users. Hence, two alternative models which are most suitable to the users were drawn by him in 1996 and 1999. The model proposed by him in 1996 focuses on the need of information by the users through both formal and informal sources which may result in success or failure in the retrieval of required information. The failure of searching the relevant information by the users leads to another search process to find the relevant resources.

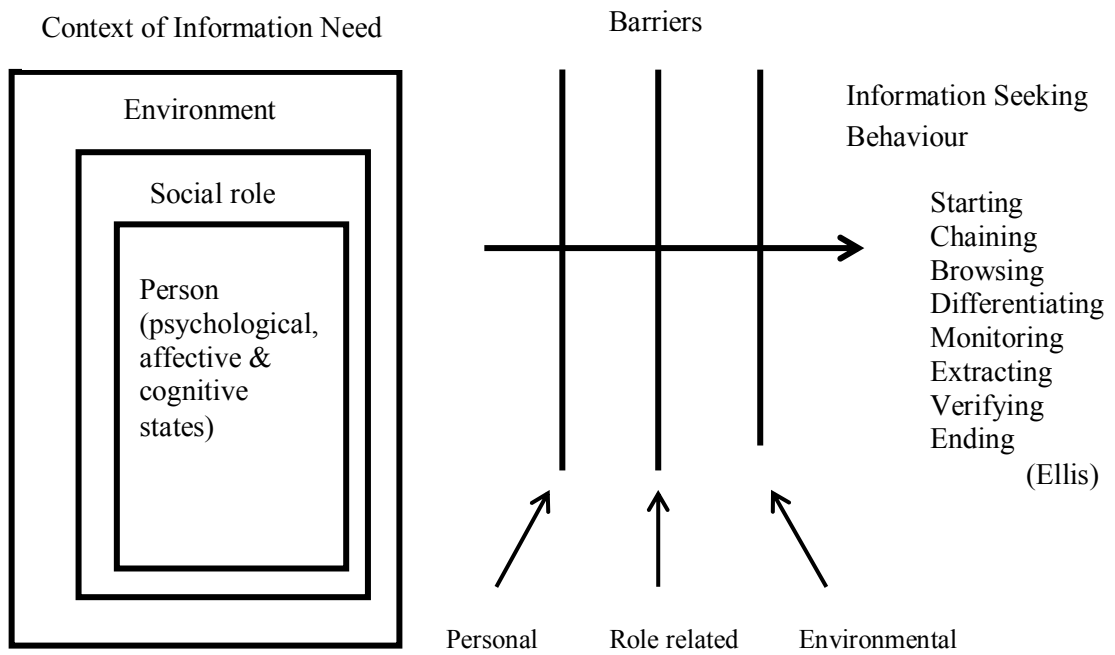


Figure-2.1: Wilson's 1981 ISB Model
 (Source: (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>))

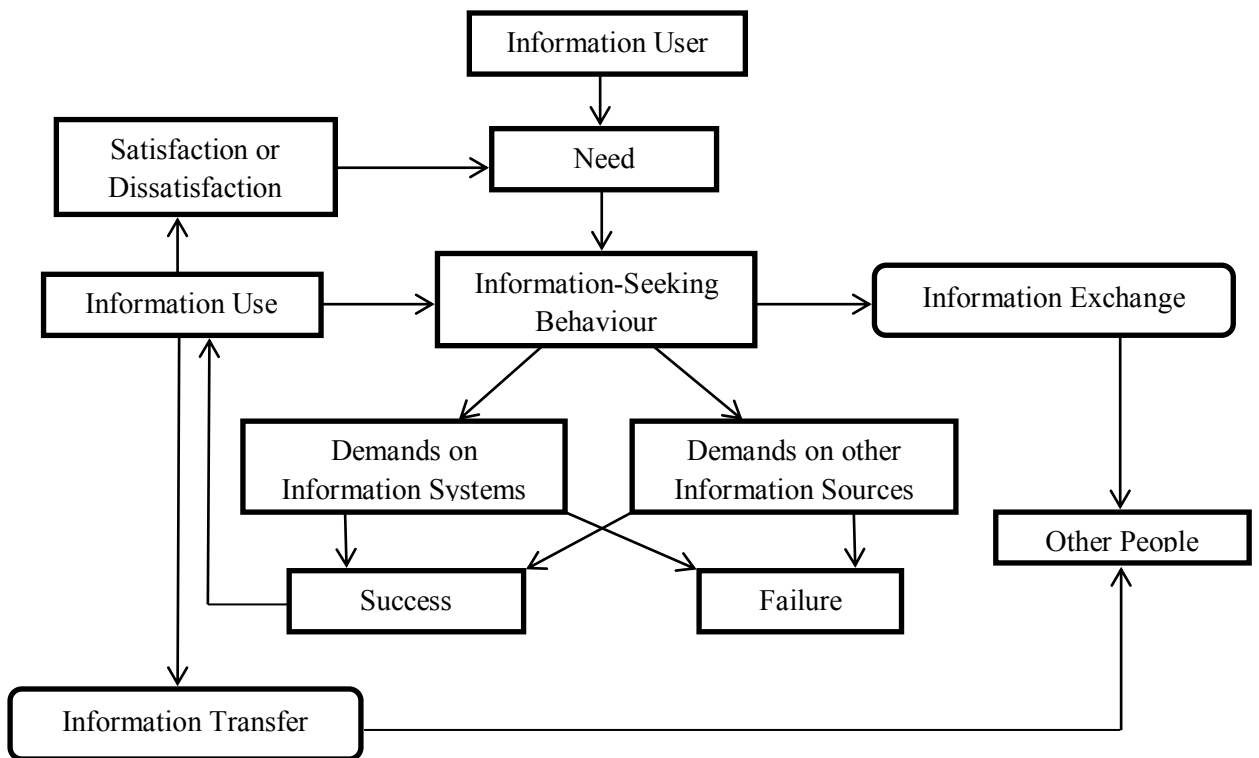


Figure-2.1.1: Wilson's 1981 Modified ISB Model
 (Source: (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>))

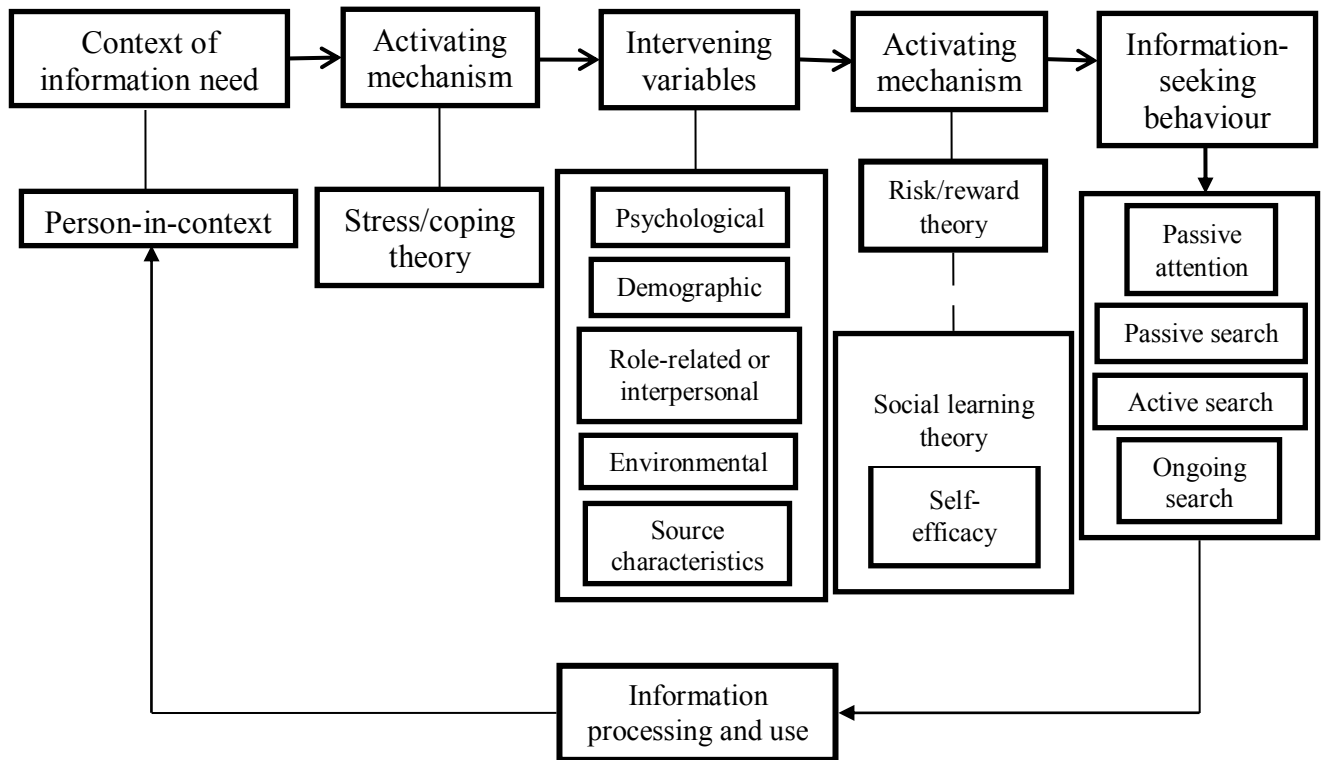


Figure 2.2: Wilson's 1996 ISB Model

(Source: (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>))

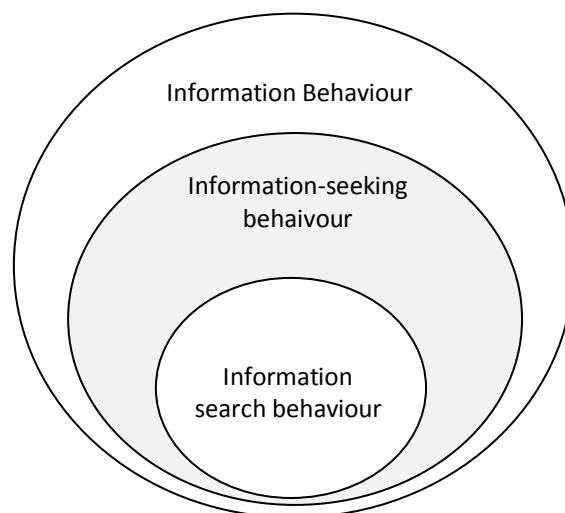


Figure 2.3: Wilson's 1999 ISB Model

(Source: (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>))

The various models of ISB depict the information exchange among a group of users concerning to their information need and in the process, a group of users can use the information. This is pragmatic among the user's group to keep abreast with the information exchange through various models which not only enhance the use of information by a single user but also a group of users are benefited.

2.9.2. Godbold Model

Based on the model devised by Derivin and Wilson, Godbold (2006) developed a model focussing on the “information behaviour wheel” is shown in Figure- 2.4. This model was developed at par with other prevailing ISB models formulated by other scientists such as Wilson, Dervin, Kuhlthau, and Ellis. This model is based on the idea of information discovery, information monitoring, and information seeking. This is the resultant impact of the information gap that is encountered by the users while searching for information. In the process of searching of information concerning to his interest area, the users either drop the idea when authentic information is not retrievable or make an effort to find the information in association with other related information which may provide a solution to information required by him. He further, suggested that the gap may either be reduced or enlarged or may appear within the information wheel whilst the individual is closing a different gap – resulting in looping and feedback mechanisms (Godbold, 2006). This model incorporates feedback mechanism from the users. It, however, excludes passive information acquisition. The process of searching for information is an important component of the user studies which facilitate them to find out the relevant information for his learning, teaching, and research.

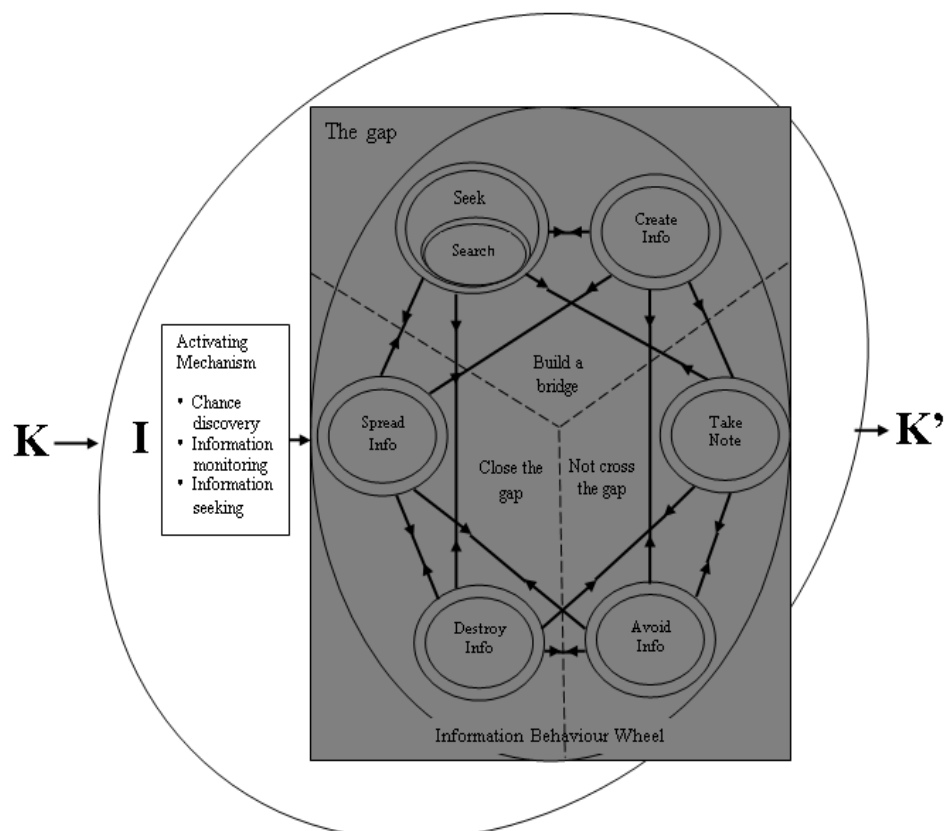


Figure 2.4: Godbold’s (2006) model of Information Behaviour
 (Source: (<http://www.informationr.net/tdw/publ/papers/1999JDoc.html>))

2.9.3. Krikelas Model

Krikelas (1983) devised a model on Information Seeking Behaviour parallel to the ISB model of Wilson and the model as depicted below in Figure-2.5 projects its focus on information acquisition that can be acquired by (i) information gathering, and (ii) information giving. Information gathering relates to various actions involved in acquiring information and storage for future use. This activity is known as “deferred need”. He, however, stated that the term information giving is associated with the performance of disseminating the messages (Krikelas, 1983, p.13). He, further, mentioned that ISB relates to the activity that fulfills immediate information need of the user. (Krikelas, 1983, p.8). Thus, the model as shown in Figure- 2.5 spells out two major aspects of ISB i.e, (i) Deferred and (ii) Immediate. Users education regarding this operational model of ISB is imminent in view of the fact that, the deferred model is structured and encompasses the current information that can be used later on by the user. But, the drawback of the model is that there is no feedback mechanism from the users. However, the model is acceptable in present environment by the user as it is the convenient form to search information (Julien & Michels, 2000; Lalthey & Hodge, 2001; Stokes & Lewin, 2004; Haines et al., 2010; Stokes, 2013).

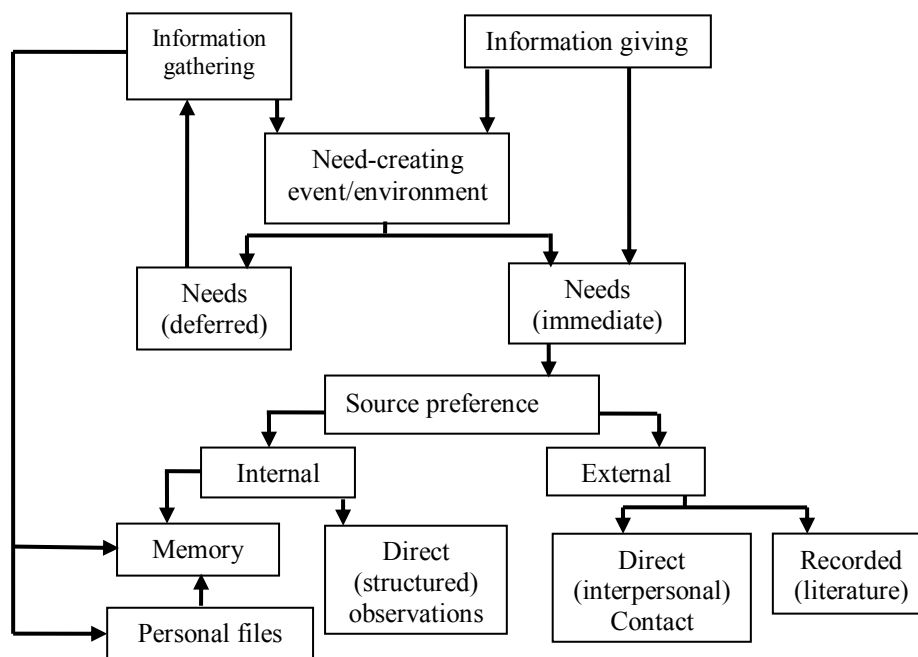


Figure-2.5: Krikelas Model (Everyday Behavior)

2.9.4. Dervin's Sense-Making Theory

Similarly, another Sense-Making Theory was conceived by Brenda Dervin. According to Dervin (1998), the sense-making theory relates to a set of theoretical concepts of a sense, methodical approach to find relevant information, speculation in the field of information seeking behaviour. According to him, no distinction lies between information and knowledge as it refers to making a sense the way it is being used. It is some way fillup the gap between the present situation in which a user is searching an information and the outcome that he receives. It is well explained in the model the various elements through a triangle showing the situation, gap, and outcome in Figure 2.6 and 2.6.1

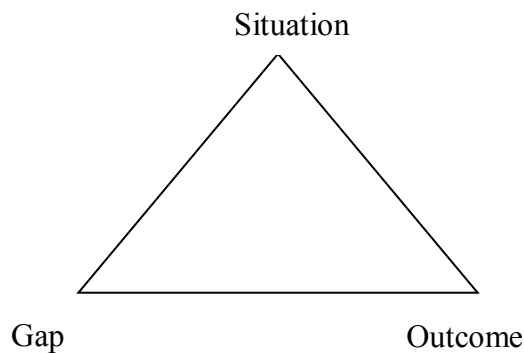


Figure: 2.6 Dervin's Sense-Making Framework

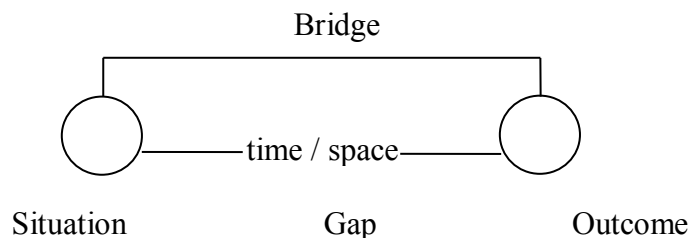


Figure: 2.6.1 Dervin's Sense-Making Framework

2.9.5. Ellis, 1989 and Ellis, Cox and Hall, 1993 Model

Ellis model of ISB developed in 1989 and revised by Ellis, Cox, and Hall in 1993 projects on different features instead of stages as discussed below. The nomenclatures assigned by him are as follows. Compared to Kuhlthau's model, Ellis's model is based on empirical research and it is also tested. There are 8 steps of information seeking and each step spells out the different features while searching for information (Joseph, Debowski and Goldschmidt ;2013). The model has been shown in Table-2.1 and Figure-2.7.

Table-2.1:Features of Ellis, 1989 and Ellis, Cox and Hall, 1993 Model

No	Steps		Features
a	Starting	:	It is associated with commencing of search by the users to seek information. Here, the users may seek the help of an expert, colleague who is knowledgeable in the given field of study.
b	Chaining	:	The user gathers the footnotes, citations available through indexes, literature, and chain the information according to his requirement.
c	Browsing	:	The information seeker browse through 'semi-directed or semi-structured searching
d	Differentiating	:	The user adopts a filtering technique to find out the relevant information pertaining to his study from an array of information sources.
e	Monitoring	:	Here, the user monitors the developments in a given field of study and incorporates the new idea in his study/research. Continuously, the users keep an eye on update and current awareness searching.
f	Extracting	:	Processes involved in identifying the information from the authentic source and its accuracy.
g	Verifying	:	The process involved in checking the reliability and usability of information.
h	Ending	:	The users finally, ties all the information required by him and this is the final feature where he uses it for his study and or research.

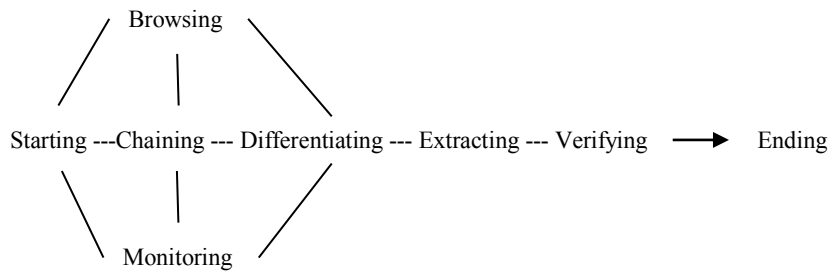


Figure: 2.7 – A stage process version of Ellis’s behavioural framework, 1993

At the initial stage, the user begins his search especially on the internet in many ways to find out the relevant information relating to his study and or research. According to Ellis model, he starts his searching from the web or the internet and while searching he invariably takes the help of the experts because he is not aware of the search techniques. In the second step, he generally searches the related words or sites suitable to him for a given study or research. In the third step, he browses the internet using a semi-directed or semi-structured searching method. In the fourth step, when he comes across with multiple information relating to his information need he segregates the items through a filtration process. In the fifth step, the user monitors the information i.e, he comes across the current information pertaining to his search. In the next stage, he identifies the information from the authentic source followed by verifying process in the next stage where the user checks the reliability and usability of the information. In the final step, the user completes his searching and download the information as per his requirements.

2.9.6. Kuhlthau, 1991 Model

In the field of Library and Information Service invariably, the user gets constrained to seek the relevant information from the system as various search techniques are involved in thesearch process. This is more prominent on the internet. Therefore, many scientists have developed various types of information seeking behaviour models. The Kuhlthau (1991) model as shown Figure- 2.8 below describes the search process of information to redress the problems encountered by the user in the information system. The scientist projected the uncertainty anxiety of the users while searching the information at the initial stage. The theoretical application of his model discusses the related feelings, thoughts and proper action required to be undertaken in an appropriate way. His model speaks about the initiation, selection, exploration, formulation, collection, and presentation which are directly concerned with the users need. It is clearly shown in the following Table-2.2

Table-2.2: Kuhlthau 1991 Model

Sl. No.	Stages in ISP	Appropriate Task According to Kuhlthau Model	Task as Reported by Study Participants
1.	Initiation	Recognize Information Need of the user	Gather
2.	Selection	Identify General Topic(s)	Gather
3.	Exploration	Investigate Information on General Topic	Gather / Complete
4.	Formulation	Formulate Focus	Gather / Complete
5.	Collection	Gather Information Pertaining to Focus	Complete
6.	Presentation	Complete Information Search	Write or Present

Source: Kuhlthau, Carol C. (1991). Inside the search process: Information seeking from the users' perspectives. *Journal of American Society for Information Science*.42 (5), 361-371

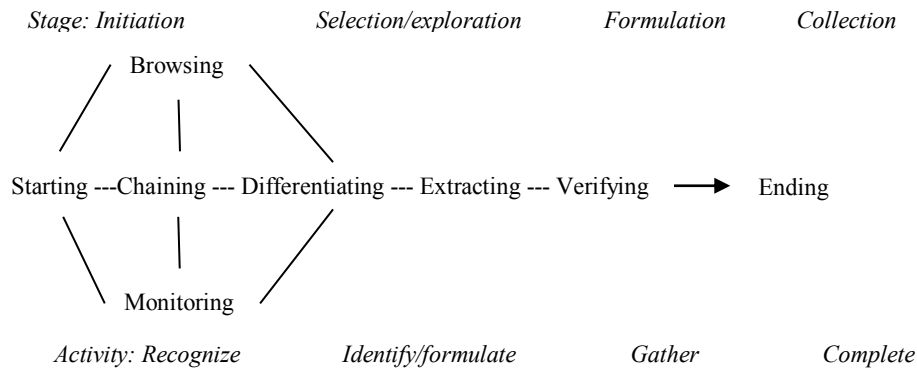


Figure: 2.8 – A comparison of previous Figure: 2.7 with Kuhlthau's stage process model

2.9.7 Task Based Model

Information seeking behaviour process is known to be a success only when the complexity of the tasks involved in locating the desired information is resolved. The users search in many ways to find out the most relevant, useful information sources which are at times complex (Bystrom, 2002; Bystrom & Hansen, 2005; Bystrom & Jarvelin, 1995).

The model devised by Bystrom and Jarvelin's (1995) placed below in Figure-2.9 clearly depicts various functions in information seeking.

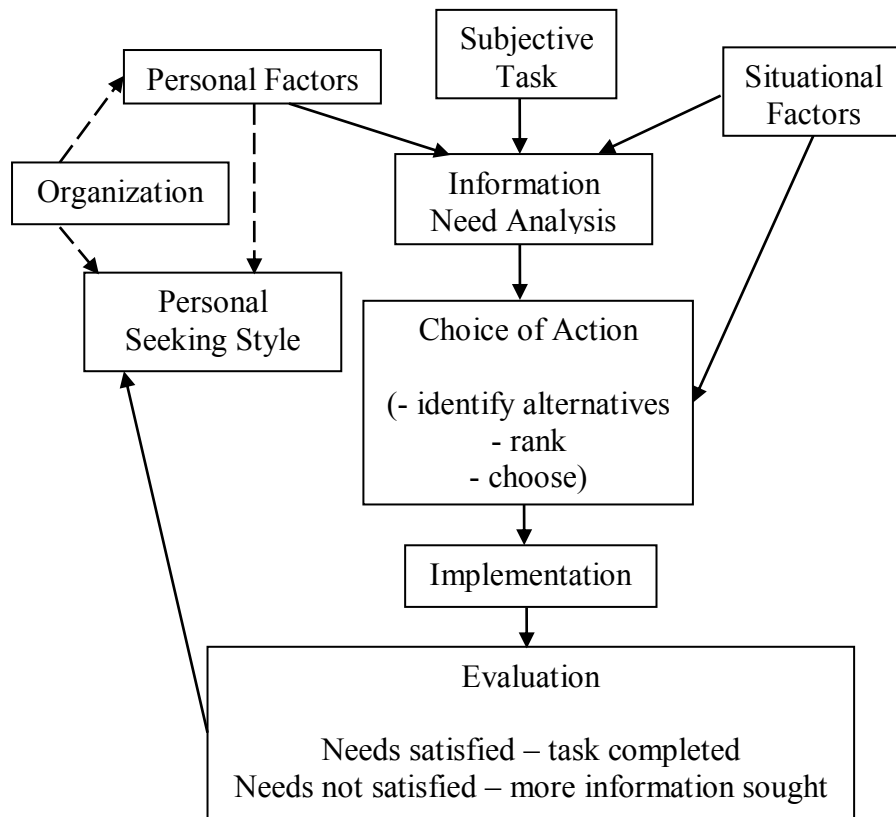


Figure-2.9: Bystrom and Jarvelin's (1995) task-based ISB model

The other information seeking behavior models such as, Niedzwiedzka's (2003) model placed in Figure-2.10, Non-linear model devised by Foster (2004) widely recognized as Foster Model, 2004 which is placed in Figure-2.11, and Spink and Cole's integrated HIB model placed in Figure-2.12 equally emphasize on the searching of information from various resources. The authors have devised the models in such a way that, the users from complex information sources can access the information and filter according to the norms prescribed in the models. However, the option lies with the user to choose the model to derive the information according to their requirements.

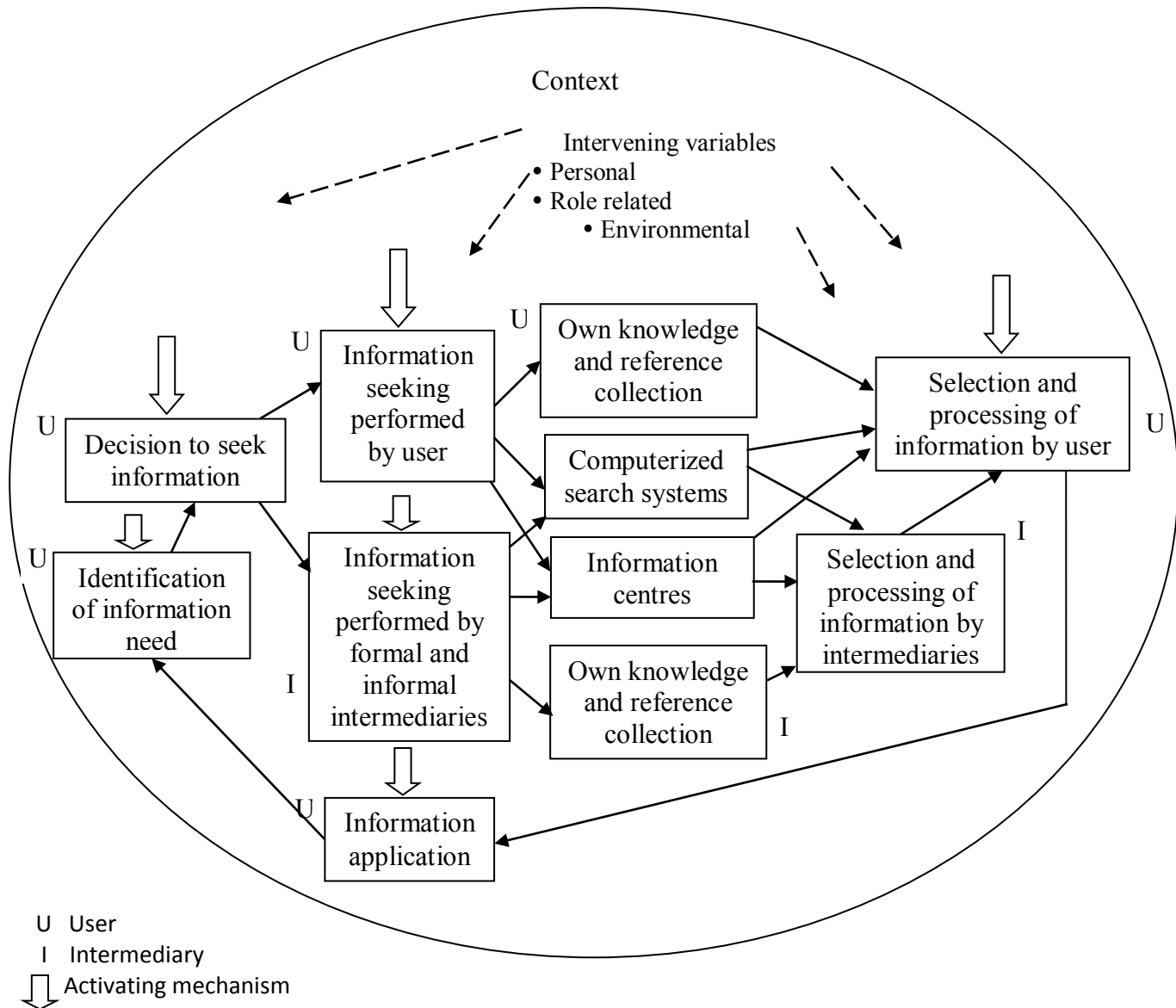


Figure-2.10: Niedzwiedzka's (2003) model

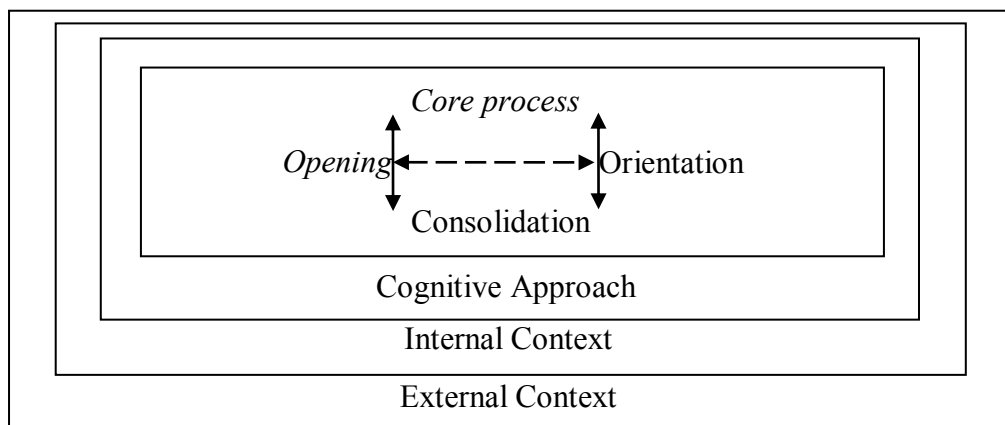


Figure-2.11: Non-linear model of information seeking behaviour

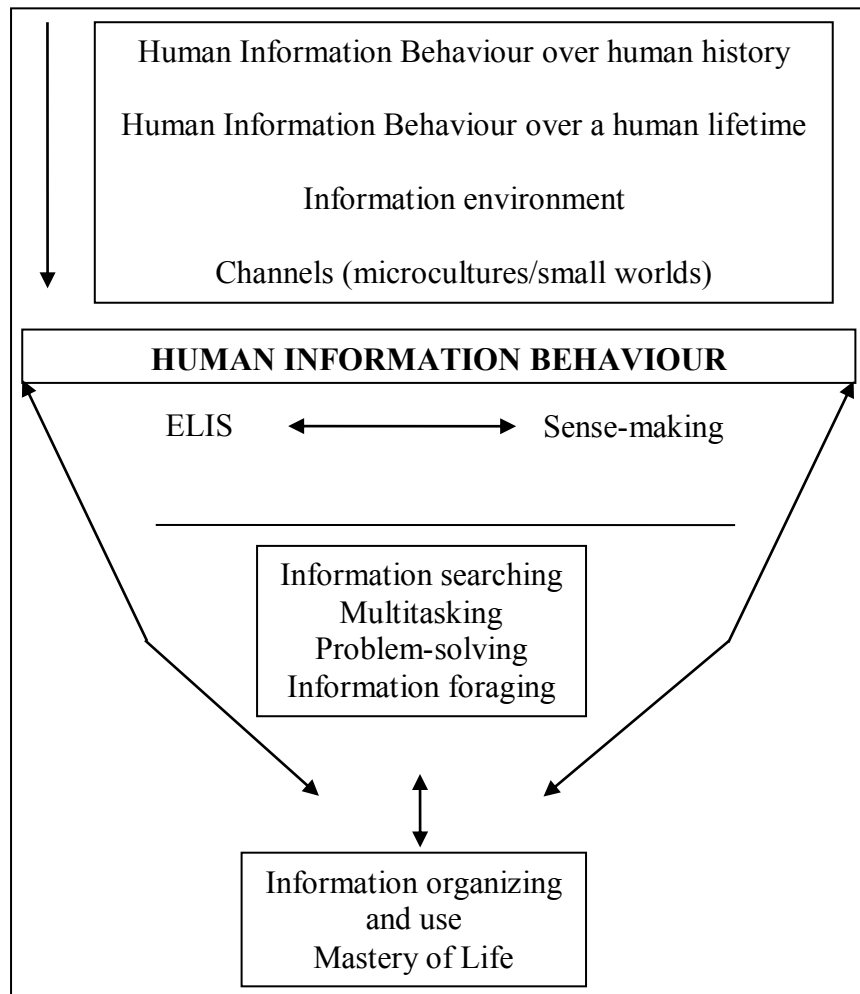


Figure-2.12: Spink and Cole's integrated HIB model

2.10 Conclusion

Information seeking behavior models as devised by various scientists, authors practically function as a solution to the emerging problems of the user community while seeing information from wide range of resources. This has become more pragmatic in view of the availability of information in various platforms which include print and electronic. The internet has contributed immensely to generate information in various dimensions. Further, a new generation of subjects, collaborative works, research works etc. add potentially to generate the information. Therefore, it is important from the users' perspective to choose the right information seeking a model to access authentic, reliable, useful information for study and research. The information seeking models are directly concerned with the users which open avenue for development in all spheres.

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3.1 Introduction

Education is extremely important for the development of a nation and is entirely unimaginable, inconceivable in the contemporary world to think of a society or a nation without the education. It is the education which contributed immensely to the growth and development in every sphere of life. Higher education equally is considered to be one of the key factors in promoting and accelerating the process of national development. Higher educational institutions, therefore, play a significant role in providing knowledge through their teaching and research programs.

The onus of framing of policies concerning to the higher education lies with the Central Government which also takes the responsibility of instituting central universities in different states through the acts of legislation passed by the parliament. The central universities have always reflected a national diverse character in the composition of students, teaching and non-teaching staffs. Further, it not only facilitates these universities in attracting students from across the country but also prompt to retain the talents of the faculties, researchers.

The central universities have always reflected a national diverse character in the composition of students, teaching and non-teaching staffs. It not only facilitates in attracting students from across the country but also prompt to retain the talents of the faculties, researchers. To accelerate higher education and quality teaching, the Government of India setup 47 central universities. In the higher education domain, the universities in general and the central universities, in particular, have become a driving force to expedite literacy in the society excel the knowledge domain. The Unesco (http://www.unesco.org/education/pdf/24_133.pdf) has taken a mandate to reform the higher education and specifically focused on quality and pertinence. It further, emphasized on floating three basic ideas in higher education such as, (i) From reflection to coherent action, (ii) Balancing quality and pertinence, and (iii) Social role of higher education and cooperation (http://www.unesco.org/education/pdf/24_133.pdf). It pointed out for the realization of the potentiality of higher education in the society which needs adopting a dynamic stand and should be pro-active in its functioning. It further, stressed upon revitalization in partnership between the academic communities and other relevant sectors to excel the benefits to the society. While focusing to the establishment of the central universities in India over the period of time, the Central Government took positive measure in instituting the central universities in this perspectives aiming at flourishing literacy in the society among all classes of people. The list of central universities instituted by the Govt. of India is placed in 3.1 which depict the general academic universities, special universities, aviation universities etc.

Table-3.1: List of Central Universities in India

Sl. No.	State	Name of Central University	Estd	URL
1.	Arunachal Pradesh	Rajiv Gandhi University	2007	www.rgu.ac.in
2.	Assam	Assam University	1994	www.aus.ac.in
3.		Tezpur University	1994	www.tezu.ernet.in
4.	Bihar	Central University of Bihar	2009	http://www.cub.ac.in/
5.		Nalanda University	2010	https://www.nalandauniv.edu.in/
6.		Mahatma Gandhi Central University	2016	http://www.mgcub.ac.in/
7.	Chhattisgarh	Guru Ghasidas Vishwavidyalaya	2009	http://ggu.ac.in/
8.	Delhi	Jamia Millia Islamia	1988	www.jmi.nic.in
9.		University of Delhi	1922	www.du.ac.in
10.		Jawaharlal Nehru University	1969	www.jnu.ac.in
11.		Indira Gandhi National Open University (IGNOU)	1985	http://www.ignou.ac.in
12.		South Asian University	2010	http://www.sau.int/
13.	Gujarat	Central University of Gujarat	2009	http://www.cug.ac.in/
14.	Haryana	Central University of Haryana	2009	http://www.cuh.ac.in/
15.	Himachal Pradesh	Central University of Himachal Pradesh	2009	http://www.cuhimachal.ac.in/
16.	Jammu & Kashmir	Central University of Kashmir	2009	http://www.cukashmir.ac.in/
17.		Central University of Jammu	2011	http://www.cujammu.in
18.	Jharkhand	Central University of Jharkhand	2009	http://www.cuj.ac.in
19.	Karnataka	Central University of Karnataka	2009	http://www.cuk.ac.in
20.	Kerala	Central University of Kerala	2009	http://www.cukerala.ac.in
21.	Madhya Pradesh	Indira Gandhi National Tribal University	2007	http://igntu.nic.in/
22.		Dr. Harisingh Gour Vishwavidyalaya	2009	http://www.dhsgsu.ac.in/
23.	Maharashtra	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	1997	www.hindivishwa.org

24.	Manipur	Manipur University	2005	www.manipuruniv.ac.in
25.		Central Agricultural University	1993	http://www.cau.ac.in/
26.	Meghalaya	North Eastern Hill University	1973	www.nehu.ac.in
27.	Mizoram	Mizoram University	2000	www.mzu.edu.in/
28.	Nagaland	Nagaland University	1994	nagalanduniversity.ac.in/
29.	Orissa	Central University of Orrisa	2009	http://cuo.org
30.	Pondicherry	Pondicherry University	1985	http://www.pondiuni.edu.in/
31.	Punjab	Central University of Punjab	2009	http://cup.ac.in
32.	Rajasthan	Central University of Rajasthan	2009	http://www.curaj.ac.in/
33.	Sikkim	Sikkim University	2007	http://www.cus.ac.in/
34.	Tamil Nadu	Central University of Tamil Nadu	2009	http://www.cutn.ac.in/
35.		Indian Maritime University	2008	http://www.imu.edu.in/
36.	Telangana	University of Hyderabad	1974	www.uohyd.ernet.in
37.		Maulana Azad National Urdu University	1998	http://www.manuu.ac.in
38.		The English and Foreign Languages University	2007	http://www.efluniversity.ac.in
39.	Tripura	Tripura University	2007	http://www.tripurauniv.in
40.	Uttarakhand	Hemwati Nandan Bahuguna Garwal University	2009	http://www.hnbgau.ac.in/
41.	Uttar Pradesh	Aligarh Muslim University	1920	www.amu.ac.in
42.		Babasaheb Bhimrao Ambedkar University, Lucknow	1996	www.bbau.ac.in/
43.		Banaras Hindu University	1916	www.bhu.ac.in
44.		University of Allahabad	2005	www.allduniv.ac.in
45.		Rajiv Gandhi National Aviation University	2013	allduniv.ac.in
46.		Rani Lakshmi Bai Central Agricultural University	2014	http://www.rlbcu.ac.in/
47.	West Bengal	Visva Bharati	1951	www.visva-bharati.ac.in

Source: <https://www.ugc.ac.in/oldpdf/Consolidated%20list%20of%20Central%20Universities%20as%20on%2029.06.2017.pdf>

3.2 Central Universities in North East Region

To accelerate higher education in the North East Region and for the total development of all the eight states, the Govt. of India took steps expeditiously to institute central universities. Mention may be made that, there are 9 (Nine) Central Universities operating in all 8 states as shown in the Table-3.2. The primary aim of such universities is to flourish higher education in the respective state, eradicate illiteracy, developing professional competency, capacity building among all classes of people, self-sustaining power, the growth of the economy of the state, better livelihood, and sustainable development of the state etc. The list of 9 (Nine) Central Universities in North-East India is reflected in the following Table-3.2.

Table-3.2: List of Central Universities in North-East India

Sl. No	State	Name of Central University	Place	Estd.	URL
1	Arunachal Pradesh	Rajiv Gandhi University	Itanagar	2008	www.rgu.ac.in
2	Assam	Assam University	Silchar	1994	www.aus.ac.in
3		Tezpur University	Tezpur	1994	www.tezu.ernet.in
4	Manipur	Manipur University	Imphal	2005	www.manipuruniv.ac.in
5	Meghalaya	North Eastern Hill University	Shillong	1973	www.nehu.ac.in
6	Mizoram	Mizoram University	Aizawl	2000	www.mzu.edu.in/
7	Nagaland	Nagaland University	Kohima	1994	nagalanduniversity.ac.in/
8	Sikkim	Sikkim University	Gangtok	2007	http://www.cus.ac.in/
9	Tripura	Tripura University	Agartala	2007	http://www.tripurauniv.in

Source: <https://www.ugc.ac.in/centraluniversity.aspx>

A detail discussion of all the central universities excluding the Agricultural University in North-East reflects the setup status and genealogy of the university (Mishra, 2016).

3.2.1 Assam University, Silchar (www.aus.ac.in)

Assam University, Silchar in North-East was established in 1994 as a central university by an Act of the Indian Parliament (Act XXIII of 1989) which gives a wide range of scope in higher education to the state. The university has population strength of the students more than 4000. The university has two different campuses such as Silchar Campus and Diphu campus which spread higher education covering the entire state. Both the campuses are having a good collection of library resources (www.aus.ac.in) which adequately support the teaching, learning and research.

3.2.2 Manipur University, Imphal (www.manipuruniv.ac.in)

Manipur University located at Imphal was established in 1980 by an Act of the Parliament in 2005 and started functioning as a central university since October 2005. The main objectives of the university are to impart advance knowledge by providing instructional and research facilities in various subjects and also aims at providing capacity building and self-sustained among all in the society. Improvement in the socio-economic condition of the state, cultural development and trained man power in various dimensions are also included in the objectives of the study and hence, the university emphasizes on the value-oriented courses.

3.2.3 Mizoram University, Aizawl (www.mzu.edu.in)

Established as a central university by an Act of the Parliament in 2000, Mizoram University started its functioning in 2001 primarily to disseminate high level of teaching, learning and research to the students including providing advance knowledge in the state. It focuses on providing instructional and research facilities and capacity building through various branches of learning and make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry and other allied disciplines including innovative educational programmes, research and to develop trained manpower for sustainable development of economic and to improve the intellectual and cultural development. Keeping these objectives in view, Mizoram University embarked on various programmes/ schemes in terms of both academic and administrative. The jurisdiction of the Mizoram University extends to the whole of Mizoram, the erstwhile jurisdiction of Mizoram Campus of North Eastern Hill University, Shillong, which functioned till 1.7.2001. Initially inherited with 7 academic departments from NEHU, the university is now functioning with 30 academic departments.

3.2.4 Nagaland University, Kohima (www.nagauniv.org.in/).

The Nagaland University was established in 1994 as a Central University in Lumani campus in the state capital Kohima with a mission to disseminate and advance knowledge by providing instructional and research facilities in various branches. The other missions include to develop skill and competencies in other integrated courses such as, humanities, natural and physical sciences, social sciences, agricultural sciences, disciplines in the education and forestry and other allied programmes of the university and to take appropriate measures for promoting innovations in teaching-learning process, inter-disciplinary studies and research to educate and train manpower for the development of the state of Nagaland including paying special attention to improve the social economic conditions and welfare of the state and to protect cultural heritage and intellect. Equal attention has been given to promote quality teaching and learning in other campuses spread across the state, namely at Kohima (Merima), Medziphema, and Dimapur (temporary) (www.nagauniv.org.in/).

3.2.5 North-Eastern Hill University, Shillong (www.nehu.ac.in)

North-Eastern Hill University, a premier university in North East primarily was established to facilitate higher learning, research and development in the entire region. The primary motto lies with providing quality education and creation with skilled manpower for sustainable development of the society. Apart from that, it also focuses on protecting the cultural heritage of the state. Shillong being a cosmopolitan city, the university accommodates all classes of people in education horizon of the university and it is a central place of intellectual deliberations and is the hub centre for knowledge sharing both nationally and internationally.

3.2.6 Rajiv Gandhi University, Itanagar (www.rgu.ac.in)

Rajiv Gandhi University (formerly Arunachal University) is the premier institution for higher education in the state of Arunachal Pradesh and was established in 1984 which achieved the central status in 2008 and the university was setup with an intention to eradicate illiteracy in the state and bring success in the national and international field by providing qualitative education, developing sustainable economic condition in the state and capacity building among the aspirants in all the field of as per notification of Ministry of Human Resource Development, Government of India. The university is one of the oldest universities in India and before the inception of Rajiv Gandhi University, the colleges of Arunachal Pradesh were affiliated to North Eastern Hill University, Shillong. There is a separate cell for internet browsing by the students, research scholars and Faculty Members. They can browse more than 4000 plus e-journals on-line under UGC InfoNet Digital Library consortium. A separate section for storing Ph.D. and M.Phil. dissertations for ready reference are added during the year for the benefit of M.Phil. and Ph.D. scholars. Other reference sources have been put into another section donated by the USIS, Kolkata. A proposal for a Spanish Section, databank, RFID theft prevention smart electronic gate, self-check-in desk, and closed-circuit LED camera are on the card (<http://www.rgu.ac.in/aboutrgu/statisticalDataFactSheet-02.html>).

3.2.7 Sikkim University, Gangtok (www.sikkimuniversity.ac.in)

The Sikkim University in 2007 was established in Gangtok with an aim to be a hub centre to provide quality in higher education by disseminating advance knowledge through instructional and research including taking appropriate measures for promoting innovation in teaching-learning process, inter-disciplinary studies at an affordable cost. The other objectives include developing skills and competencies among the people and improve the socio-economic status and culture.

3.2.8 Tezpur University, Tezpur (<http://www.tezu.ernet.in/>)

Tezpur University was established by an Act of Parliament in 1994. The objective of this Central University as envisaged in the statutes are that it shall strive to offer employment oriented and interdisciplinary courses to meet the regional to national aspirations and the development of the state of Assam and also offer courses and promote research in areas which are of special and direct relevance to the region and in the emerging areas in Science and Technology.

3.2.9 Tripura University, Agartala (www.tripurauniv.in)

Tripura University with an aim to flourish higher education in the state and to fulfill the long cherished demands of the students' community, and the present and future came into existence as a state university in 1987 and in 2007 became a central university. The aims of the university like other central universities were to develop sustainable quality in higher education, professional competency, skill and competencies to meet the challenging opportunities etc.

3.3 Role of Library in the Central Universities

To fulfill the aim and objectives of the universities, library attached to each institution play a commendable and indispensable role in providing adequate resources to support learning procedure, research and development, knowledge distribution etc.

The library, since the dawn of civilization, has been recognized as a viable podium to excel different academic programs. Recognized as a knowledge domain, it is equipped with resources and disseminate among the users for flourishing education and sustainable research and development. It, further supplements substantially various education programs imparted by the academic departments. The success of the education primarily rests on the resources library attached to the respective institution. The central library of the universities reflects a wide diverse character which accommodates all types of users like students, research scholars, faculties, administrative staffs and other users who get access to the information and resources in the library in a seamless way. It not only supplements the education to the users in-house but also attracts the other users outside the library through its website. Therefore, instituting the library website of its own is pragmatic in the central library of the universities. Each of the nine central universities of North-East is attached with a central library to equip to the students, teachers, research scholars with intellectual wealth, resources comprising both print and electronic to build the nation. A detailed account of the central library attached to the institution is as follows.

3.3.1 Assam University Central Library, Silchar, Assam

The central library of Assam University known as Rabindra Library was established along with the university in 1994 to meet the information and academic need of the users. As per the Annual Report, 2011-12 of the university, the University Library at present has a stock of total 118,296 books. The University Library subscribes 150 titles of Indian Journals during the period and 12 popular magazines

and 18 newspapers. Assam University library is one of the libraries selected by UGC for automation and networking under INFLIBNET programme in the year 1998-1999 and provides access to more than 5000+ e-journals through UGC INFONET e-journal Consortium. Assam University library is also a member of DELNET.

3.3.2 Manipur University Central Library, Imphal, Manipur

The Manipur University Library like other university library facilitates both traditional and electronic resources to the users for teaching, learning and research. It is also recognized as a Referral Library of the state. A total number of more than 3500 registered users are there in the library comprising of 2170 P.G. Students, 702 Research Scholars, 191 Teachers and 483 Non-Teaching staff. It also facilitates information to the unregistered users who drop into the library for seeking information. Thus, the university library from its inception has been serving the communities and is also a centre of preservation and conservation of the library resources, institutional resources.

With regard to collections, the library has more than 1, 61,000 books and is subscribing to more than 200 printed journals including more than 8600 core and peer-reviewed journals and nine bibliographic databases from 23 publishers and aggregators from 23 publishers through UGC-INFONET Digital Library Consortium. The library operates three databases such as, i) Books ii) Serials and iii) Thesis which are incorporated in the union databases of INFLIBNET, Ahmedabad (<http://en.manipuruniv.ac.in/Library/index.php>).

3.3.3 Mizoram University Central Library, Aizawl, Mizoram

The Central Library, Mizoram University has been witnessing significant development in various spheres since its inception and contributing immensely to various academic activities such as teaching, learning and research. The library over the period of time has been able to extend sustainable services to its users through in-house and Wi-Fi. The entire library holdings have been made available in machine-readable catalogue since 2008 and the computerized bibliographic information of the library holdings have also been available for users' searching throughout the campus through Local Area Network (intranet) using Web OPAC. Automated circulation system using barcode technology has been used since 1st December 2008 which provides easy and prompt service to the users.

Digitization of Mizoram University's own documents and publications had been pursued setting up of an 'Institutional Repository' and the same had been hosted on the intranet since May 2011. The repository provides free access to institutional research outputs within the campus network (Intranet).

The library also has installed advanced technology in the field of identification, security, tracking and automated handling of Library materials using Electro-magnetic and Radio Frequency Identification (RFID) Library management system in order to improve the efficiency of Library operations has been completed and started using the system since 21st March 2012. The new system allows the user to check-out books by themselves using a Self-Check machine. Further, computerized

Braille System for blind students also is being provided since 2011. Moreover, the library is also working on the process of appending CD/DVD contents along with the bibliographic record of the books and making it available for the users to easily access the digital data contents from Web OPAC throughout the campus network (Intranet). Mizoram University Central Library started using LIBSYS since 2006 for automating the in-house operation of various activities. However, when initiative for installation of RFID (Radio Frequency Identification) technology started in 2008, it has been discovered that the two systems have technical problems with each other. The Central Library authority then changes the library automating software to TLMS (Total Library Management Service) which is still in use without any major problem so far.

3.3.4 Nagaland University Central Library, Kohima, Nagaland

The Library is one of the active places in the Nagaland University system. It is the core information center not only for students and teachers of the University but also for the scholars in and around Kohima. The University Library offers most of the traditional services provided by any other University Libraries. The main campus at Lumami is equipped with a sound library system to provide access to its users and serves with a good number of literature. It is considered as a knowledge centre which supports teaching, learning and research. Nagaland University Central Library, a premier institution supports services to its users to promote teaching, learning and research. On 6th September 1994 consequent upon the merging of postgraduate studies NEHU, Nagaland Campus at Kohima with Nagaland University. The library apart from building have reasonably useful collection of books also subscribes to 22 International and 9 National Journals to meet various demands of the users. The library is the core centre of information not only facilitates services to its patrons but also the scholars available in and around Kohima. The University Library offers most of the traditional services provided by any other University Libraries. The readership of the Library now numbers more than 500 consisting of teachers, students, research scholars, staff and other consultants from college students and teachers (<http://www.nagauniv.org.in/index.php/facilities/libraries/central-library-kohima>). However financed by the INFLIBNET, the automation process in the library through SOUL commenced in 1999 initially with six computers, one server and installation of networking and internet access was provided to the faculties, scholars and the students.

3.3.5 North Eastern Hill University Central Library, Shillong, Meghalaya

Since 2004, the Central Library of the North-Eastern Hill University (NEHU) which was located earlier at Mayurbhanj Complex, Nongthymmai, Shillong is now functioning in its own building in NEHU campus. Consequent upon the shifting of the Central Library to the University Campus, all the departmental libraries and the library of the School of Life Sciences located within the NEHU Campus have been recalled to the Central Library. The Central Library is well equipped with advanced computers and other electronic and audio-visual equipment to provide seamless both off-line and online services. The Central Library is also an active partner of the e-

shodh-sindhu: Consortium for Higher Education Electronic Resources (<https://www.inflibnet.ac.in>) and currently it is providing access to almost all online journals and other resources available through the consortium. The Central Library, with a stock of over 2,90,000 books and back-volumes, including a rich collection of works on North-East India, has emerged as a major regional resource centre for scholars engaged in teaching and research <http://www.nehu.ac.in/library/over.html>. The library with rich resources caters to the needs of the students, research scholars, faculties, administrators and staffs of the university.

Apart from providing e-resources through e-Shodh-Sindhu, the library also provides online resources which include,

- ⇒ Subject Information Gateways Free e-books
- ⇒ American Libraries in India Catalogue
- ⇒ New Online Initiatives
- ⇒ DBT DelCON Consortium
- ⇒ Shodhganga- Full-text of Indian Thesis
- ⇒ Shodhgangotri-Synopsis of Indian Research in Progress
- ⇒ Knimbus - A collaborative Research Platform

Thus, the library takes all-out measures to reach the users and satisfy the varied interest of them.

3.3.6 Rajiv Gandhi University Central Library, Itanagar, Arunachal Pradesh

The Rajiv Gandhi University Central Library also equally put emphasis on providing services to its users in multiple ways. The university central library uses Libsys software for its library automation and also a member of e-shodh-sindhu: Consortium for Higher Education Electronic Resources (<https://www.inflibnet.ac.in>) getting thereby, a lot of e-resources for use in the library and the faculties, research scholars, students etc. The library also access e-resources and full-text databases from IEEE Online, Springer link, ProQuest, ASME, ASCE, j-Gate and JCCC. Bibliographical databases available from Biological Abstracts and provides access to e-journals and other network services such as OPAC on the intranet, and e-mail service to the patrons of the library. The services were more prominent after the application of library software which facilitated the library to opt for most of the functions of the library activities which could be carried out automatically.

3.3.7 Sikkim University Central Library, Gangtok, Sikkim

Sikkim University central library endeavors to establish a world-class library with up-to-date, contemporary academic and general books, journals, magazines, research publications, manuscripts, reports and other documents in various disciplines and subjects. University has got access to more than 5000 e-Journals available. In a very short period of over about two years, the University Central Library has spread into more than 9000 sq.ft and has acquired over 10000 books from across the disciplines/subjects. The library also has initiated the application of satellite library.

In order to promote research activities and broad-based teaching practices, the library is in the process of acquiring the publications of various Multilateral and national institutions. The library is also in collaboration with Inter-University Centre (IUC) of UGC and Information and Library Network Centre, connected with Information and Library Network (INFLIBNET), a network that allows free access to e-journals published from India and abroad. Through INFLIBNET, now the Library can access journals listed in e-resources like American Chemical Society, American Institute of Physics, American Physical Society, Annual Reviews, Blackwell Publishing, Cambridge University Press, Economic & Political Weekly, Elsevier Science, Emerald, Institute of Physics, ISID, JCCC, JSTOR, MathSciNet, Nature, Oxford University Press, Portland Press, Project Euclid, Project Muse, Royal Society of Chemistry, SIAM, Springer Link and Taylor & Francis. Apart from these e-resources, University is also enlisted in DelCON, an e-resources consortium for biological sciences in North East India under Department of Bio-Technology, Government of India.

Under this INFLIBNET and DelCON connectivity, University library gets access to more than 5000 e-journals available in Microbiology, Bio-Technology, Zoological, Chemical, Environmental, Social, Humanities and Life Sciences. About ten (10) computers in the library are solely dedicated to access e-shodh-sindhu: Consortium for Higher Education Electronic Resources (<https://www.inflibnet.ac.in>). University is in the process of extending this connectivity to other academic buildings for maximum utilization by various stakeholders. The University Library is also subscribing leading international, national journals, magazines, newspapers in various disciplines.

3.3.8 Tezpur University Central Library, Tezpur, Assam

Tezpur University Central Library from its inception in 1994 has been trying to provide maximum services and one of the prime objectives is to put emphasis on the users need and to meet the demands of the users especially research scholars and faculties including the students of various academic disciplines. The library has strengthened its collection development to provide the use-oriented service. The Central Library moved to its new permanent building in February, 2009. The library holds its goal to achieve the height as an ideal University library in the region as well as in the country. The objective ahead is to serve the university community in the sphere of literature and information services both in qualitative and quantitative terms in a sustained manner towards the attainment of the academic and research pursuits as set by the University. In order to achieve the objectives, the library is continuously striving to adopt the best practices in all endeavours of its activities *viz.* acquisition, technical processing, scientific organization of the resources housed in the library as well as services to its clientele.

The library holds more than sixty thousands 60000 volumes of print documents and subscribed 630 titles of current journals (print 128, online 502). The e-shodh-sindhu: Consortium for Higher Education Electronic Resources (<https://www.inflibnet.ac.in>) provides access facility to 9081 (including 525 on a

perpetual basis) e-journals and seven databases. Central Library also gets online access to 926 e-journals through DelCon Consortium. The library also holds more than 1800 CDs scattering to different thought contents. Library users can access book database, theses database, journal database, e-journals and other e-resources from any terminal within the University campus. (<http://www.tezu.ernet.in/Library>).

3.3.9 Tripura University Central Library, Agartala, Tripura

The Tripura University Central Library came into being in 1987 with an initial collection of 18780 books and documents, taken from the erstwhile Calcutta University Post Graduate Centre (CUPGC). The library provides adequate resources both print and electronic to all the users of the university spread over 28 major and inter-disciplinary subjects and also facilitates the students, research scholars, faculty members and participants of the various programs and also other organizations through inter-library loan system and public consultation. The library is considered to a knowledge resource center to meet the versatile needs of the users and disseminate data and information including creation and sharing of knowledge and thus, fulfills the mission of the Central Library in the present era of learning.

The Central Library has a rich collection of resources which include 1,11,752 (approx) books and documents presently beside a sound collection of reports, state-of-arts, non-print media, etc. The library subscribes 141 journals both national and international in the area of subjects taught and e-journals under UGC INFONET program. Approximately 8000 e-journals with millions of full text articles in all subjects/disciplines are usable under the UGC INFONET program presently. The computerization of library services and the creation of database are under process by "SOUL" software and new advanced technology is under active consideration under INLIBNET. In 2004, the ERNET's 64 kbps VSAT connectivity was upgraded to 250 Kbps SCPC VSAT connectivity under UGC INFONET program. Currently the library is equipped with 10 Mbps dedicated leased line under the UGC INFONET program and 1 Gbps dedicated leased line under NKN NMEICT (<http://www.tripurauniv.in> /[index.php/general-information](http://www.tripurauniv.in/index.php/general-information) and http://www.tripurauniv.in/images/universitymedia/StatisticalData/UGC_Data_Final_310112.pdf)

3.4 Conclusion

Library services in an academic institution keep a formidable position in providing resources and services to its users and strengthen the academic for with value of research, teaching and learning. It is the knowledge hub which is committed to distributing information irrespective of the fields and extends services using multiple channels to strengthen the quality of education which ultimately leads to developing a sustainable knowledge society. The discussions visualized that, the central libraries of both the universities are well equipped with sources and infrastructures and provides adequate services to its users. Still, radical measures such as literacy campaign need to excel so as to provide more user-centric services.

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4.1 Introduction

Library of any institution is recognized by its collection of resources and services extended to the users of the institute and the two university libraries i.e. Mizoram University Central Library and North Eastern Hill University Central Library under study are no exception to it. The growth of user-centric resources and its proper management is one of the prime components of the library services. To provide the services effectively, resources play a significant role as multiple types of resources are available to support the academic works.

Libraries from the beginning have become a viable podium to support the users with resources for wider academic benefits and extend service to accelerate education. To meet the need of the users it accumulates resources primarily traditional but in the ICT environment, e-resources are gaining momentum. It is somehow impossible to acquire the resources to meet the needs of the users. However, traditional resources cannot be ignored in the library which constitutes all forms of traditional literature i.e. books, journals, reports etc. Therefore being compelled under the prevailing situation, the libraries now rely on increasing e-resources as many of them are not supported with sufficient print versions due to the above-mentioned factors. Since the inception and induction of electronic materials through the technologies libraries have practically become flooded with digital resources which are a continuous process.

4.2 Mizoram University Central Library

The Mizoram University Central Library has a collection strength by 2017 includes 1,06,658 books, 378 Theses, 303 dissertations, 11,364 number of Bound volumes of Journals, including a subscription to 242 current journals and 20 dailies out of which 5 are in English, 14 are in Mizo and 1 in Hindi. The central library is now having a member strength of 3,657 out of which 612 are from undergraduate students (i.e. computer and engineering, IMBA etc.), 1,757 from postgraduate students, 159 from M.Phil scholars of different departments, 609 from Ph.D scholars of different departments, 242 from faculty of different departments, 90 guest lecturers from different departments, 3 departmental libraries and 185 from non-teaching staff.

During the academic year 2017, 29,214 numbers of books were added to its collection after obtaining the documents from different departments. The central library records a total number of 38,096 visitors in 2017 (<http://www.mzu.edu.in/index.php/facilities/central-library>). The university central library adds substantial resources to support teaching and learning in the university in all disciplines. Housed with a good professional strength, the library provides not only a technology-based information resource services to its users but also adequate resources through e-shodh-sindhu: Consortium for Higher Education Electronic Resources (<https://www.inflibnet.ac.in>).

All the resources available inside the library are accessible through machine-readable catalogue since 2008 and the computerized bibliographic information of the library resources have also been made available for all the users through Local Area Network (intranet) by using Web-OPAC. The central library has been automated

since 1st December 2008 using barcode technology which is very effective and efficient for the users. In the beginning of every academic session, the central library is organizing orientation programme for all the newly admitted students from the entire department and it provides lending and reprographic services.

To provide the electronic-based services, the library resources of the central library have undertaken the digitization process including creating an institutional repository to accommodate all the published literature by the academic fraternity and are hosted on the intranet to provide freely accessible to all the users through campus network (Intranet). Especially for the blind students of the library users, Computerized Braille System also has been started which are accessible for the users for better academic output. Using information technology, the library also takes care for the preservation of library resources including the security system of the library materials, Electro-magnetic.

4.3 Services of Central Library, Mizoram University

The Central Library of the Mizoram University provides the following services for the overall academic developments of the students. It also adequately supports services to the faculties and the research scholars. The library also provides the digital library services. The digital library services that are visible to the society are described as follows.

☞ Institutional Repository:

For keeping a record of all the documents and information in the institution there is several institutional repository open source software like Greenstone, E-prints, D-space etc. For maintaining the archives of electronic resources in Mizoram University, Institutional Repository software D-space is being used. The repository contains all the electronic materials and primary resources published by the university faculties including the institutional research outputs and these are archived using the software and the repository is accessible freely by all the users inside the university using the intranet.

☞ Electronic Services

The library also has developed the electronic resources like CD/DVD containing bibliographic records of the books those were appended in the institutional repository. All these types of resources are freely accessible through Web-OPAC throughout the campus network i.e. through an intranet. Apart from these, the University Central Library is subscribing to 22 e-journals provided by Inflibnet Centre (UGC Infonet Digital Library Consortium) (<https://www.inflibnet.ac.in/econ/eres.php?memID=126>). The University, after the Inflibnet Centre stop providing the e-journal, is trying to subscribe to three journals which could be utilized for all the departments and library users viz. JSTOR, Springer Link and Wiley-Blackwell on payment basis.

☞ **Mobile Service:**

The Central Library is implementing mobile services by upgrading the existing library management software by integrating with a Short Message Service and E-mail alert system. The new services send SMS and E-mail alert for every transaction like issuing of books, return or renewal of the items etc. with necessary information done by the users.

If the users keep the books beyond the due date, then information is sent to that users' mobile or email along with the fine amount. This service has been done since 14th January 2016.

☞ **RFID (Radio Frequency Identification):**

For the security services, RFID has been implemented in the central library. This service makes the library material more secure than the manpower due to its advanced technology in the ways of identification of the material, security, tracking and automated handling using Electromagnetic and Radio Frequency Identification. The system has been used since 21st March 2012.

Besides the security service of RFID, to make the library services updating, RFID Proximity Visitors Attendance System was also introduced and implemented since 28th September 2015 for replacing the library visitor's handwritten registers kept in the main gate and in periodical section in the central library.

☞ **Security Service:**

To enhance the security services in the central library, like monitoring the activity of the library visitors and for securing of the property counter, 4 CCTVs (Closed Circuit Television) had been installed in some of the vital location inside the library building.

☞ **Other electronic related services:**

The central library is providing a separate room for its users for accessing the electronic resources with 15 computers and this has been developed in November 2013. In the early of the year 2013, power backup of 100 KW standalone solar PV power plant had been installed for uninterrupted power supply.

☞ **Reprography Service:**

Reprography services are also available in the library to support the students and other users to supplement their academic works. The library in the process executes the order received through indents and with a minim charge provides the benefits to the users subject to the copyright principle.

☞ **Stock Verification:**

All materials on loan irrespective of the normal due date shall be returned in the event of stock verification

4.4 Staff Position of the Mizoram University Central Library (Designation Wise):

Staffs are the real strength in the library that is entrusted with specific duties and responsibilities to discharge their assigned works. The central library of the university also equipped with both technical and non-technical staffs who are engaged in different types of responsibilities. The staff position of the said library is shown below in the Table-4.1 designation wise. At present, the number of staff strength is hopefully increased to a higher number as this table only shows the number of staff in the Mizoram University Central Library till November 2017.

Table 4.1: Number of Staff in Mizoram University Central Library

Sl. No	Designation	No. of Incumbent				Total
		Male		Female		
		Regular	Contract	Regular	Contract	
1.	Librarian	-	-	1	-	1
2.	Deputy Librarian	1	-	-	-	1
3.	Assistant Librarian	-	-	3	-	3
4.	Information Scientist	1	-	-	-	1
5.	Professional Assistant	3	-	2	-	5
6.	Semi-Prof. Assistant	3	-	3	-	6
7.	Assistant	1	-	-	-	1
8.	Stenographer	-	-	1	-	1
9.	Library Assistant	2	-	2	-	4
10.	Laboratory Attendant	4	-	4	-	8
11.	LDC	1	-	-	-	1
12.	Gate Keeper / MTS	3	2	-	-	5
Total		19	2	16	-	37

Source: Field Survey

The table shows that, out of 37 staff strength in the library, 17 are having professional qualification leaving behind 20 who are not professionally qualified.

4.5. Regulations for MZU Central Library Membership

The central library functions within a set of rules and regulation and it is a framework to run the library administration. The following rules and regulations are implemented for the Central Library:-

- ⇒ All the teachers, students, research scholars, officers and other employees of the University are eligible to be a member of the Library.
- ⇒ The members are issued with a Library Membership Card for borrowing books. The university provides the facility of issuing the employee ID which is multifunctional. The university also issues IDs to all the students, research scholars to avoid any complications.
- ⇒ In case of loss of employee ID, the university has a provision for issuing the duplicate ID subject to realization of requisite fine.
- ⇒ All the members are entitled to borrow books from the Library through their membership card and taking care of that book is the responsibility of the borrower.
- ⇒ General books can be renewed once to the borrower provided those books are not requisitioned by any other member. However, renewal is done only when the book is physically available in the library.
- ⇒ The students, research scholars are also entitled to issuing two-course books at a time for a period of 3 days. Books under this category are not renewed.
- ⇒ The library also facilitates issuing two books overnight issue at a time which, however, are refrained from renewal.
- ⇒ In the event of stealing, loss, misuse or damage of borrowed books by a member, the Librarian is entrusted with the power to suspend the member and report the matter to the higher authority for appropriate action.
- ⇒ Any member intending to terminate the membership shall return all the books borrowed against his/her card along with the membership card.
- ⇒ Misconduct in any form in the library leads to termination of membership.

Apart from the above, the library also stipulates the general rules and code of conduct for smooth running of the library administration. The rules include indecent behavior, noise, mobile phone operations, disturbance, prevention of lethal weapons, vandalizing or defacing library reading materials, furniture, equipment, library building etc.

4.6. Guidelines for Internet Services

The library also has a set of rules for internet service in the library which is binding for both the staffs and the clientele using the internet.

- ⇒ The computer section of the library as of 2017 is equipped with 16 computers with LAN connectivity.
- ⇒ All the Library members are allowed to access the internet freely for different purposes.

4.7. Library Revised Rate

The library has stipulated the revised rate as follows for the effective functioning of the library.

- ⇒ Member delaying return of book after the due date will be fined Rs.2/- per day for General book.
- ⇒ A fine of Rs.10/- per day is levied to the defaulter for the course book.
- ⇒ A fine of Rs.100/- per day is levied to the defaulter for the documents who are issued for overnight.
- ⇒ Provision for suspending the defaulter is also there under the rules who retains the book beyond the due date. However, it is levied after two months of the due date or until the outstanding book is returned.
- ⇒ If any member of the Library is found guilty of mutilating or defacing a book, writing in the margin or on the print, or of destroying or damaging Library property, such member needs to replace such books or properties damaged. If such book is one of a set or a series and the volume cannot be obtained singly, the member shall be asked to replace the entire set or series. The same conditions are also applicable in case of loss of book where the member is required to replace the book with the latest edition.
- ⇒ In case replacement is not feasible, the case will be decided by the Library Committee.

4.8. Conditions Regarding Issue of General Books:

The conditions about issuing of books for the library users in Mizoram University Central Library are shown in the following Table-4.2

Table-4.2: Conditions of Issuing of Books in Mizoram University Central Library

Category of Member	No. of Volume	Loan Period	Amount of Caution Deposit
Teachers	10	15 days	NIL
	10	1 Semester	Nil
Administrative Staff			
Officers	4	15 days	Nil
Other staffs	2	15 days	Nil
Students			
Post Doctorate	6	15 days	Library Fee as applicable + Library Caution deposit as applicable (subject to change from time to time)
Ph.D.	6	15 days	
M.Phil	6	15 days	
Post Graduate	4	15 days	
Professional Course / Under Graduate	4	15 days	
Guest Teachers (to work more than one month)	5	15 days	Nil

Source: Questionnaire

4.9. Achievements of Central Library, Mizoram University

Some of the new achievements in modernizing the central library are discussed below:

- ✿ The electronic materials like CD/DVD contents which are converted and born-digital with the bibliographic record of the books are made available to the users to be easily accessible from Web-OPAC throughout the campus network i.e. intranet which is completed in November 2013.
- ✿ For the better preservation of the security system in the central library, 4 CCTVs had been installed in the sensitive location of the library so as to monitor user's activities.
- ✿ Now a day, the library users became more aware of the e-resources for their study, teaching and research purpose etc. keeping in view this matter the central library is maintaining a separate room for accessing the e-resources with 15 computers in November 2013.
- ✿ The central library building has been extended horizontally (Phase II) during November 2013 so that it increased the size of the building that it can occupy more materials for its users.

4.10. List of Subscribed Print Journals:

Mizoram University Central Library subscribes a total number of 276 peer-reviewed journals both foreign and Indian including the dailies. The list of print department wise periodicals including the general periodicals subscribed by the library are mentioned in Appendix-I.

4.11. NEHU CENTRAL LIBRARY: THE PRESENT SCENARIO

The Central Library of North Eastern Hill University is having more than 4000 number of users from all departments of the university, the resources and materials are now equipped with good and high quality like high-end computers and other electronic and audio-visual equipment to provide the most effective and useful information both in-house and online services. The Central Library is providing access to almost all the online journals and other resources available through UGC-INFONET programme and it is an active partner of the UGC-INFONET Digital Library Consortium (E-ShodhSindhu). Currently, the Central Library holds a record of book collection about 2,90,000, (till November, 2017) back-volumes and other electronic materials which are accessible by the research scholars, faculty and non-teaching staff of the Central Library members.

It may be mentioned that, the NEHU Central Library provides access to its users the resources through links to the Digital Book Index containing more than 165,000 full-text digital books from more than 1800 commercial and non-commercial publishers, universities, and various private sites and free access to more than 140,000 resources.

The digitized books contains 2000 Reference books that include Dictionaries, Encyclopedias, Thesauri, Glossaries, Bibliographies, Chronologies, Timelines, Literary Histories, Biographies, Writing & Style Guides & Student Study aids, Literature & Languages books more than 12,000 containing basic texts in English & American Literature, ranging from Chaucer & other medieval texts to modern, contemporary Fiction & Literature. This includes the most comprehensive, openly-accessible collection of 19th century American Literature available on the Internet, as well as extensive collections on Shakespeare (at least eight different editions - modern, old-spelling, & photo facsimiles of the original Folios & Quartos, etc.); the American Renaissance (Transcendentalism); the Harlem Renaissance; 3000+ Short Stories, Diaries, Sagas, and Ballads; along with 2500+ volumes of Canadian, Australian, ancient Greek & Latin, French, Russian, German, Italian, Spanish, Scandinavian, Indian (limited), Chinese (limited), & Japanese (limited) literatures. There are 3000 volumes of Poetry and more than 3000 volumes by women writers. The collection also includes 15,000 volumes on History, Social Sciences, 1500 medical and health books, more than 1900 books on Mathematics and Sciences, 1200+ titles on Philosophy and Religion, more than 3500 contemporary & classic children's books and stories, 1500+ titles on Agriculture, 600+ titles on Business etc.

Apart from the above resources, the library provides access to the Online Books Page listing over 2 million free books on the Web - Updated Monday, February 5, 2018, Large-scale repositories which are arranged alphabetically. It also provides access to Google Book Search (page images of 2,000,000+ fully readable public domain books, plus many more copyrighted books available via excerpts and snippets), Hathi Trust (2,000,000+ freely readable titles, and additional search-only titles, from Google and elsewhere), Internet Archive E-books and Texts (6,000,000+ freely readable volumes; page images and some transcriptions), Project Gutenberg (over 50,000 items, mostly book transcriptions) Via Web site at gutenberg.org, University of Michigan Digital General Collection (page images from 28,000+ books scanned for preservation purposes) (www.nehu.ac.in/library/ebooks.html).

4.12 Regulations for NEHU Central Library Membership

The Central Library, NEHU has stipulated the following rules for the smooth functioning of the library and enrollment as a member of the library.

- ⇒ All the faculties, students, Research Scholars, Officers and other employees of the University are the members of the library.
- ⇒ All the superannuated teachers and officers of the university residing in Shillong/Kohima/Aizawl are also the members of the library.
- ⇒ The teachers of all the affiliated colleges of the university also can enroll as the member of the library.
- ⇒ On recommendation by the Head of the Departments under the university and subject to the approval by the Vice-Chancellor/ Pro-Vice Chancellor, a person also can get enrolled as the member of the library.
- ⇒ The library has made the specific procedure for enrolment as a member who is required to fill-up the form and pays the requisite fee and caution money.

- ⇒ The termination of membership is done to the members subject to the return of all the borrowed books and surrenders the Library Passbook/Borrower's Cards.
- ⇒ A member who has been terminated his/her membership may claim a refund of the caution deposit from the Finance Department of the University after producing the "no dues" certificate from the Librarian. In the case of members who do not have to make any caution deposit, the accounts will be settled only on production of a "no dues" certificate from the Librarian. Similarly, in case of teachers of affiliated colleges, the Principal will settle the accounts only on production of a "no dues" certificate by the teachers from the Librarian, North-Eastern Hill University.

4.13 General Library Rules & Code of Conduct

The university library has framed the rules for the library and also the code of conduct for smooth functioning of the library.

- ⇒ Filled in registration form and submission through proper channel to the librarian is mandatory for membership of the library.
- ⇒ The users of the library strictly confines to the students, faculty, officers, non-teaching employees and technical staff of the University and they can use the library resources.
- ⇒ Provision for the affiliated college teachers also has been made by the library for the membership.
- ⇒ They are, however, enrolled as a member of the library under 'Other Category'.
- ⇒ The library also has a provision to get enrolled as a member to the students, Research Scholars and Faculties of the other universities and or institute subject to a special request by the incumbent and it is for a short period.
- ⇒ The privilege of borrowing books from the Library is restricted to registered library members only.
- ⇒ Research scholars from other universities/institutes can avail the Library facilities with the approval of the University Librarian. Such temporary membership is for consultation, reference, and photocopying services only.
- ⇒ A fine of Rs. 2.00 per day is collected for a general book kept beyond the due date. A fine of Rs.5/- per day will be realized for a Course Book kept beyond the due date.
- ⇒ Loose issues and bound volumes of periodicals are not for issue.
- ⇒ A book is issued to a Library member against production of Library Passbook/Borrower's Card(s) issued by the Library.
- ⇒ The Borrower's Cards of Students/Research Scholars will remain valid for the period mentioned on the Borrower's Cards and must be renewed in time.
- ⇒ The University Librarian reserves the right to recall any book from any Library member at any time.
- ⇒ The loan period may be shortened by the University Librarian if the books are on special demand.

- ⇒ A book borrowed from the Library may be renewed for a further period provided no other reader has reserved the same.
- ⇒ Library members are responsible for the safe custody of the Library Passbooks/Borrower's Cards issued to them.
- ⇒ Tampering with the entries/records on the Library Passbooks/Borrower's Cards can render library membership liable to suspension.
- ⇒ Library members must not cause any disturbance or engage in any behaviour which interferes with Library activities. Proscribed behaviour includes (but is not limited to) verbal abuse, threats of violence, sexual harassment, or use of aggressive words to harass any person.
- ⇒ Library members must not carry lethal weapons or other potentially dangerous items inside the Library.
- ⇒ Stern action is initiated against Library members found vandalizing or defacing the Library building, furniture or equipment.
- ⇒ Loss of Library Passbook/Borrower's Card(s) should be reported to the Circulation Section and Course-Books Section immediately.
- ⇒ Duplicate Library Passbook/Borrower's Cards will be issued after one week from the date of application on payment of Rs. 25/-.
- ⇒ Members shall be held responsible for any loss which the Library may suffer through the loss or misuse of their Library Passbooks/Borrower's Card(s).
- ⇒ In case of loss of a book by the borrower he/she shall either replace the book or bear its cost. If the book is out of print, it may be replaced with a bound photocopy as per library specifications. If the book of a multi-volume set is damaged or lost the member concerned shall be liable to replace the whole set or pay four times the cost of the same.
- ⇒ Library Passbooks/Borrower's Cards are not transferable.
- ⇒ Library members must not remove or attempt to take library materials, equipment or property without proper checkout or other official Library authorization.
- ⇒ Library members must not conceal library materials in the Library for the exclusive use of an individual or group.
- ⇒ Library members must not mutilate library materials by marking, underlining, removing pages or portions of pages, removing binding or in any other way damage or deface library materials.
- ⇒ Library members must not enter unauthorized areas of the Library, remain in the Library after closing or refuse to leave the Library when requested to leave during emergency situations.
- ⇒ Library members shall be required to pay the penalty imposed upon them by the University Librarian for any damage caused by them to the books or any other property belonging to the Library.
- ⇒ Any damage or missing pages detected in a book must be reported to the staff before borrowing the same, failing which the borrower shall be held responsible for the damage/mutilation.

- ⇒ Members leaving the library should stop at the exit so that the books borrowed or materials taken out of the library by them may be checked by the Library Gate-Keepers/Security Staff.
- ⇒ Upon any infringement of the library rules members shall forfeit the privileges of admission to and membership of the library.
- ⇒ The University Librarian reserves the right to suspend the membership of any member found misbehaving, abusing the library staff or disrupting the peaceful Library atmosphere.
- ⇒ The Library membership of any member found tearing pages or caught while attempting to steal books will be suspended forthwith from using the library facilities and further disciplinary action will be initiated by the University.
- ⇒ Members are instructed not to bring casual visitors/friends or outsiders for using the library facilities without the prior permission of the University Librarian.

4.14 Guidelines for Internet Services

The library has stipulated the following guidelines for internet use. The users of the library require strictly adhering to the same. The rules are as under,

- ⇒ Internet facility is restricted to the registered members of the NEHU Library only.
- ⇒ Outsiders are not allowed to use this facility.
- ⇒ Prior permission of the University Librarian must be obtained by visitors or research scholars from other institutions availing consultation facilities.
- ⇒ Library members who need to use the Internet services must produce valid proof of identity.
- ⇒ Library members must record their names and other details in the Users' Register before and after using the Internet services. Maximum time allowed per session of browsing is 1 hour under normal accessibility conditions.
- ⇒ Library members must make use of the Internet facility only to support their academic and research activities.
- ⇒ Library members are requested to help in identifying the unauthorized users since the Library's Internet facility is only for registered library members.
- ⇒ Library members are requested to bring to the notice of the University Librarian any misuse of the computer systems.
- ⇒ Library members must not intentionally read other users' computer screens unless invited to do so, as such inappropriate behaviour amounts to a breach of privacy.
- ⇒ Library members must not monopolize the computer resources, i.e., using more than one computer at a time or spending an inordinate amount of time on a computer. When other library members are waiting, Internet service users are expected to observe the posted time limit.
- ⇒ Library members must not install any software not specifically approved by the Library. Word-processing and other application software considered

indispensable for academic activities are preloaded on all the computers in the Cyber Room.

- ⇒ Library members must not attempt to bypass system restrictions or tamper with system files or applications.
- ⇒ Unauthorized access to system files and/or attempting to disrupt the integrity of the system(s) amounts to a violation of Library Rules and Regulations.
- ⇒ Library members found transmitting, disseminating, printing or downloading sexually explicit images or sound recordings will be deemed to voluntarily invoke suspension of their library membership.
- ⇒ Library members behaving in an abusive or harassing manner in the use of the Internet facilities provided by the Library will not be allowed further use of the Internet services.
- ⇒ Library members must not indulge in unauthorized copying of copyright-protected materials. Library members are expected to observe relevant copyright laws and regulations.
- ⇒ Library members must not deliberately waste or overload the computer resources.
- ⇒ Stern action will be taken against Library members maliciously accessing, altering, deleting, damaging or destroying any computer system, network computer program or data.

4.15 Library Revised Rate:

The revised rules of the library as approved by the Executive Council enumerate the following guidelines which are followed by the library.

- ⇒ Fine of Rs. 2/- per day is imposed to irrespective of the members after the due date of the general book;
- ⇒ Fine of Rs.5/- per day is levied to all defaulters in case of the course book and the amount becomes double for every subsequent week.
- ⇒ The facility of issuing of books is, however, withdrawn from the defaulter in case of such activity and this is imposed on him only after the return of the book to the library.
- ⇒ The library has stipulated rules for the loss of passbook/ card to the effect that, the members required to report the librarian in case of loss of passbook/ card. In this situation, the librarian issue a duplicate card subject to realization of payment of Rs. 25/-.

4.16 Conditions Regarding Issue of Books:

The conditions stipulated by the Central Library, NEHU for the issue of books including the amount of caution deposit are shown in Table-4.3.

Table 4.3: Issue of Books to Users, NEHU Central Library

Category of Member	No. of Volume	Loan Period	Amount of Caution Deposit
Teachers	20	1 month	NIL
Technical Staff	6	5 days	NIL
Administrative Staff			
Officers	4	15 days	Nil
Other staffs	2	5 days	Nil
Students			
Ph.D.	6	15 day	Rs.500/- + Rs.50/- Library Fee
M.Phil	6	15 days	Rs.400/- + Rs.50/- Library Fee
MA/M.Com/M.Lib	4	7 days	Rs.200/- + Rs.30/- Library Fee
M.Sc	4	7 days	Rs.300/- + Rs.50/- Library Fee
Other categories	2	15 days	Rs.500/- + Rs.50/- Library Fee

Source: <http://www.nehu.ac.in/library/rates.html>

4.17 Loss of Books:

In case the book is out of print on documentary evidence, the university library has formulated the following rules to counterbalance the loss.

- ⇒ By a photocopy of the same book in bound form.
- ⇒ Replacement of the book with the latest edition as would be decided by the librarian of the central library in consultation with the respective Head of the Department.

4.18 Sections and Units:

The different sections and units and the works done by those sections and units of the Central Library are highlighted as follows:

⇒ Acquisition Section:

The acquisition section is one of the crucial sections in the library that is responsible for managing budget utilization for the purchase of resources mainly books, the processing of orders, accessioning the new books. It also places orders with the approval by the Library Standing Committee and also from the different head of the departments on receipt of indent and on the recommendation of the University Librarian. This section does not provide direct services to the library users and the operation of the section is performed through the computer. In other words, the section is fully computerized.

⇒ Technical Section:

This section is responsible for carrying out all the technical works inside the library and the works entrusted comprise bibliographic processing activities duplicate checking, classification, cataloging, assignment of subject-headings and keywords,

transcribing, and releasing of the processed books. It also generates the list of additions regularly.

⇒ **Periodicals Section:**

This major works involved in the section comprise placing of subscription orders for the print and electronic journals, receipt and recording of issues of journals/newspapers, renewal of subscriptions, and maintenance of current journals and back-volumes for use.

⇒ **Circulation Section:**

This section is the heart of library as it is directly associated with the users of the library and the library under discussion performs all the operations using the computer. It handles a massive range of services apart from the registration of library members and provision of lending, renewal, reservation services to the users. The section performs shelf rectification and provides consultation services, issues the no-dues certificates and reminds the users for overdue loans, and maintains statistical information pertaining to the library use.

⇒ **Documentation & Reference Section:**

This section maintains the key government publications and reports, statistical information and international bodies and NGO's publications. It also provides services like bibliography-on-request, document delivery services, citation verification services, databases search services, a bibliography of vernacular newspaper articles, user orientation programmes, current awareness service via e-mail, and Selective Dissemination of Information via e-mail, inter-library loan services, and E-Query services.

⇒ **Computer Section:**

This section is the most vital section in the library as it provides the main support to the Library's automation programme, and maintain critical support services such as maintenance of the LIBSYS software, CD-NET/NAS, Library's Website/web-OPAC server, Internet connectivity and internet services, creation and updating of database back-up, LAN troubleshooting and provision of training to the library staff. It is well equipped with servers, NA storage box, CD-NES server, Toshiba multimedia projector, IBM Think Pads, scanners, printers, combo drivers and several computers.

⇒ **Office and Maintenance Section:**

This section is responsible for the handling of the routine administrative, establishment, bill-processing and correspondence receipt and dispatch work. It also deals with the requisition for stationery and other infrastructures such as furniture and other miscellaneous items required by the different sections of the library.

4.19 Units of the Library:

Apart from the previous sections of the library, the library is also having different units inside the building maintaining different important works and they are as follows:

☞ Course Books Unit:

This unit maintains a stock of prescribed textbooks and other materials under closed access to support the academic programmes of the university. It also maintains a collection of books on North-East India. It provides out of print standard text and reference books available in the library but in limited copies and that is for Reading and Reference (RR) only. Those RR books are available for overnight issue.

☞ Reprography Unit:

It provides the reprographic and word processing required by the library users. It facilitates the users for photocopying in black and white and also in the color form. The price for photocopying of books or any images is decided by the Librarian and it differs from time to time.

☞ Bindery Unit:

This unit performs the works like binding, cutting, embossing, and restoration of the library's journal volumes and books. This unit has adequate tools, equipment and manpower to handle the urgent requirements for binding and restoration of library materials.

☞ Audio-visual and Microfilm/Microfiche Unit:

It mainly provides the microfilm/microfiche reading and audio-visual media needs of library members. For the library users, these materials are available to access in this section like microfilms and microfiches of Indian census reports, legislative assembly debated, and other government documents. This unit has done the archiving works whereby the library's collections of rare books, back issues of newspapers, etc. It also maintains the collection of audio recordings of classic theatre works, including Video Cassettes (VHS) on various themes.

☞ Library Digitization Laboratory:

This unit is same as the above unit i.e. audio-visual and microfilm/microfiche unit but there is a separate unit inside the library building where most of the works in both the unit are of similar.

4.20 In-House Resources and Services

The NEHU Central Library is having a lot of in-house resources and services which are available through internet options and they are as follows:

a) Bibliography-on-Request (BIBLIOQUEST):

This is a service offered to the library members of the university. It is a service where the Documentation Section provides information to update library's website with a view to providing library members an appropriate channel for obtaining the request form for bibliographies or reading lists on diverse topics relevant to their necessity works and the accuracy depends upon the sources consulted. All requests are subject to authentication of the applicants' membership in NEHU Central Library.

b) Citation Verification Service (CVS):

This is a new service launched by the Documentation Section of NEHU Central Library for enhancing the university library users in the verification of citation/references and authentication of bibliographical details of books, articles, reports, theses and other published material consulted and/or required to be used by them in their works. The service has been launched on the library's website with a view to providing library members an appropriate mechanism for verification of citations/references obtained from sources other than authorities indexing and abstracting services offered by reputed publishers and licensed database producers.

c) Database Search Service (DSS):

This service is especially for the M.Phil and Ph.D. scholars and university faculties searching for information from the available dissertations, theses project works. The availability and accuracy of the materials are determined through the keyword and combination terms selected by the users as well as the availability and accessibility of authoritative and licensed online/CD-ROM databases.

d) Document Delivery Service (DDS):

This is a new service started by INFLIBNET in collaboration with six university libraries which serve as Document Delivery Centers and provides the services to the users, on demand at a nominal cost. The copies of papers from learned journals, conference proceedings and other materials are available in the collections. Promoting the services to the academic and research community in India is done by INFLIBNET. The service is open to anyone who is working or studying in the academic and research institutions, government departments and other publicly funded organizations. Requests from profit-making and commercial organizations are also accepted. However, priority is given to the requests received from registered members of NEHU Central Library, Shillong and NEHU Campus Library, Tura.

e) E-Query Service:

This is a Web-enabled contemporary reference service offered to the registered members of the NEHU Central Library, Shillong and NEHU Campus Library, Tura. The Documentation, Reference and Enquiry Sections of the NEHU Central Library together managed queries received in person or by post/e-Mail. E-Queries may sometimes need to be followed-up by telephone, fax, regular mail, or personal interactions. But there is an exception to e-query services that queries on these circumstances are not handled: 1) Personal information about the University/Library staff and officers. 2) Information about the University/Library services already posted on the NEHU Central Library website. 3) Information not directly related to academic/research pursuits.

f) E-Mail Alerts (CAS/SDI):

This service is activated to those registered members only who submit their User Interest Profiles. It is a web-based Selective Dissemination of Information (SDI) which is also launched by the Documentation Section, NEHU Central Library on the library's website that the library registered members can get access to the latest updated, new, events, trends, and research and development concerning their areas of interest or their areas of specific specialization. The comprehensiveness and accuracy of the information sent through E-Mail Alerts Service are subject to availability and accessibility of relevant resources and services. Library members are informed that the information provided by them on the User Interest Profile Form will not be distributed or publicized for purposes other than those required for providing services to them.

4.21 E-Resources in NEHU Central Library

The NEHU Central Library is also providing electronic resources for the benefits of the library users and they can access and browse to e-resources as required by them. Links to online accessible catalogues of web-based resources like websites, documents, data, multimedia files and other e-resources which deal with academic related matters are provided through Subject Information Gateways. This makes accessible to internet resources for enhancing the library users in their ways of retrieving and browsing of high-quality materials for their research work and other necessities. It also provides e-journals, discussion groups, and mailing lists to the users and also grants the library users to post their materials or works for online public access for others.

Having said that, e-books can be referred to various analogous electronic resources like digital books, online books, etc. which are the electronic versions of printed books which are accessible through online from any computer or laptop connected to the internet inside the campus. In addition to these, the library also facilitates the digital resources which are born digital. Most of the electronic books are readable through PDF Adobe Reader, notepad or WordPad. However, some e-books require specific software to make it in a readable form on the computer. The e-books offered by the NEHU Central Library website are mostly accessible free of cost

and some of them may require online advance payment to access them and needs a membership.

DELCON E-library consortium subscribes several e-resources for the member of NEHU Central Library users in which all the electronic resources subscribed are made freely accessible from the publisher's website.

4.22 Staff Position of the NEHU Central Library (Designation Wise)

For the smooth flow of the library administration, manpower apart from the infrastructure and facilities is an essential thing to be implemented. The NEHU Central Library is also employing both professional and non-professional staffs to handle all the technical and traditional work. Table 4.4 shows the staffs strength of NEHU Central Library until November, 2017.

Table 4.4: Number of Staff in NEHU Central Library

Sl. No.	Designation	No. of Incumbent				Total
		Male		Female		
		Regular	Contract	Regular	Contract	
1.	Librarian	-	-	-	-	0
2.	Deputy Librarian	1	-	-	-	1
3.	Assistant Librarian	3	-	-	-	3
4.	Information Scientist	1	-	-	-	1
5.	Professional Assistant	3	-	1	-	4
6.	Semi-Prof. Assistant	-	1	5	-	6
	Jr. Library Assistant	9	-	6	2	17
9.	Library Assistant	-	-	-	-	0
10.	Library Attendant	-	7	-	8	15
11.	LDC	2	1	1	-	4
12.	Gate Keeper / MTS	3	-	1	-	4
Total		22	9	14	10	55

Source: Field Survey

4.23 List of Subscribed Print Journals:

The NEHU Central Library subscribes a total number of 233 peer-reviewed journals and Indian journals of science and other than science for different departments which enhance studies, works, dissertations or projects, etc. of the students, research scholars and faculties. The print journals subscribed by the central library, NEHU are listed in Appendix-II.

4.24 Conclusion

The users of being the central focus of the library form an integral part that needs to be provided with user-centric resources coupled with electronic resources. The resources of the library are unique in the sense that, user-centric collections, reliable, authentic, useful resources provide immense value for teaching, learning and research. Even if, Internet resources substantiates the information need of the users and has been accepted as a viable platform for multiple resources still, it cannot replace a library. The library is an accepted window for channelization of resources for learning and teaching. In the ICT scenario, it has been treated as a new media of information access and delivery of the same to the users. Further, the Librarian plays a dynamic role not only for selection, evaluation, describing, annotating the resources but also provide intelligent access to electronic information.

References:

<http://www.mzu.edu.in/index.php/facilities/central-library>(accessed on 2/11/2017)

<http://www.nehu.ac.in/library/rates.html>(accessed on 2/11/2017)

<http://www.nehu.ac.in/library/journals2017.pdf> (accessed on 10/11/2017)

<https://www.inflibnet.ac.in>(accessed on 15/11/2017)

<https://www.inflibnet.ac.in/econ/eres.php?memID=126> (accessed on 15/11/2017)

5.1 Introduction

Library is the centre of knowledge where all the information and knowledge seekers access for gaining and acquiring required information pertaining to their study and research. In the present scenario, access to information has become easy through the electronic resources and abundant literatures are available both in documentary and non-documentary form. Still, library lacks resources in view of multi-disciplinary research, the proliferation of subjects. Even if, the users access the wide range of information on Internet, but, its credibility, reliability is uncertain which, however, could be available in the library that maintains a record of the reliable and authentic source of information. Due to the fast growth of the resources, the library facilities are also changing day by day. Libraries are taking measures of acquiring different kinds of user-centric electronic resources to facilitate better study and research. Keeping in view all these matters, a questionnaire was prepared to have an in-depth study on the usage of library resources by the faculties and research scholars of Mizoram University (MZU) and North Eastern Hill University (NEHU).

5.2 Analysis by Respondents

Data relating to the number of respondents obtained through questionnaire of the two central university libraries of North-East India i.e. Mizoram University (MZU) and North-Eastern Hill University (NEHU) is placed in the following Table 5.1 for analysis.

Table 5.1: Analysis by Respondents

Sl.No	University	QD*		TQD	QR*		TQR	% of Respondents		% of sample Representation	
		RS*	F*		RS*	F*		RS	F	RS	F
1	MZU	255	163	418	185	136	321 (77%)	58	42	53	37
2	NEHU	201	314	515	163	228	391 (76%)	42	58	47	63
	Total	456	477	933	348	364	712	100	100	100	100

Source: Field Survey

Abb. QD- Questionnaire Distributed, QR- Questionnaire Received, RS- Research Scholar, F- Faculties, TQD- Total Number of Questionnaires Distributed, TQR- Total Number of Questionnaires Received

Analysis of Table 5.1 reveals that, out of the 933 constituting both Research Scholars and Faculties, 418 questionnaires were distributed in Mizoram University (MZU) and 515 questionnaires distributed in North Eastern Hill University (NEHU) among the target groups. Out of 933, 321 (77%) respondents represents MZU while 391 (76%) are from NEHU. Further, out of 321 respondents from MZU, 185 (58%) are the Research Scholars while 136 (42%) are the faculties. Likewise, out of 391 respondents from NEHU, 163 (42%) are the Research Scholars and 228 (58%) are the faculties. This shows that the respondent's rate of Research Scholars in MZU are more

compared to NEHU while the respondent's rate of Faculties are more in NEHU compared to MZU. Further, the percentage of sample representation of both the universities among the Research Scholars and Faculties show that Mizoram University constitute the highest Research Scholars i.e. 53% while, NEHU forms 47% Research Scholars. But among the faculties, NEHU is the highest i.e. 63% while, MZU is 37%. It otherwise means that Research Scholars are more prone to submit their feelings through the questionnaire while Faculties at NEHU are keener to reveal their minds.

5.3 Analysis by Gender

Analysis by gender is relevant for the given study to ascertain the respondent community that constitutes male and female among the Research Scholars and the Faculties. Data relating to the gender among both the categories of the universities under study is placed below in Table 5.2 for analysis.

Table 5.2: Analysis by Gender

Sl.No	MZU		NEHU		Total (MZU & NEHU)	
	Male	Female	Male	Female	Male	Female
Research Scholars	89 (50%)	96 (68%)	82 (36%)	81 (50%)	407 (57%)	305 (43%)
Faculties	90 (50%)	46 (32%)	146 (64%)	82 (50%)	-	-
Total	179 (58%)	142 (44%)	228 (58%)	163 (42%)	-	-
Sub Total	321		391		712	

Source: Field Survey

>.5 has been rounded to the next digit.

<.5 has been rounded to the previous digit.

Table 5.2 on analysis revealed that 179 (58%) comprising both Research Scholars and Faculties out of 321 from Mizoram University encompass male while 142(44%) were female. Likewise, out of 391 respondents of both the categories from NEHU, 228 (58%) constitute male while, 163 (42%) constitute female. Analysis, further, visualized that, out of total 712 respondents constituting both Research Scholars and Faculties of both the universities under study, 407 (57%) were a male while, 305 (43%) were female. Hence, male respondents are more compared to female respondents for the given study.

5.4 Frequency of Library Visit

The frequency of visit to the libraries visualizes the interest of the users who use the libraries for multiple purposes. The component has been divided into five variables where the target group under study submitted their options. This also determines the quality of library services provided to the users. Table- 5.3 placed below depicts the frequency of library visit by the Research Scholars and Faculties of both the universities under study which is supported by Graph- 5.1 for clear understanding.

Table 5.3: Frequency of Library Visit

Sl. No	Frequency of Library Visit	MZU		%		NEHU		%		Total	
		RS	F	RS	F	RS	F	RS	F	RS	F
1.	Weekly	61	18	33	13	39	57	24	25	100	75
2.	Twice in a month	50	35	27	26	43	39	26	17	93	74
3.	Monthly	56	68	30	50	60	96	37	42	116	164
4.	Once in a year	14	15	8	11	21	25	13	11	35	40
5.	Never	4	0	2	0	0	11	0	5	4	11
	Total	185 (58%)	136 (42%)	100	100	163 (42%)	228 (58%)	100	100	348	364
	Grand Total	321				391				712	

Source: Field Survey

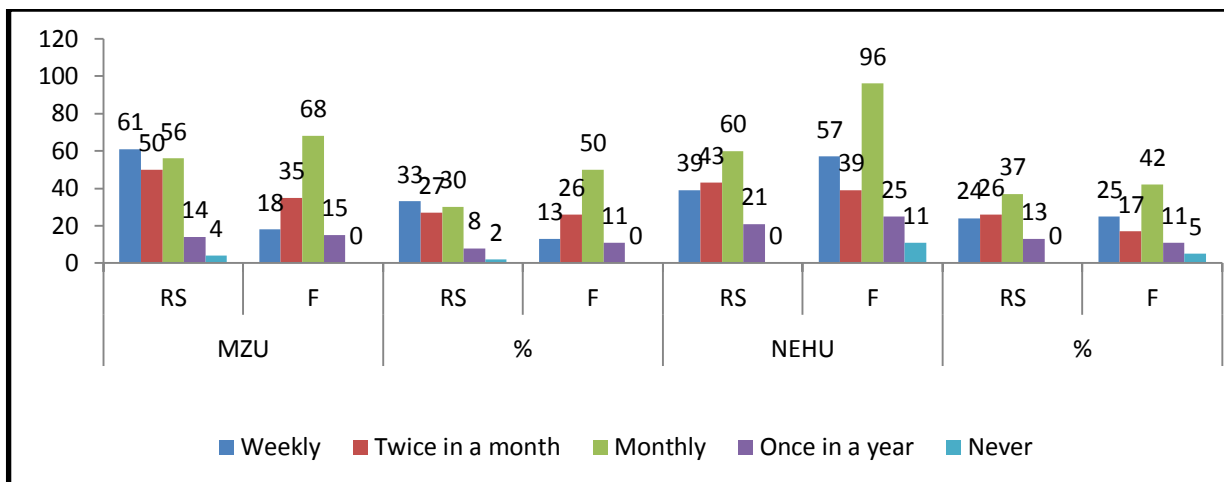
N= 712 (321+391)

>.5 has been rounded to the next digit.

<.5 has been rounded to the previous digit.

Table 5.3.1: Mean Value of Frequency of Library Visit

Sl.No.	Mean Value	MZU		NEHU	
		RS	F	RS	F
1	Weekly	39.5	48	39	57
2	Twice in a month	42.5	41	43	39
3	Monthly	62	78	60	96
4	Once in a year	14.5	23	21	25
5	Never	2	0	0	5.2
	Total Mean	160.5		195.5	



Graph-5.1 Frequency of Library Visit

As seen from the above Table 5.3 followed with Graph-1, out of the total 321 respondents of MZU, a total number of 185 (58%) Research Scholars visited the library followed by 136 (42%) Faculties while, out of 391 in NEHU, 163(42%) Research Scholars visited the library followed by 228 (58%) faculties. Further analysis of the table visualized that, out of 185 Research Scholars, of MZU, the weekly visitors are more i.e. 61 (33%) followed by the monthly visitors which comes to 56 (30%) and fortnight visitors i.e. twice in a month which comes to 50 (27%). From 136 faculties of MZU, the monthly visitors are 68 (50%) followed by fortnight visitors i.e. twice in a month which comes to 35 (26%) and weekly visitors 18 (13%). These show that the research scholars prefer to visit more frequently to the library compared to faculties. Likewise, while analyzing for NEHU, respondents, it could be found that out of 163 research scholars, the monthly visitors are highest i.e. 60 (37%) followed by the fortnight visitors i.e. twice in a month is 43 (26%) and weekly visitors come to 39 (24%). From the faculties community of NEHU out of 228, it could be found that 96 (42%) faculties visit the library once in a month followed by 57 (25%) faculties who visit the library weekly and 39 (17%) fortnightly i.e. twice in a month. The overall analysis revealed that the monthly visitors to the library from both the communities i.e. research scholars and faculties are more which form 116 and 164 respectively followed by 100 weekly visitors by the research scholars and 75 visitors from the faculties community. This is due to the reason that both the communities are engaged in different academic activities.

The mean value of the frequency of library visit is shown in Table 5.3.1 which on analysis found that the monthly visitors in both the universities are comparatively higher than the fortnight visitors and weekly visitors. It is surprising to found that the total mean value of NEHU comes to 195.5 while for MZU it comes to 160.5.

5.5 Purpose of Library Visit:

The purpose of library visit is one of the major components to know the mobility of the users. To ascertain the purpose of library visit by both the community under study i.e. research scholars and faculties. The component was split into 12 variables which have been explained in Table 5.4 supported with Graph-5.2. The respondents were allowed to choose multiple options leading thereby the 'n' values which came to 2664 among the respondents in both the universities under study. Statistical analysis of the component is drawn in Table - 5.4.1.

Table 5.4: Purpose of Library Visit

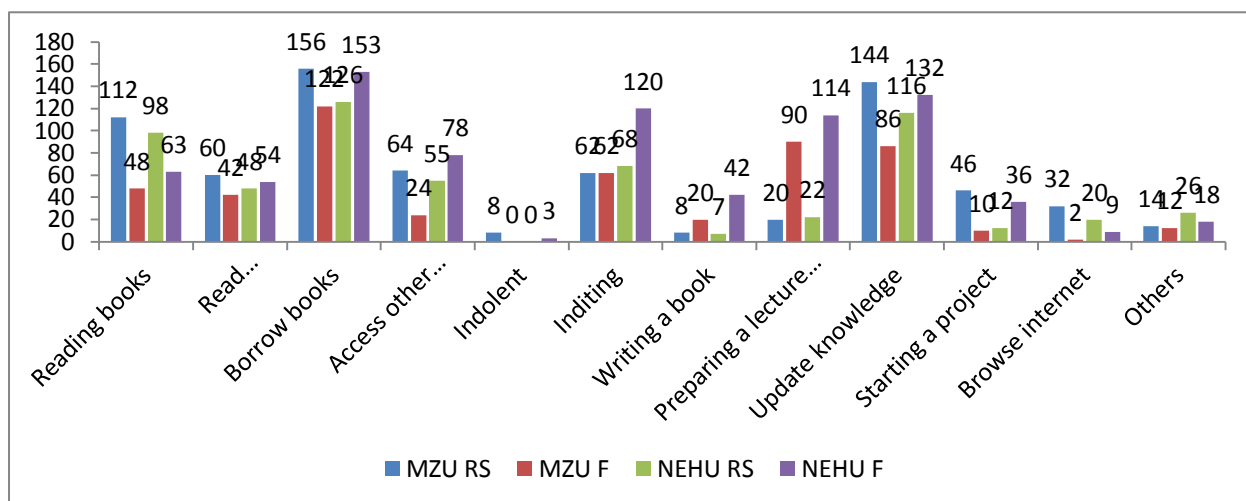
Sl.No	Purpose of Library Visit	MZU		%		NEHU		%		Total		GT
		RS	F	RS	F	RS	F	RS	F	RS	F	
1.	Reading books	112	48	15	9	98	63	16	8	210	111	321
2.	Reading periodical/Newspapers	60	42	8	8	48	54	8	7	108	96	204
3.	Borrow books	156	122	21	24	126	153	21	19	282	275	557
4.	Access other library resources	64	24	9	5	55	78	9	9	119	102	221
5.	Indolent	8	0	1	0	0	3	0	0	8	3	11
6.	Inditing	62	62	9	12	68	120	11	15	130	182	312
7.	Writing a book	8	20	1	4	7	42	1	5	15	62	77
8.	Preparing a lecture note	20	90	3	17	22	114	4	14	42	204	246
9.	Update knowledge	144	86	20	17	116	132	19	16	260	218	478
10.	Starting a project	46	10	6	2	12	36	2	4	58	46	104
11.	Browse internet	32	2	4	0	20	9	3	1	52	11	63
12.	Others	14	12	2	2	26	18	4	2	40	30	70
	TOTAL	726	518	99	100	598	822	98	100	1324	1340	2664
	Grand Total	1244				1420				2664		

Source: Field Survey

n= 2664 (1244+1420), N= 712

>.5 has been rounded to the next digit.

<.5 has been rounded to the previous digit.



Graph-5.2: Purpose of Library Visit

Table- 5.4.1: Statistical Analysis of Purpose of Library visit

Description	RB	RP/N	BB	AOLR	Indolent	Inditing	WB	PLN	UK	SP	BI
Mean	69.66 667	48	133.66 67	52.333 33	1	83.33333	23	75.33 333	111.3 333	19.33 333	10.33 333
Standard Error	14.81 366	3.464 102	9.7353 88	15.645 38	1	18.41497	10.2 1437	27.55 197	13.48 25	8.353 309	5.238 745
Median	63	48	126	55	0	68	20	90	116	12	9
Standard Deviation	25.65 801	6	16.862 19	27.098 59	1.732051	31.89566	17.6 9181	47.72 141	23.35 237	14.46 836	9.073 772
Sample Variance	658.3 333	36	284.33 33	734.33 33	3	1017.333	313	2277. 333	545.3 333	209.3 333	82.33 333
Skewness	1.090 291	0	1.6230 46	(-) 0.4385 4	1.732051	1.663353	0.74 1124	- 1.252 39	- 0.863 35	1.694 891	0.646 969
Range	50	12	31	54	3	58	35	92	46	26	18
Minimum	48	42	122	24	0	62	7	22	86	10	2
Maximum	98	54	153	78	3	120	42	114	132	36	20
Sum	209	144	401	157	3	250	69	226	334	58	31
Count	3	3	3	3	3	3	3	3	3	3	3

Abb. R B- Reading Books, RP/N- Reading Periodicals/ Newspapers, BB- Borrowing Books, AOLR- Access other Library Resources, WB- Writing Books, PLN- Preparing Lecture Note, UK- Update Knowledge, SP- Starting Project, BI- Browse Internet

The analysis of Table 5.4 revealed that out of 12 variables both the research scholars and the faculties which form 156 (21%) and 122 (24%) respectively for MZU visit the library to borrow books. It is surprising to know that 112 (15%) research scholars of MZU visit the library to read books followed by 62 (9%) who concentrate to produce literary work. From the faculties community of MZU, analysis of the table revealed that 90 (17%) out of 518 visit the library to prepare lecture note followed by 86 (17%) who visit the library to update knowledge. Likewise, the analysis of the table for respondents constituting both research scholars and faculties of NEHU revealed that 126 (21%) research scholars and 153 (19%) faculties visit the library to borrow books. 116 (19%) research scholars and 132 (16%) faculties visit the

library to update knowledge. However, 98 (16%) research scholars visit the library to read books while 120 (15%) faculties visit for inditing i.e. composing of literature.

The overall analysis revealed that both the categories of both the universities under study prefer to borrow books which constitute the highest i.e. 282(21%) research scholars and 275 (21%) faculties out of 1324 and 1340 respectively. Further, 260 (20%) research scholars and 218(16%) faculties out of 1324 and 1340 respectively visit the library to update knowledge. Thus, a major chunk of the respondents i.e. 557 (21%) out of 2664 constituting both research scholars and faculties prefer to go to the library to borrow books followed by 478 (18%) to update knowledge and 321(12%) for reading the books. This otherwise means that, both the library of the two universities has a quality collection of books which suit the needs of both the categories.

Further, the statistical analysis for the Table 5.4.1 shows that the mean value for Borrowing Books which comes to 133.67 followed by 111.33 for Updating of Knowledge and 83.33 for Inditing. The standard error for preparing lecture note stands at the apex which comes to 27.6 followed by 15.64 for access to other library resources and 14.81 for the reading of books. The median value for borrowing books is at the top i.e. 126 followed by 116 for an update of knowledge and 90 for preparing lecture note. The other statistical measure like standard deviation, range etc. has been clearly defined in the table.

5.6 Resources in MZU and NEHU:

Resources are crucial to any academic pursuits whether research, teaching, learning and it is indispensable to the research scholars, faculties and the students as well. Resources available in Mizoram University Central Library and North Eastern Hill University Central Library till November 2017 are discussed below in Table 5.5.

Table 5.5: Resources in MZU and NEHU

Sl.No.	Types of Resources	MZU	NEHU
1.	Books	1,06,658	2,90,000
2.	Theses & Dissertation	681	990
3.	Print Journals	276	233
4.	Digital Book Index	-	165000
	Reference Books	11736	2000
	Literature & Languages	15000+	12000
	Short Stories	-	3000+
	Literatures	16000+	2500+
	Poetry	3300+	3000
	History& Social Sciences	46000+	15000
	Medical	100+	1500
	Mathematics and Science	6900+	1900
	Philosophy & Religion	14000+	1200
	Contemporary & classic children's	1500+	3500

	books and stories		
	Agriculture	4000+	1500+
	Business	7500+	600+
5	Online Books Page	-	2 Millions
6	Google Book Search	-	2,000,000
7	Hathi Trust	-	2,000,000
8	Internet Archive E-books and Texts	-	6,000,00
9	Project Gutenberg	-	>50,000
10	University of Michigan Digital General Collection	-	28,000

Source: Field Survey & www.nehu.ac.in/library/ebooks.html

It could be ascertained from the analysis of the Table-5.5 that, both the libraries have taken sporadic attempts to develop their collections. The NEHU Central Library has taken positive initiatives to provide adequate resources both traditional and digital and it has developed the Digital Book Index which facilitates the users' abundant resources for their teaching, learning and research. Likewise, Mizoram University Central Library has also taken positive initiatives to provide resources to the users. But it does not provide the Digital Book Index. However, providing the full-fledged digital resources to the users in Mizoram University Central Library is in pipeline. This shows that, both the universities have strengthened their library resources. Mizoram University Central Library still needs developing more electronic resources at par with the NEHU Central Library and allows access to the resources for more research productivity and learning. The Table 5.5 further revealed that the collection of books at NEHU Central Library is 2,90,000 while at MZU Central Library it is 1,06,658. The theses and dissertation is again higher at NEHU which comes to 990 as against MZU 681. But the collection of print journal at MZU Central Library is higher i.e. 276 as against 233 at NEHU Central Library. It could further observed that, the library resources are comparatively more in NEHU than the Mizoram University as NEHU was established in 1973 while Mizoram University was established in 2000 as discussed in Table 3.2.

5.7 Use of Information Sources:

Providing adequate and need-based resources by the libraries to the user community is one of the major functions of the library. The resources either may be documentary and electronic. The target group of the present study constituting both research scholars and faculties equally depends much upon the resources of both the library under study. For convenient sake, the information resources for the present study have been divided into 9 variables. Data relating to the use of information resources by both the category of users has been placed in Table 5.6 for analysis. The respondents exercised multiple options regarding the use of library resources and hence, the total population for the present component has risen to 3971 out of which

MZU constitutes 1783 while, NEHU constitutes 2188 instead of a total number of 712. The statistical analysis of the use of information sources is placed in T. 5.6.1 for analysis.

Table 5.6: Use of Information Sources

Sl. No.	Information Sources	MZU		NEHU		Total
		RS	F	RS	F	
1.	Text Book	161(14%)	118 (18%)	147 (14%)	193 (17%)	619 (16%)
2.	Electronic Documents	149 (13%)	98 (15%)	126 (12%)	204 (18%)	577 (15%)
3.	Periodicals, Magazines , Newspapers	144 (13%)	101 (15%)	125 (12%)	148 (13%)	518 (13%)
4.	Conference/ Seminars Proceedings	124 (11%)	72 (11%)	118 (11%)	125 (11%)	439(11%)
5.	Theses/Dissertations	135 (12%)	59 (9%)	127 (12%)	57 (5%)	378 (10%)
6.	Abstracts/Indexes	121 (11%)	39 (6%)	111 (11%)	80 (7%)	351(9%)
7.	Government Documents	67 (6%)	46 (7%)	79 (8%)	68 (6%)	260(7%)
8.	Statistical publications	79 (7%)	48 (7%)	99 (9%)	102 (9%)	328 (8%)
9.	Reference Books (Encyclopedias, Yearbooks, Reports, etc.)	143 (13%)	79 (12%)	120 (11%)	159 (14%)	501(13%)
	Total	1123	660	1052	1136	3971
	Grand Total	1783		2188		

Source: Field Survey

n= 3971, N= 712

>.5 has been rounded to the next digit.

<.5 has been rounded to the previous digit.

Table 5.6.1: Statistical Analysis of Use of Information Sources

Description	Text Book	ED	Periodicals	Conference	Theses	Abstract.	GD	SP	Reference
Mean	152.6667	142.6667	124.6667	105	81	76.66667	64.33333	83	119.3333
Standard Error	21.83524	31.714	13.56875	16.62328	23.00725	20.85133	9.701088	17.52142	23.09642
Median	147	126	125	118	59	80	68	99	120
Standard Deviation	37.81975	54.93026	23.50177	28.79236	39.84972	36.11556	16.80278	30.34798	40.00417
Sample Variance	1430.333	3017.333	552.3333	829	1588	1304.333	282.3333	921	1600.333
Skewness	0.659114	1.239671	-0.06381	-1.61759	1.727144	-0.4118	-0.93522	-1.71303	-0.07497
Range	75	106	47	53	70	72	33	54	80
Minimum	118	98	101	72	57	39	46	48	79
Maximum	193	204	148	125	127	111	79	102	159
Sum	458	428	374	315	243	230	193	249	358
Count	3	3	3	3	3	3	3	3	3

Table 5.6 analysis revealed that out of nine different information sources use of textbook stands at the apex i.e. 619 (16%) out of 3971 followed by 577 (15%) of electronic documents and 518 (13%) each for periodicals, magazines, newspapers and reference books. It may be mentioned that the total number of 501 reference books constituted 13% out of 3971 because above .5 has been rounded to the next digit. A detailed analysis revealed that 161 (14%) research scholars out of 1123 of MZU preferred to use textbook while 147 (14%) out of 1052 of NEHU use the textbook. Further, 149 (13%) research scholars out of 1123 of MZU used electronic documents followed by 126 (12%) research scholars out of 1052 of NEHU use the electronic documents. Likewise, the periodicals, magazine and newspapers are the third preferred resources for research scholars of both MZU and NEHU as 144 (13%) out of 1123 of MZU and 125 (12%) out of 1052 of NEHU used the resources. Reference books used by the research scholars of MZU are again higher compare to NEHU. This could be found from the analysis that 143 (13%) out of 1123 use the reference book by the research scholars of MZU while 120 (11%) out of 1052 research scholars of NEHU used the reference books. While analyzing the data for faculties, it could be found that NEHU tops the list with regard to use of electronic documents as 204 (18%) out of 1136 using the electronic documents while 98 (15%) out of 660 faculties of MZU used the electronic documents. The second preferred documents of faculties of NEHU is textbook which comes to 193 (17%) out of 1136 while it comes to 118 (18%) out of 660 at MZU. The third preferred documents for faculties of NEHU is reference books which comes to 159 (14%) out of 1136 while at MZU it comes to 79 (12%) out of 660. The overall use of information resources from among the faculties are higher at NEHU compared to faculties of MZU.

The statistical analysis placed in Table 5.6.1 revealed that the mean value for textbooks stand at the apex which comes to 152.7 followed by electronic documents 142.7 and periodicals 124.7. It is surprising to note that the standard error for electronic documents is more i.e. 31.71 while for reference book it comes to 23.1, theses 23.1 and textbook 21.9. The median value for a textbook is 147 followed by electronic documents 126 and periodicals 125. The standard deviation for electronic documents is higher i.e. 54.93 followed by 40.00 for reference books and 39.85 for theses.

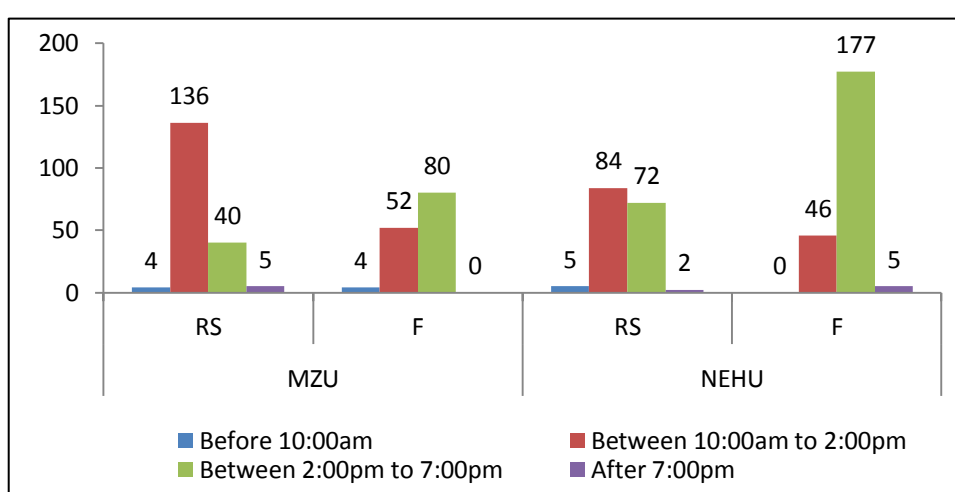
5.8 Convenient Time to visit the Library:

The research scholars and faculties have their convenient time to visit the library. It is essential to know so that the library can function accordingly. For the present study, the timing has been divided into 4 variables where the option was given to the target audience of both the universities under study. Data relating to this component is placed in table 5.7 for analysis which is supported with graph-5.3.

Table 5.7: Convenient Time to visit the Library

Sl. No.	Time	MZU		%		NEHU		%	
		RS	F	RS	F	RS	F	RS	F
1.	Before 10:00AM	4	4	2	3	5	0	3	0
2.	Between 10:00AM to 2:00PM	136	52	74	38	84	46	52	20
3.	Between 2:00PM to 7:00PM	40	80	22	59	72	177	44	78
4.	After 7:00PM	5	0	3	0	2	5	1	2
	Total	185	136	101	100	163	228	100	100
		321				391			

Source: Field Survey



Graph-5.3: Convenient Time to Visit the Library

The analysis of the Table 5.7 found that a maximum number of research scholars i.e. 136 (74%) out of 321 in MZU prefer to visit the library in between 10am to 2pm followed by 52 (38%) faculties who also prefer the same timing. But major faculties of MZU i.e. 80 (59%) out of 321 opined that the convenient time to visit the library is from 2pm to 7pm. Likewise in NEHU, major research scholars i.e. 84 (52%) preferred to visit the library between 10 am to 2pm while very fewer faculties i.e. 46 (20%) who expressed their willingness to visit the library in the same time. It is surprising to note that major faculties of NEHU i.e. 177 (78%) prefer the timing between 2PM to 7PM. The respondents preferred to visit the library from 2 PM to 7 PM as they are bit relaxed from official, academic engagements. It could further be found that, 5 (3%) and 2 (1%) Research scholars of MZU and NEHU respectively and 5 (2%) faculties of NEHU opined that, their convenient time to visit the library is after 7PM. But, they are deprived from using the library as this fall beyond official time.

While comparing both MZU and NEHU, it could be found that while the research scholars preferred 10AM to 2PM to visit the library, the faculties expressed their preferred timing 2PM to 7PM as they are having less engagements in the afternoon. This is a healthy sign for the faculties who have the interest to use the library after the class hour.

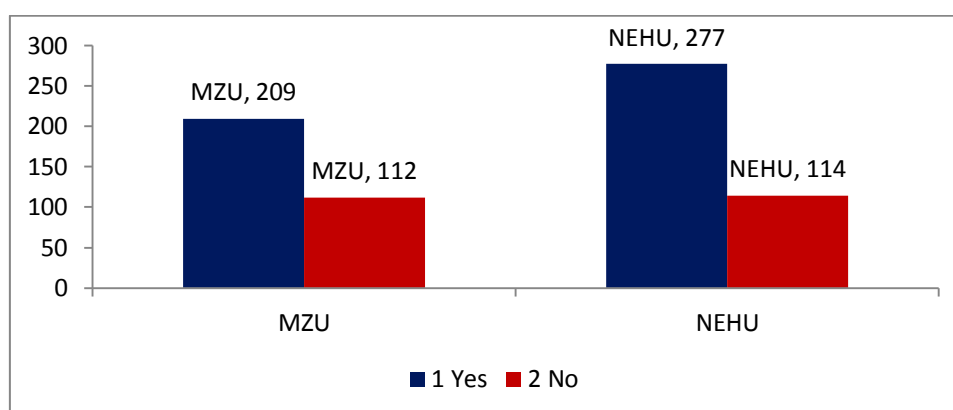
5.9 Display of New Arrival of Documents:

Display of new arrival of documents in the library is one of the prime activities of library services. This service rendered by the library attracts the user for instant information to the new books. The libraries both understudy actively initiate displaying of new arrival of documents for the users. Data relating to this component given the research scholars and faculties of both the university is placed in Table 5.8 for analysis complemented with Graph-5.4

Table 5.8: Display of New Arrival of Documents

Sl.No.	Display New Arrival	MZU	%	NEHU	%
1.	Yes	209	65	277	71
2.	No	112	35	114	29
	Total	321	100	391	100

Source: Field Survey



Graph-5.4: Display of new arrivals

Table 5.8 on analysis revealed that 209 (65%) respondents constituting both research scholars and faculties of MZU followed by 277 (71%) of NEHU viewed that the library displays the new arrival of documents. But 112 (35%) respondent of MZU and 114 (29%) of NEHU opined that the libraries of both the universities under study do not display the new arrival of documents. To confirm this, the scholar personally visited both the libraries and found that the libraries display the new arrival of documents. The negative view of the users may be due to the fact that the libraries might have been removed the book jackets of the new books by the time they go to the library.

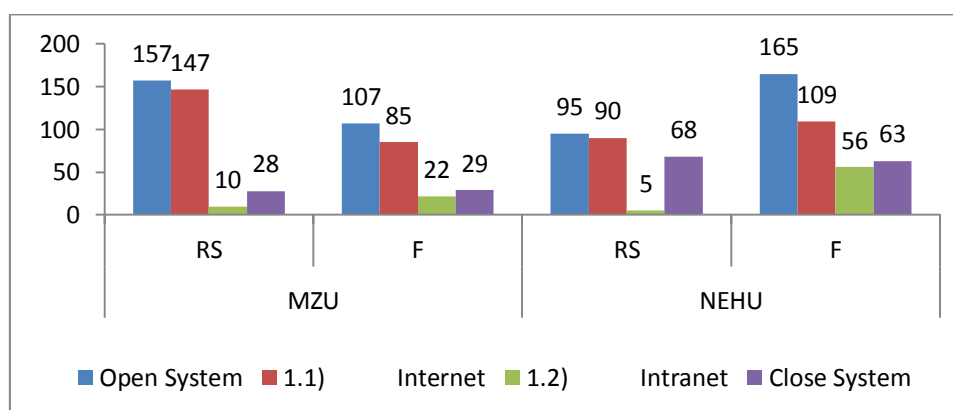
5.10 Access Preference to the Library:

Generally, the library is accessed in two ways i.e. i) physical access and ii) virtual access. Previously the library was allowing the users to access the resources in two ways i.e. open access and closed access. The open access allows accessing the resources through multiple channels i.e. internet, intranet etc. while the closed access which is also known as restricted access the users got access only through physical presence and they are not allowed to go to the stack room to find their documents. Therefore, the scholars wanted to know the access preference for both research scholars and faculties of the university under study and data relating to this component is placed in Table 5.9 supported with Graph-5.5 for analysis.

Table 5.9: Access Preference to the Library

Sl.No.	Access System		MZU		NEHU	
			RS	F	RS	F
1.	Open System		157 (85%)	107 (79%)	95 (58%)	165 (72%)
	1.1	Internet	147 (94%)	85 (79%)	90 (95%)	109 (66%)
	1.2	Intranet	10 (6%)	22 (21%)	5 (5%)	56 (34%)
2.	Close System		28 (15%)	29 (21%)	68 (42%)	63 (28%)
	Total		185 (58%)	136 (42%)	163 (42%)	228 (58%)
			321		391	

Source: Field Survey



Graph-5.5: Access Preference to the Library

Table 5.9 shows the division of two systems i.e. open system and closed system. The open system is further divided into two types i.e. internet and intranet. Data relating to this component obtain through the questionnaire shows that in MZU 157 (85%) research scholars and 107 (79%) faculties out of 185 and 136 respectively prefer open system. While 28 (15%) research scholars and 29 (21%) faculties out of 185 and 136 respectively prefer close system. Likewise in NEHU, 95 (58%) research

scholars out of 163 and 165 (72%) faculties out of 228 prefer open system followed by 68 (42%) research scholars and 63 (28%) faculties out of 163 and 228 respectively preferred close system.

Further analysis shows that in open system preference for the internet goes to 147 (94%) and 10 (6%) for intranet by the research scholars out of 157 of MZU and 85 (79%) and 22 (21%) of MZU out of 107 faculties preferred internet and intranet respectively. Likewise out of 95 (58%) research scholars of NEHU, 90 (95%) and 5 (5%) preferred internet and intranet respectively. Again, out of 165 faculties of NEHU 109 (66%) and 56 (34%) preferred internet and intranet respectively to access the library.

The overall analysis shows that open system is preferable by both the communities in MZU and NEHU. Further, the internet happens to be the most preferred way of accessing to the library physically compared to the intranet.

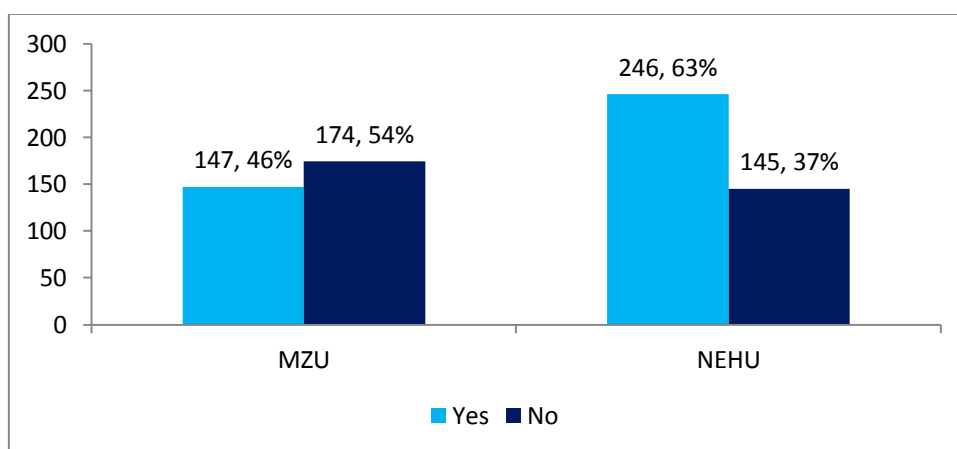
5.11 Accessing the Central Library from the Department:

Access to the library in a virtual mode has become imminent among the users in view of the prevailing of ICT in the library. The libraries under study are making effort to reach the users for its access through Intranet. To ascertain the access of the library by the research scholars and faculties of the universities understudies, the scholar obtained the data in two variables which is placed in Table 5.10 for analysis. The Table is supported with the Graph-5.6 for clear understanding.

Table 5.10: Accessing the Central Library from the Department

Sl.No.	Access	MZU	%	NEHU	%
1.	Yes	147	46	246	63
2.	No	174	54	145	37
	Total	321	100	391	100

Source: Field Survey



Graph-5.6: Accessing the Central Library from the Department

The analysis of Table 5.10 shows that 147 (46%) respondents constituting research scholars and faculties of MZU out of 321 accessed to the library from the department while 246 (63%) constituting research scholars and faculties from NEHU out of 391 accessed to the library through intranet. It is surprising to find that 174 (54%) respondents of MZU expressed negatively of accessing the library from the department even if the library is facilitating the department to access through intranet. A less number of respondents 145 (37%) of NEHU out of 391 do not access to the library from the department. The overall viewed that while a major chunk of respondents i.e. 246 out of 391 of NEHU accessed to the library from the department. 147 (46%) out of 321 of MZU which is very less accessed from the department. It otherwise means that the MZU central library needs to provide more orientation to the scholars and motivate to access the library from the department through an intranet.

5.12 Type of Information Need:

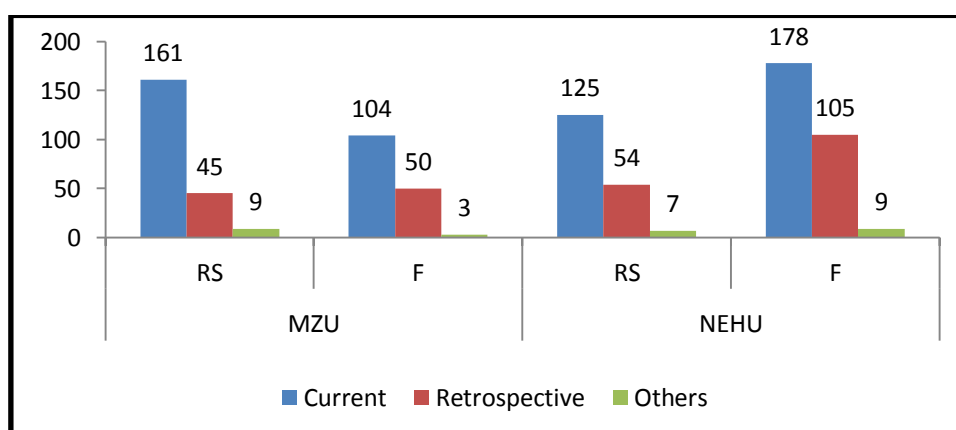
Information is a dominating factor for study and research which is available in many modes. For the present study, it has been categorized into three variables such as current, retrospective and others. Data for this component was obtained from the target audience of both the universities under study which is placed in Table 5.11 supported with Graph-5.7. The target audience made their option in multiple variables and therefore, the 'n' value came to 850 instead of 712.

Table 5.11: Type of Information Need

Sl. No	Type of Information	MZU		%		NEHU		%	
		RS	F	RS	F	RS	F	RS	F
1.	Current	161	104	75	66	125	178	67	61
2.	Retrospective	45	50	21	32	54	105	29	36
3.	Others	9	3	4	2	7	9	4	3
	Total	215	157	100	100	186	292	100	100
	Grand Total	372				478			

Source: Field Survey

n= 850, N= 712



Graph-5.7: Types of Information Need

The analysis of Table 5.11 visualized that in MZU out of 372, 215 (58%) research scholars and 157 (42%) faculties submitted their preference. Likewise in NEHU out of 478, 186 (39%) research scholars and 292 (61%) faculties put their option. Further analysis revealed that in MZU 161 (75%) followed by 45 (21%) out of 215 research scholar's preferred current and retrospective type of information respectively. From among 157 faculties, 104 (66%) and 50 (32%) gave their preference of information current and retrospective respectively. Likewise, out of 186 research scholars from NEHU, 125 (67%) preferred current information while 54 (29%) preferred retrospective information. Moreover, from 292 faculties, 178 (61%) preferred current information and 105 (36%) preferred retrospective information. The overall analysis revealed that both research scholars and faculties of MZU and NEHU preferred mostly current information. They also preferred retrospective information due to useful knowledge contents.

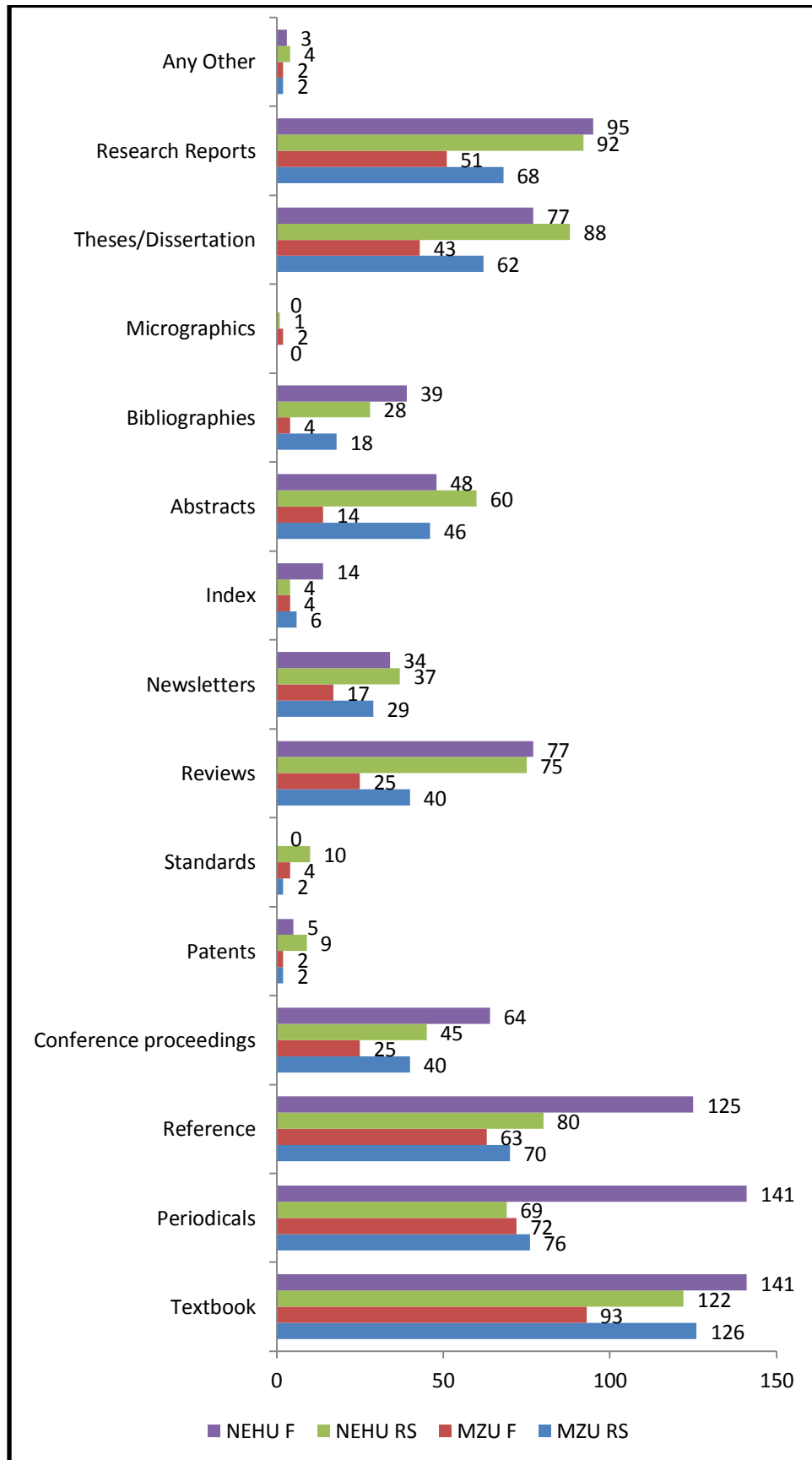
5.13 Searching for Preferred Document

Most of the library users search varied documents for various information relating to their subjects and research areas. This is one of the prime components of library collection of multifarious documents. Keeping in view the searching of preferred documents, the scholar obtained the data which is placed in Table- 5.12 supported with Graph- 5.8. The component has been divided broadly into 14 variables where the target audience under study opted multiple choices which resulted to increase the 'n' value to 1008 in respect of MZU and 1587 in respect of NEHU.

Table 5.12: Searching of Preferred Document

Sl. No.	Document	MZU		NEHU		Total	
		RS: A	F: B	RS: C	F: D	RS: (A+C)	F: (B+D)
1.	Textbook	126 (21%)	93 (22%)	122 (17%)	141 (16%)	248 (19%)	234 (18%)
2.	Periodicals	76 (13%)	72 (17%)	69 (10%)	141 (16%)	145 (11%)	213 (17%)
3.	Reference Tools	70 (12%)	63 (15%)	80 (11%)	125 (14%)	150 (11%)	188 (15%)
4.	Conference proceedings	40 (7%)	25 (6%)	45 (6%)	64 (7%)	85 (6%)	89 (7%)
5.	Patents	2 (0%)	2 (0%)	9 (1%)	5 (1%)	11 (1%)	7 (0%)
6.	Standards	2 (0%)	4 (1%)	10 (1%)	0 (0%)	12 (1%)	4 (0%)
7.	Reviews	40 (7%)	25 (6%)	75 (10%)	77 (9%)	115 (9%)	102 (8%)
8.	Newsletters	29 (5%)	17 (4%)	37 (5%)	34 (4%)	66 (5%)	51 (4%)
9.	Index	6 (1%)	4 (1%)	4 (1%)	14 (2%)	10 (1%)	18 (1%)
10.	Abstracts	46 (8%)	14 (3%)	60 (8%)	48 (6%)	106 (8%)	62 (5%)
11.	Bibliographies	18 (3%)	4 (1%)	28 (4%)	39 (5%)	46 (4%)	43 (3%)
12.	Micrographics	0 (0%)	2 (0%)	1 (0%)	0 (0%)	1 (0%)	2 (0%)
13.	Theses/ Dissertations	62 (11%)	43 (10%)	88 (12%)	77 (9%)	150 (11%)	120 (9%)
14.	Research Reports	68 (12%)	51 (12%)	92 (12%)	95 (11%)	160 (12%)	146 (11%)
15.	Any Other	2 (0%)	2 (0%)	4 (1%)	3 (0%)	6 (0%)	5 (0%)
	Total	587	421	724	863	1311	1284

Source: Field Survey, n= 2595 (1008+1587) N= 712 (321+391)



Graph-5.8: Document Prefer to Search

Table 5.12 with regard to searching of preferred documents by the research scholars and faculties of both the universities revealed that out of 14 types of documents the most preferred documents by both research scholars and faculties are the textbook as 248 research scholars and 234 faculties out of 1311 and 1284 respectively of both the universities preferred to search the same. Further, 160 (12%) research scholars out of 1311 of both MZU and NEHU preferred to search research report followed by 150 (11%) each research scholars who preferred to search reference tools and theses/dissertations respectively. Likewise from among the faculties of both the universities 213 (17%) out of 1284 preferred to search periodicals followed by 188 (15%) faculties who preferred to search reference tools.

The overall analysis revealed that 126 (21%) research scholars of MZU as against 122 (17%) research scholars of NEHU preferred to search textbook. Likewise, among the 141 (16%) faculties of NEHU preferred to search textbook. Periodicals are the next preferred documents for the faculties of both MZU and NEHU as 141 (16%) of NEHU preferred to search periodicals as against 72 (17%) of MZU. The reference tools equally are the preferred documents for both MZU and NEHU as 125 (14%) faculties of NEHU preferred to search as against 63 (15%) of MZU.

It shows that apart from textbook, periodical, reference tools and research report are also the preferred documents for both MZU and NEHU from among the faculties and also the research scholars.

5.14 Preference of Information Sources:

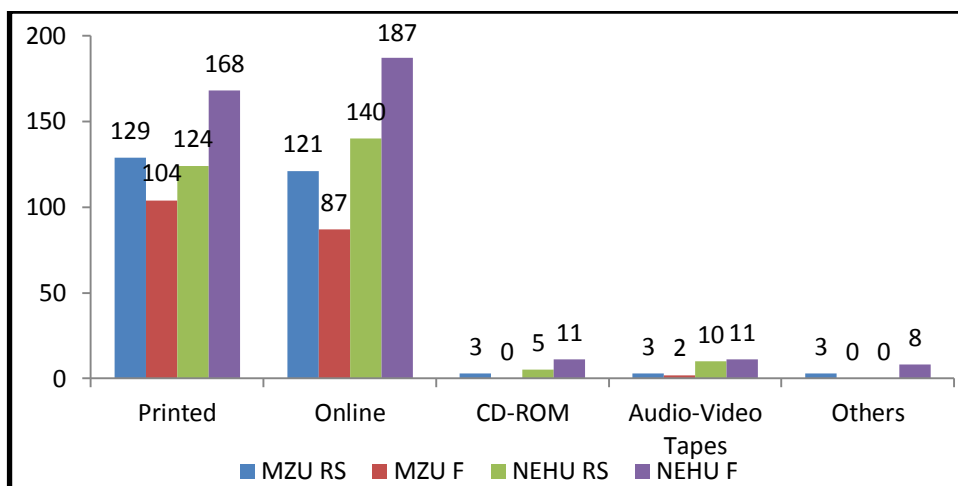
Information is important for any type of study and research which are available in many forms. For the present study, the information sources required by the research scholars and faculties of both the universities under study have been grouped into 5 variables. Data with regard to the preferred information sources need by the target audience under study was obtained and placed in Table 5.13 collaborated with Graph-5.9 for analysis. As the respondents preferred to give their option to more than one variable the 'n' value raised to 452 for MZU and 664 for NEHU, thus coming to a total 1116.

Table 5.13: Preference of Information Sources

Sl. No.	Information Sources	MZU		NEHU		Total	
		RS	F	RS	F	RS	F
1.	Printed	129 (50%)	104 (54%)	124 (44%)	168 (44%)	253	272
2.	Online	121 (47%)	87 (45%)	140 (50%)	187 (49%)	261	274
4.	CD-ROM	3 (1%)	0 (0%)	5 (2%)	11 (3%)	8	11
5.	Audio-Video Tapes	3 (1%)	2 (1%)	10 (4%)	11 (3%)	13	13
6.	Others	3 (1%)	0 (0%)	0 (0%)	8 (2%)	3	8
	Total	259	193	279	385	538	578
	Grand Total	452		664		1116	

Source: Field Survey

n=1116 (452+664), N= 712 (321+391)



Graph-5.9: Preference of Information Sources

Analysis of Table 5.13 revealed that 129 (50%) research scholars out of 259 from MZU preferred the print documents as against 124 (44%) out of 279 from NEHU. 168 (44%) faculties out of 385 from NEHU preferred print documents as against 104 (54%) out of 193 of MZU. The second preferred information sources are the online sources, here 140 (50%) research scholars of NEHU out of 279 preferred online sources as against 121 (47%) research scholars out of 259 of MZU. The other information sources like CD-ROM, Audio-Video Tapes and others are having the less importance by the respondents of both MZU and NEHU. This otherwise can be told that online sources of information are gaining momentum among the respondents. Equally, the print resources are also profusely used by the respondents which show that both the libraries are equipped with latest information sources.

5.15 Internet Access and Purpose

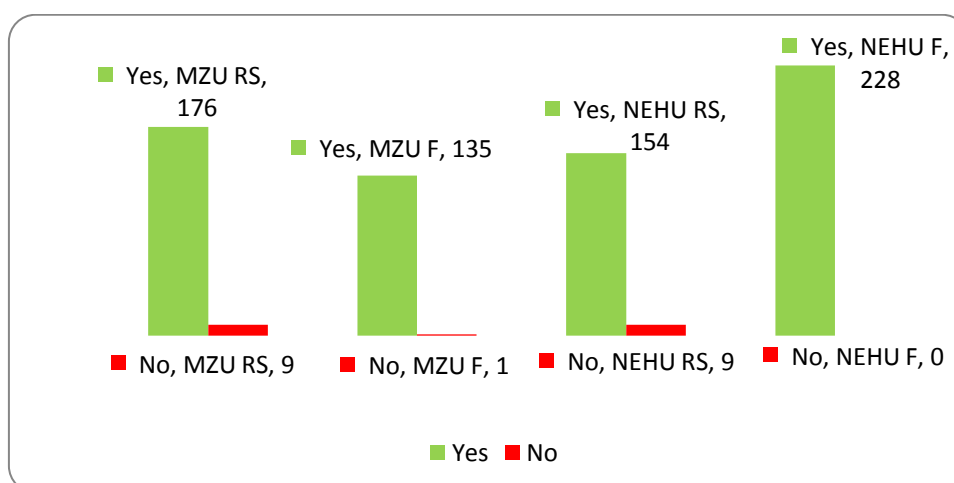
Allowing internet access for the users under study by the library has become imminent in view of retrieving additional e-resources to substantiate the teaching, learning and research. The scholar with this idea whether internet access is being provided to the users under study allows by the library or not wanted to ascertain. Further, the scholar tries to know the purpose of internet access by the users. Data relating to this component is placed in Table 5.14 and 5.15 respectively supplemented with Graph 5.10 and 5.11 which shows internet access and purpose of internet access.

It may be mention that the respondents used multiple options for the purpose of internet access which resulted to the 'n' value to 1515 i.e. 629 for MZU and 886 for NEHU instead of the total respondents 712.

Table 5.14: Internet Access

Sl.No.	Access	MZU		NEHU	
		RS	F	RS	F
1.	Yes	176 (95%)	135 (99%)	154 (94%)	228 (100%)
2.	No	9 (5%)	1 (1%)	9 (6%)	0 (0%)
	Total	185	136	163	228
		321		391	

Source: Field Survey



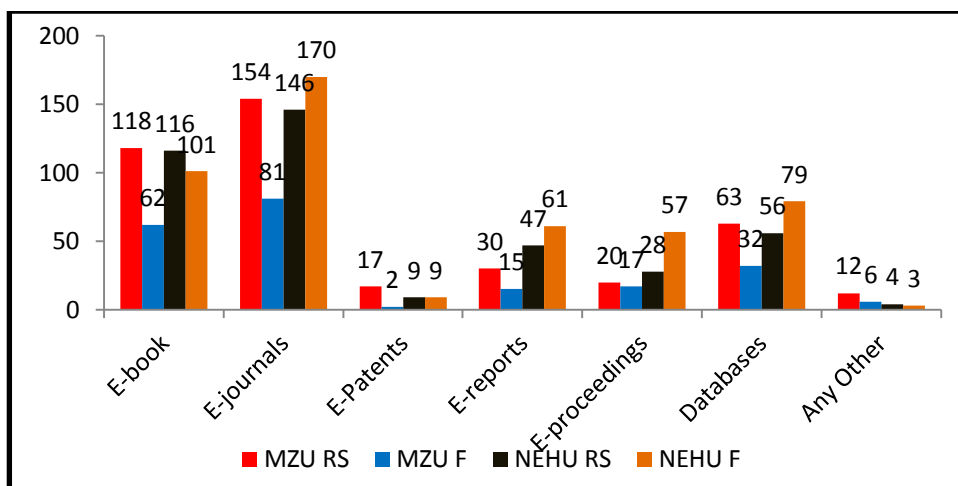
Graph-5.10: Internet Access

Table 5.15: Purpose of Internet Access

Sl.No.	Purpose	MZU		NEHU		Total	
		RS	F	RS	F	RS	F
1.	E-book	118 (29%)	62 (29%)	116 (29%)	101 (21%)	234	163
2.	E-journals	154 (38%)	81 (38%)	146 (36%)	170 (35%)	300	251
3.	E-Patents	17 (4%)	2 (1%)	9 (2%)	9 (2%)	26	11
4.	E-reports	30 (7%)	15 (7%)	47 (12%)	61 (13%)	77	76
5.	E-proceedings	20 (5%)	17 (8%)	28 (7%)	57 (12%)	48	74
6.	Databases	63 (15%)	32 (15%)	56 (14%)	79 (16%)	119	111
7.	Any Other	12 (3%)	6 (3%)	4 (1%)	3 (1%)	16	9
	Total	414	215	406	480	820	695
	Grand Total	629		886		1515	

Source: Field Survey

n= 1515 (629- MZU & 886- NEHU), N= 712



Graph-5.11: Purpose of Accessing the Internet

Table 5.14 on analysis with regard to internet access found that out of 321, 176 (95%) followed by 135 (99%) of research scholars and faculty of MZU out of 185 and 136 respectively access to internet, while 154 (94%) research scholars and 228 (100%) faculty out of 163 and 228 respectively of NEHU access to internet. Very few i.e. 9 (5%) research scholars and 1 (1%) faculty out of 185 and 136 respectively of MZU do not access the internet. Likewise, only 9 (6%) out of 163 research scholars of NEHU also do not access to the internet.

Thus, a major chunk of both research scholars and faculty of MZU and NEHU accessed to the internet for supplement resources for teaching, learning and research.

The scholar divided the purpose of the internet into seven variables and the users submitted their option in more than one variable. Analysis of the Table 5.15 concerning to the purpose of internet access reveals that a total number of 414 research scholars and 215 faculties of MZU including 406 research scholars and 480 faculties of NEHU put their options. The Table shows that out of seven categories, e-journal is the most preferred option for the users of both MZU and NEHU followed by e-book. It could be found from the table that 154 (38%) research scholars and 81 (38%) faculties out of 414 and 215 respectively of MZU preferred e-journal access on the internet. Likewise, 146 (36%) research scholars and 170 (35%) faculty out of 406 and 480 respectively of NEHU access the e-journal. 118 (29%) research scholars and 62 (29%) faculties out of 414 and 215 respectively of MZU access e-book while 116 (29%) research scholars and 101 (21%) faculty of NEHU out of 406 and 480 respectively also preferred to access the e-book on the internet. Thus, it could be view that the access of e-journal and e-book for both the communities of MZU and NEHU is gaining momentum for teaching, learning and research.

5.16 Use of e-Resources:

E-resources have a predominant role in promoting study and research which facilitate the users to get access to a wide array of information thereby, leading a wide option to search the right information. E-resources in the present days could able to establish as a potential source of information irrespective types of users. For a

convenient approach, the present component is divided into six variables broadly. The scholar obtained the data relating to the use of e-resources from the research scholars and the faculties of both the universities under study and the same is placed in Table-5.16 and graph-5.12 for analysis. The population group for the present studies exercised multiple options and hence, the total population i.e. n value reached to 478 instead of 321 at MZU and 874 instead of 391 at NEHU.

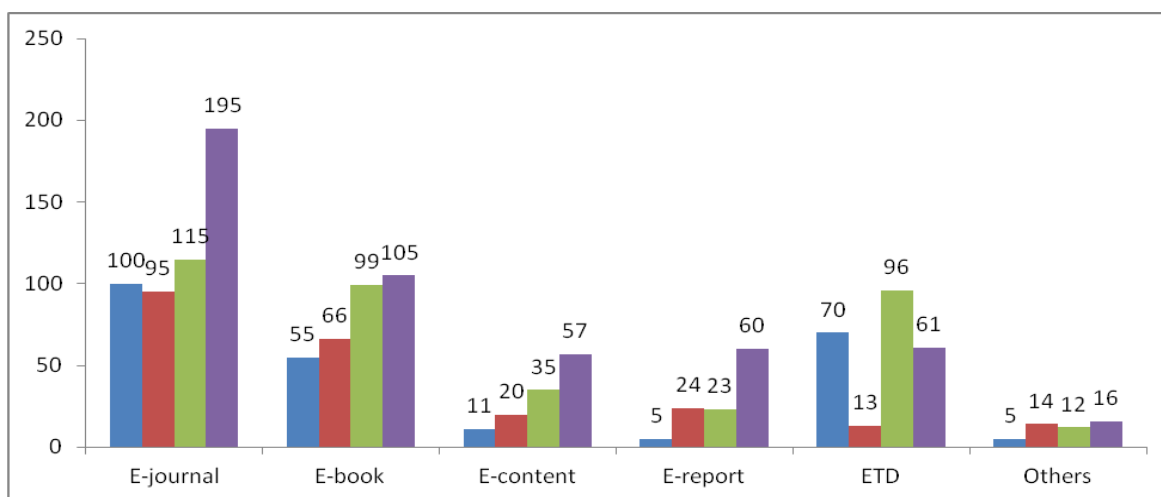
Further, Statistical analysis of the use of e-resources among the target audiences of both the universities under study also has been discussed in Table-5.16.1 coupled with Graph- 5.12.1 for clear understanding.

Table 5.16: Use of e-Resources

Sl.No	E-resources	MZU		NEHU		Total	
		RS	F	RS	F	MZU	NEHU
1.	E-journal	100 (41%)	95 (41%)	115 (30%)	195 (39%)	195 (41%)	310 (35%)
2.	E-book	55 (22%)	66 (28%)	99 (26%)	105 (21%)	121 (25%)	204 (23%)
3.	E-content	11 (4%)	20 (9%)	35 (9%)	57 (12%)	31 (6%)	92 (11%)
4.	E-report	5 (2%)	24 (10%)	23 (6%)	60 (12%)	29 (6%)	83 (9%)
5.	ETD	70 (28%)	13 (6%)	96 (25%)	61 (12%)	83 (17%)	157 (18%)
6.	Others	5 (2%)	14 (6%)	12 (3%)	16 (3%)	19 (4%)	28 (3%)
7.	Total	246	232	380	494	478	874
	Grand Total	1352					

Source: Field Survey

n= 1352 (478+874), N= 712 (321+391).

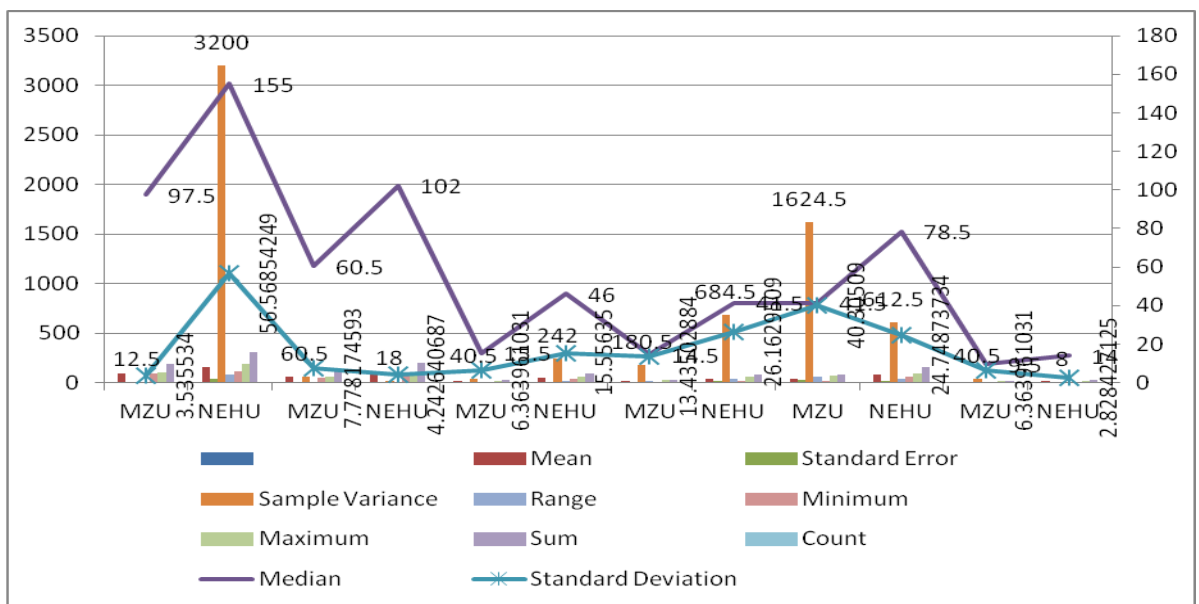


Graph-5.12: Use of e-Resources in MZU & NEHU

Table-5.16.1: Statistical representation of Use of e-Resources in MZU & NEHU

Description		Mean	SE	Median	SD	SV	Range	Min	Max	Sum	Count
MZU	E-Journals	97.5	2.5	97.5	3.535534	12.5	5	95	100	195	2
NEHU		155	40	155	56.568542	3200	80	115	195	310	2
MZU	E-Books	60.5	5.5	60.5	7.7781746	60.5	11	55	66	121	2
NEHU		102	3	102	4.2426407	18	6	99	105	204	2
MZU	E-Contents	15.5	4.5	15.5	6.363961	40.5	9	11	20	31	2
NEHU		46	11	46	15.55635	242	22	35	57	92	2
MZU	E-Reports	14.5	9.5	14.5	13.435029	180.5	19	5	24	29	2
NEHU		41.5	18.5	41.5	26.162951	684.5	37	23	60	83	2
MZU	ETD	41.5	28.5	41.5	40.30509	1624.5	57	13	70	83	2
NEHU		78.5	17.5	78.5	24.748737	612.5	35	61	96	157	2
MZU	Others	9.5	4.5	9.5	6.363961	40.5	9	5	14	19	2
NEHU		14	2	14	2.8284271	8	4	12	16	28	2

SE- Standard Error, SD- Standard Deviation, SV- Standard Variance, Min- Minimum, Max- Maximum



Graph-5.12.1: Statistical representation of Use of e-Resources in MZU & NEHU

While analyzing Table 5.16 in respect to use of e-resources by the audience under study of both the universities, it could be found that a major chunk of research scholars of MZU which constitute 100 (41%) out of 246 and 115 (30%) out of 380 research scholars of NEHU used e-journals followed by 195 (39%) faculties out of 494 of NEHU and 95 (41%) out of 232 of MZU who prefer to use the e-journals. E-books are also gaining momentum among the target users which could be visualized from the Table 5.15 that 105 (21%) out of 494 faculties of NEHU and 66 (28%) out of 232 faculties of MZU used e-books. So also, 99 (26%) research scholars out of 380 of NEHU followed by 55 (22%) out of 246 of MZU used e-books. The third category of e-resources mostly used by the users is ETD (e-theses/dissertations). This is found

from the table on analysis that 96 (25%) research scholars of NEHU out of 380 and 70 (28%) research scholars out of 246 of MZU used ETD for their research. Likewise, 61 (12%) faculties out of 494 of NEHU followed by 13 (6%) faculties out of 232 of MZU used ETD.

Comprehensively, it could be found from the table that 310 (35%) out of 874 users used e-journals in NEHU while 195 (41%) out of 478 users in MZU used e-journals as their source of information. This is followed by 204 (23%) users out of 874 of NEHU and 121 (25%) users out of 478 of MZU prefer to use e-books. ETD also is proved to be the chief source of information among the research scholars and faculties as 157 (18%) out of 874 of NEHU and 83 (17%) out of 478 of MZU who used ETD.

The statistical analysis placed in the Table 5.16.1 reveals that the mean value of e-journals for NEHU comes to 155 while for MZU it comes to 97.5. Likewise, for e-books, the mean value comes to 102 for NEHU and for MZU it comes to 60.5. The mean value for ETD for NEHU comes to 78.5 while for MZU it comes to 41.5. Correspondingly, the SD for e-journals comes to 56.57 and 3.54 for NEHU & MZU respectively.

5.17 Place of Accessing e-resources:

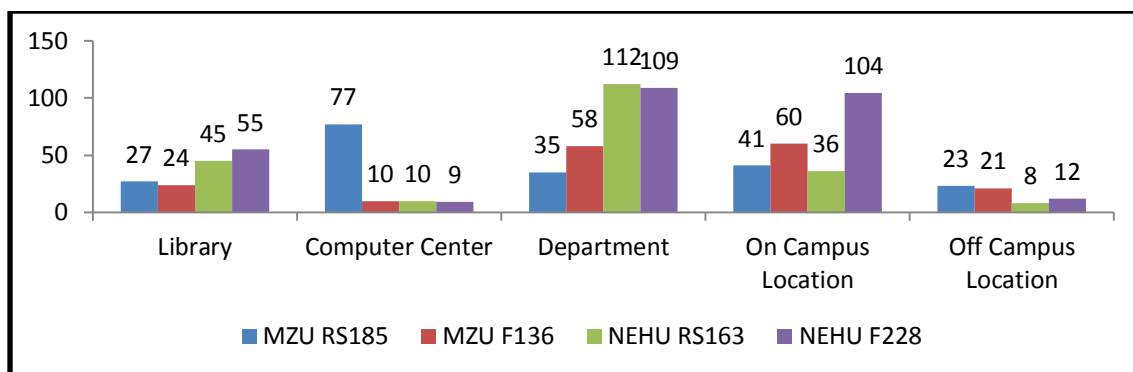
Use of e-resources is gaining momentum among the target audience of both the universities under study. However, it matters very much the place from which they access e-resources. There are multiple platforms through which the target group can access the e-resources. Broadly, for present study, it has been divided into 5 variables. The data obtained for the same is placed below in Table 5.17 for analysis and the same is supported with Graph-5.13. As the respondents exercised multiple options, the 'n' value reached to 876 (376 for MZU and 500 for NEHU) instead of 712.

Table 5.17: Place of Accessing e-resources

Sl.No	Place	MZU		NEHU	
		RS	F	RS	F
1.	Library	27 (13%)	24 (14%)	45 (21%)	55 (19%)
2.	Computer Center	77 (38%)	10 (6%)	10 (5%)	9 (3%)
3.	Department	35 (17%)	58 (34%)	112 (53%)	109 (38%)
4.	On Campus Location (Wi-Fi)	41 (20%)	60 (35%)	36 (17%)	104 (36%)
5.	Off Campus Location	23 (11%)	21 (12%)	8 (4%)	12 (4%)
	Total	203	173	211	289
	Grand Total	376		500	

Source: Field Survey

n= 876 (376+500), N= 712 (321+391).



Graph-5.13: Place of accessing e-resources

The analysis of the Table 5.17 shows that in MZU, 77 (38%) research scholars out of 203 preferred computer center as the place of access as against 10 (5%) of 211 research scholars of NEHU. From among the 289 faculties at NEHU, 104 (36%) preferred to access e-resources on campus i.e. Wi-Fi as against 60 (35%) out of 173 at MZU. It is surprising to note that the 112 (53%) out of 211 preferred departments as the centre for access as against 35 (17%) out of 203 at MZU. It could be found that both research scholars and faculties which constitute 45 (21%) out of 211 and 55 (19%) out of 289 of NEHU prefer library as the centre of access as against 27 (13%) research scholars out of 203 and 24 (14%) faculties out of 173 of MZU access e-resources.

The overall analysis revealed that both the university libraries adequately facilitate to allow access of e-resources through various platforms.

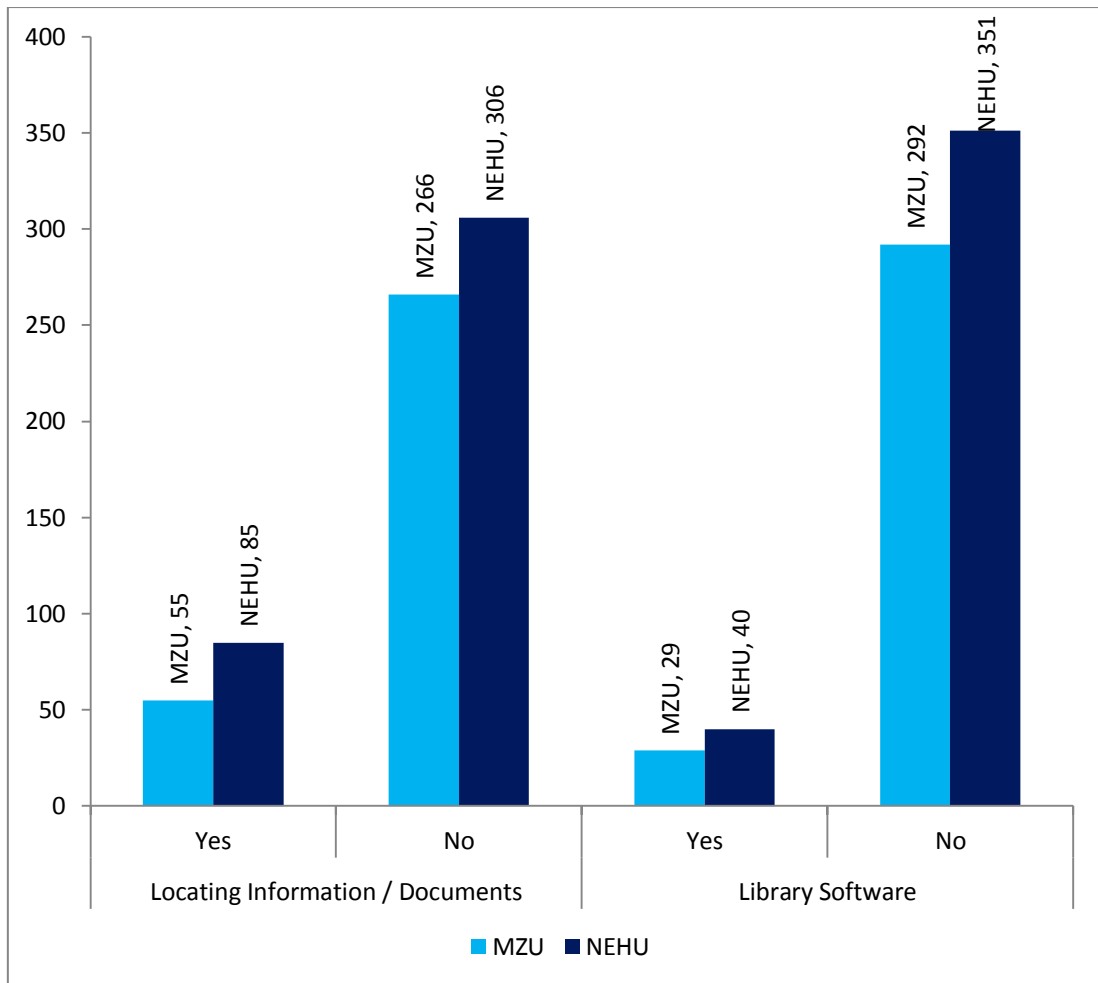
5.18 Difficulties in Locating Information / Documents & Use of Library Software:

Locating of information/documents sometimes become difficult for the users due to the arrangement of information unscientific way. The scholar tried to know the difficulties if any while locating the information/documents and the use of library software from among the users under study. The data relating to the component is placed herewith in Table 5.18 for analysis which is supported with Graph-5.14 for clear understanding.

Table 5.18: Difficulties in Locating Information / Documents & Use of Library Software

Sl.No	Difficulty		MZU	%	NEHU	%
1.	Locating Information / Documents	Yes	55	17	85	22
		No	266	83	306	78
		Total	321	100	391	100
2.	Library Software	Yes	29	9	40	10
		No	292	91	351	90
		Total	321	100	391	100

Source: Field Survey



Graph-5.14: Difficulties in Locating Information / Documents & Use of Library Software

The Table 5.18 while analysing revealed that 306 population out of 391 as a whole of NEHU which constitute 78% opined that they do not encounter any difficulties while locating information/documents in the library. 266 (83%) populations out of 321 of MZU also revealed that they do not find difficulties in locating their information in the library. However, 85 (22%) respondents out of 391 at NEHU and 55 (17%) out of 321 at MZU expressed that they find problems in locating their information. This maybe due to unawareness and lack of literacy to find documents in a library through the computer.

Likewise, the scholar wanted to know the difficulties with regard to the handling of library software among the respondents of both the universities under study where it could be found from the Table that 351 (90%) total population out of 391 of NEHU do not find any problem in operating the software. So also, 292 (91%) of total population out of 321 at MZU also expressed that they do not encounter with any problem in operating the library software. However, very few respondents i.e. 40 (10%) out of 391 at NEHU followed by 29 (9%) out of 321 at MZU opined that they encountered problems. This maybe due to lack of acquaintance among the users of the library.

5.19 Satisfaction/ Dissatisfaction on Library Services:

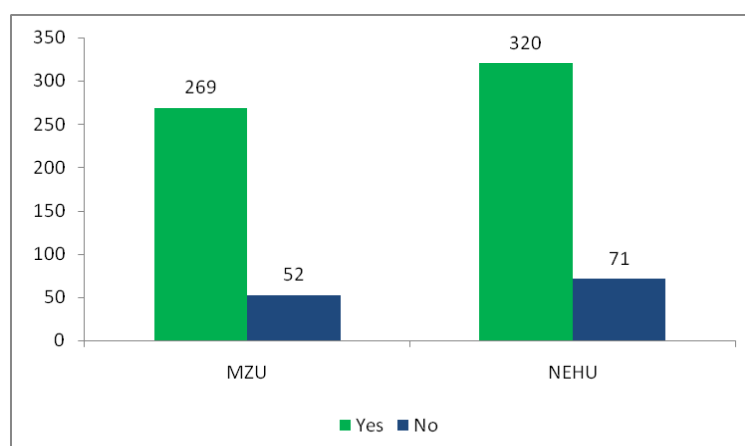
Satisfaction or dissatisfaction reflects the choice of users on library services. The users submit their feelings as satisfied when they received the adequate support of resources and services from the library. For the present study, the scholar obtained the data with regard to satisfaction achieved by the target users of both the universities under study which has been placed in Table 5.19 for analysis which is supported with Graph-5.15.

The scholar with regard to satisfaction divided the same into four variables and the data relating to the component is placed in Table 5.20 which is also supported with Graph-5.16 for clear understanding. Further, the statistical analysis of parameters of satisfaction is also placed herewith in Table 5.20.1 supported with Graph-5.16.1

Table 5.19: Whether Satisfied with the Library Services

Sl.No.	Satisfied	MZU	%	NEHU	%
1.	Yes	269	84	320	82
2.	No	52	16	71	18
	Total	321	100	391	100

Source: Field Survey

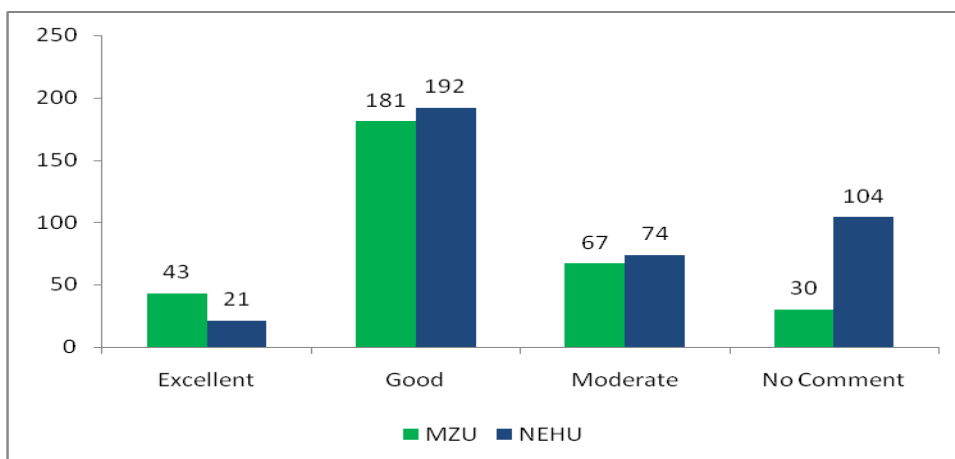


Graph-5.15: Whether Satisfied with the Library Services

Table 5.20: Parameters of Satisfaction

Sl.No.	Satisfied	MZU	%	NEHU	%
1.	Excellent	43	13	21	5
2.	Good	181	56	192	49
3.	Moderate	67	21	74	19
4.	No Comment	30	9	104	27
	Total	321	100	391	100

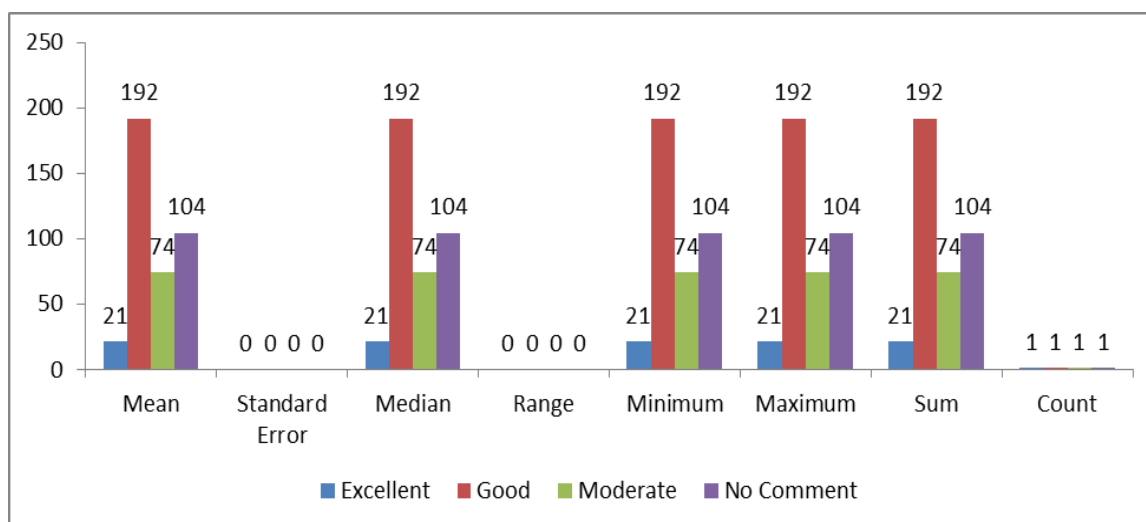
Source: Field Survey



Graph-5.16: Rate of Satisfaction

Table-5.20.1: Statistical Analysis of Satisfaction parameters

Description	Excellent	Good	Moderate	No Comment
Mean	21	192	74	104
Standard Error	0	0	0	0
Median	21	192	74	104
Range	0	0	0	0
Minimum	21	192	74	104
Maximum	21	192	74	104
Sum	21	192	74	104
Count	1	1	1	1



Graph-5.16.1: Statistical Analysis of Rate of Satisfaction

Table 5.19 on analysis revealed that 320 (82%) users constituting both research scholars and faculties out of 391 of NEHU unveiled that they are satisfied with the library services. This is followed by 269 (84%) users out of 321 of MZU who are satisfied. The dissatisfaction group constitutes 71 (18%) out of 391 and 52 (16%) out of 321 in NEHU and MZU respectively.

While analysing the various parameters of satisfaction placed in Table 5.20 revealed that major chunk of target users which comes to 192 (49%) out of 391 of NEHU expressed their feeling as 'good' followed by 181 (56%) out of 321 of MZU. 74 (19%) out of 391 users of NEHU followed by 67 (21%) out of 321 of MZU viewed 'moderate'. 43 (13%) out of 321 of MZU followed by 21 (5%) out of 391 of NEHU expressed as 'excellent'. However, 104 (27%) out of 391 followed by 30 (9%) out of 321 of NEHU and MZU respectively reserved their opinion i.e 'no comment'.

The statistical analysis of the Table 5.20.1 revealed that the mean value as a whole for 'good' is 192 while for 'moderate' it is 74 and for 'excellent' it is 21. It is surprising to note that there is no standard error. Likewise, the median value for good, moderate, excellent comes to 192, 74 and 21 respectively. Overall, it could be found that according to the target audience of both the university under study, both the libraries provide good services.

5.20 Findings:

Objective 1: Identify the resources in the Central Library of both Mizoram University and North Eastern Hill University.

1) The scholar has intricately has discussed the collection of resources of both Mizoram University Central Library and North Eastern Hill University in Chapter- 4 of the work. Further, the Table 5.5 revealed that the library resources at NEHU Central Library are comparatively more than Mizoram University Central Library.

2) The Table 5.5 further revealed that, the collection of books at NEHU Central Library is 2, 90,000 while at MZU Central Library it is 1, 06,658. The theses and dissertation is again higher at NEHU which comes to 990 as against MZU 681. But the collection of print journal at MZU Central Library is higher i.e 276 as against 233 at NEHU Central Library.

Objective 2: Find out the usage of Library resources of both the Libraries.

1) Table 5.2 found that, the male respondents compared to the female respondents are more out of total 712 respondents constituting both Research Scholars and Faculties of both the universities under study, 407 (57%) were male while, 305 (43%) were female.

2) Table 5.3 deduced that out of 185 Research Scholars, of MZU, the weekly visitors are more i.e. 61 (33%) followed by the monthly visitors which comes to 56 (30%) and fortnight visitors i.e. twice in a month which comes to 50 (27%). From 136 faculties of MZU, the monthly visitors are maximum 68 (50%) followed by twice in a month 35 (26%) and weekly visitors 18 (13%). Moreover, From NEHU, out of 163 research scholars, the monthly visitors are highest i.e. 60 (37%) followed by the fortnight visitors i.e. twice in a month are 43 (26%) and weekly visitors come to 39 (24%). From the faculties community of NEHU out of 228, it could be found that 96 (42%) faculties visit the library once in a month followed by 57 (25%) faculties who visit the library weekly and 39 (17%) fortnightly i.e. twice in a month. The mean value of the frequency of library visit shown in Table 5.3.1 found that the monthly visitors in both the universities are comparatively higher than the fortnight visitors

and weekly visitors. It is surprising to found that the total mean value of NEHU comes to 195.5 while for MZU it comes to 160.5.

3) Table 5.4 with regard to the purpose of library visit revealed that both the categories of both the universities under study prefer to borrow books which constitute the highest i.e. 282 (21%) research scholars and 275 (21%) faculties out of 1324 and 1340 respectively. Further, 260 (20%) research scholars and 218(16%) faculties out of 1324 and 1340 respectively visit the library to update knowledge. Thus, a major chunk of the respondents i.e. 557 (21%) out of 2664 constituting both research scholars and faculties prefer to go to the library to borrow books followed by 478 (18%) to update knowledge and 321(12%) for reading the books. This, otherwise, means that both the library of the two universities has a quality collection of books which suit the needs of both the categories. Statistical analysis in Table 5.4.1 found that the mean value for Borrowing Books is higher i.e. 133.67 followed by 111.33 for Updating of Knowledge and 83.33 for Inditing. The standard error for preparing lecture note stands at the apex which comes to 27.55 followed by 15.65 for access to other library resources and 14.81 for reading of books. The median value for borrowing books is at the top i.e. 126 followed by 116 for an update of knowledge and 90 for preparing lecture note.

4) With regard to the use of information sources by research scholars and faculty of MZU and NEHU placed in Table 5.6, it could be found that 161 (14%) research scholars out of 1123 of MZU preferred to use textbook while 147 (14%) out of 1052 of NEHU use the textbook. Further, 149 (13%) research scholars out of 1123 of MZU used electronic documents followed by 126 (12%) research scholars out of 1052 of NEHU use the electronic documents. Likewise, the periodicals, magazine and newspapers are the third preferred resources for research scholars of both MZU and NEHU as 144 (13%) out of 1123 of MZU and 125 (12%) of NEHU used the resources. Reference books used by the research scholars of MZU are again higher compare to NEHU. This could be found from the analysis that 143 (13%) out of 1123 use the reference book by the research scholars of MZU while 120 (11%) out of 1052 research scholars of NEHU used the reference books. The faculty of NEHU tops the list with regard to use of electronic documents as 204 (18%) out of 1136 using the electronic documents while 98 (15%) out of 660 faculties of MZU used the electronic documents. The second preferred documents of faculties of NEHU is textbook which comes to 193 (17%) out of 1136 while it comes to 118 (18%) out of 660 at MZU. The third preferred documents for faculties of NEHU is reference books which comes to 159 (14%) out of 1136 while at MZU it comes to 79 (12%) out of 660. The statistical analysis placed in Table 5.6.1 revealed that textbooks stand at the apex which comes to 152.67 followed by electronic documents 142.67 and periodicals 124.67. It is surprising to note that the standard error for electronic documents is more i.e. 31.71 while for reference book it comes to 23.10, theses 23.1 and textbook 21.84. The median value for a textbook is 147 followed by electronic documents 126 and periodicals 125. The standard deviation for electronic documents is higher i.e. 54.93 followed by 40.00 for reference books and 39.85 for theses.

5) Table 5.16 in respect to use of e-resources by the audience under study of both the universities, found that a major chunk of research scholars of MZU which constitute 100 (41%) out of 246 and 115 (30%) out of 380 research scholars of NEHU used e-journals followed by 195 (39%) faculties out of 494 of NEHU and 95 (41%) out of 232 of MZU who prefer to use the e-journals. E-books are also gaining momentum among the target users which could be visualized from the Table 5.16 that 105 (21%) out of 494 faculties of NEHU and 66 (28%) out of 232 faculties of MZU used e-books. So also, 99 (26%) research scholars out of 380 of NEHU followed by 55 (22%) out of 246 of MZU used e-books. The third category of e-resources mostly used by the users is ETD (e-theses/dissertations). Further, analysis of the Table shows that 310 (35%) out of 874 users used e-journals in NEHU while 195 (41%) users in MZU used e-journals as their source of information. This is followed by 204 (23%) users out of 874 of NEHU and 121 (25%) users out of 478 of MZU prefer to use e-books. ETD also is proved to be the chief source of information among the research scholars and faculties as 157 (18%) out of 874 of NEHU and 83 (17%) out of 478 of MZU used ETD. The statistical analysis placed in the Table 5.16.1 reveals that the mean value of e-journals for NEHU comes to 155 while for MZU it comes to 97.5. Likewise, for e-books, the mean value comes to 102 for NEHU and for MZU it comes to 60.5. The mean value for ETD for NEHU comes to 78.5 while for MZU it comes to 41.5. Correspondingly, the SD for e-journals comes to 56.57 and 3.54 for NEHU & MZU respectively.

Objective 3: Exploring the problems encountered by the users while accessing e-resources

1) Table 5.18 shows that in NEHU 306 (78%) out of 391 opined that they do not encounter any difficulties while locating information/documents in the library. 266 (83%) populations out of 321 of MZU also revealed that they do not find difficulties in locating their information in the library. However, 85 (22%) respondents out of 391 at NEHU and 55 (17%) out of 321 at MZU expressed that they find problems in locating their information.

2) With regard to the handling of library software, it was found from the Table that 351 (90%) total population out of 391 of NEHU do not find any problem in operating the software. So also, 292 (91%) of total population out of 321 at MZU also expressed that they do not encounter with any problem in operating the library software. However, very few respondents i.e. 40 (10%) out of 391 at NEHU followed by 29 (9%) out of 321 at MZU opined that they encountered problems.

Objective 4: Changing behavior of users in information seeking.

1) The type of information need placed in Table 5.11 visualized that in MZU out of 372, 215 (58%) research scholars and 157 (42%) faculties submitted their preference. Likewise in NEHU out of 478, 186 (39%) research scholars and 292 (61%) faculties put their option. Further analysis revealed that in MZU 161 (75%) followed by 45 (21%) out of 215 research scholar's preferred current and retrospective type of information respectively. From among 157 faculties, 104 (66%)

and 50 (32%) gave their preference of information current and retrospective respectively. Likewise, out of 186 research scholars from NEHU, 125 (67%) preferred current information while 54 (29%) preferred retrospective information. Again, it could be found that both research scholars and faculties of MZU and NEHU preferred mostly current information. They also preferred retrospective information due to useful knowledge contents.

2) Table 5.12 revealed that 126 (21%) research scholars of MZU as against 122 (17%) research scholars of NEHU preferred to search textbook. Likewise, among the 141 (16%) faculties of NEHU preferred to search textbook and periodicals. Periodicals are the next preferred documents for the faculties of MZU i.e. 72 (17%). The reference tools equally are the preferred documents for both MZU and NEHU as 125 (14%) faculties of NEHU preferred to search as against 63 (15%) of MZU.

3) Table 5.13 found that 129 (50%) research scholars out of 259 from MZU preferred the print documents as against 124 (44%) out of 279 from NEHU. 168 (44%) faculties out of 385 from NEHU preferred print documents as against 104 (54%) out of 193 of MZU. The second preferred information sources are the online sources, here 140 (50%) research scholars of NEHU out of 279 preferred online sources as against 121 (47%) research scholars out of 259 of MZU.

Objective 5: Make suggestions for the improvement of user-centric Library resource.

1) Table 5.7 concerning to visiting hour to the library found that 136 (74%) out of 321 in MZU prefer to visit the library in between 10am to 2pm followed by 52 (38%) faculties who also prefer the same timing. But major faculties of MZU i.e. 80 (59%) out of 321 opined that the convenient time to visit the library is from 2pm to 7pm. Likewise in NEHU, major research scholars i.e. 84 (52%) preferred to visit the library between 10 am to 2pm while very fewer faculties i.e. 46 (20%) who expressed their willingness to visit the library in the same time. It is surprising to note that major faculties of NEHU i.e. 177 (78%) prefer the timing between 2PM to 7PM. Comparison of MZU and NEHU shows that the research scholars preferred 10AM to 2PM to visit the library, the faculties expressed their preferred timing 2PM to 7PM. This is a healthy sign for the faculties who have the interest to use the library after the class hour.

2) The access preference to the library placed in Table 5.9 found that in MZU 157 (85%) research scholars and 107 (79%) faculties out of 185 and 136 respectively prefer open system. While 28 (15%) research scholars and 29 (21%) faculties out of 185 and 136 respectively prefer close system. Likewise in NEHU, 95 (58%) research scholars out of 163 and 165 (72%) faculties out of 228 prefer open system followed by 68 (42%) research scholars and 63 (28%) faculties out of 163 and 228 respectively preferred close system. Further, in open system, preference for the internet goes to 147 (94%) and 10 (6%) for intranet by the research scholars out of 157 of MZU. 85 (79%) and 22 (21%) of MZU out of 107 faculties preferred internet and intranet respectively. Likewise out of 95 (58%) research scholars of NEHU, 90 (95%) and 5 (5%) preferred internet and intranet respectively. Out of 165 faculties of NEHU 109

(66%) and 56 (34%) preferred internet and intranet respectively to access the library. Thus, an open system is preferable by both the communities in MZU and NEHU and internet is most preferred way of accessing to the library physically compared to the intranet.

3) Table 5.10 relating to accessing the central library from the department shows that 147 (46%) respondents constituting research scholars and faculties of MZU out of 321 accessed to the library from the department while 246 (63%) constituting research scholars and faculties from NEHU out of 391 accessed to the library through an intranet. It is surprising to find that 174 (54%) respondents of MZU expressed negatively of accessing the library from the department even if the library is facilitating the department to access through an intranet. Moreover, while a major chunk of respondents i.e. 246 (63%) out of 391 of NEHU accesses the library from the department. 147 (46%) out of 321 of MZU which is very less accessed the library from the department. It otherwise means that the MZU central library needs to provide more orientation to the scholars and motivate to access the library from the department through an intranet.

4) Table 5.15 on analysis found that e-journal is the most preferred option for the users of both MZU and NEHU followed by e-book. The result from the Table deduced that 154 (38%) research scholars and 81 (38%) faculties out of 414 and 215 respectively of MZU preferred e-journal access on the internet. Likewise, 146 (36%) research scholars and 170 (35%) faculty out of 406 and 480 respectively of NEHU access the e-journal. 118 (29%) research scholars and 62 (29%) faculties out of 414 and 215 respectively of MZU access e-book while 116 (29%) research scholars and 101 (21%) faculty of NEHU out of 406 and 480 respectively also preferred to access the e-book on the internet.

General Findings

1) Among the several models under studied which are design for the guidelines for effective services in a library, Wilson model is considered most suitable as in the contemporary world, it suits to the requirements of the users to search information and use. The other models however contemplate in providing better services to the users.

2) Table 5.1 revealed that the response rate of Research Scholars in MZU 185 (58%) are more compared to NEHU 163 (42%) while the response rate of Faculties are more in NEHU 228 (58%) compared to MZU 136 (42%). Further, the percentage of sample representation of both the universities among the Research Scholars and Faculties show that Mizoram University constitute the highest Research Scholars i.e. 53% while, NEHU forms 47% Research Scholars. But among the faculties, NEHU is the highest i.e. 63% while, MZU is 37%.

3) Table 5.8 concerning to display of new arrival found that 209 (65%) respondents constituting both research scholars and faculties of MZU followed by 277 (71%) of NEHU viewed that the library displays the new arrival of documents. But 112 (35%) respondent of MZU and 114 (29%) of NEHU opined that the libraries of both the universities under study do not display the new arrival of documents.

- 4) Table 5.14 on analysis with regard to internet access found that out of 321, 176 (95%) followed by 135 (99%) of research scholars and faculty of MZU out of 185 and 136 respectively access to internet, while 154 (94%) research scholars and 228 (100%) faculty out of 163 and 228 respectively of NEHU access to internet.
- 5) Table 5.17 with regard to the place of accessing e-resources found that in MZU, 77 (38%) research scholars out of 203 preferred computer center as the place of access as against 45 (21%) of 211 research scholars of NEHU who preferred library as the place of access. From among the 289 faculties at NEHU, 104 (36%) preferred to access e-resources on campus i.e. Wi-Fi as against 60 (35%) out of 173 at MZU. It is surprising to note that the 112 (53%) out of 211 preferred departments as the centre for access as against 35 (17%) out of 203 at MZU. It could be found that both research scholars and faculties which constitute 45 (21%) out of 211 and 55 (19%) out of 289 of NEHU prefer library as the centre of access as against 27 (13%) research scholars out of 203 and 24 (14%) faculties out of 173 of MZU access e-resources.
- 6) Table 5.19 concerning to satisfaction or dissatisfaction shows that 320 (82%) users constituting both research scholars and faculties out of 391 of NEHU unveiled that they are satisfied with the library services. This is followed by 269 (84%) users out of 321 of MZU who are satisfied. The dissatisfaction group constitutes 71 (18%) out of 391 and 52 (16%) out of 321 in NEHU and MZU respectively. Further, the statistical analysis of the Table 5.20.1 revealed that the mean value as a whole for 'good' is 192 while for 'moderate' it is 74 and for 'excellent' it is 21. It is surprising to note that there is no standard error. Likewise, the median value for good, moderate, excellent comes to 192, 74 and 21 respectively. Overall, it could be found that according to the target audience of both the university under study, both the libraries provide good services.

5.21 Conclusion

From the foregoing discussion on avarious aspect of the user's community in MZU and NEHU concludes that library at any point in time is the viable podium for accessing information resources in multidimensional form. The readers access useful literature for teaching, learning and research. The e-resources available in the library is an additional source apart from the traditional literature. Use of e-resources among the users are gaining momentum to pursue academic work and hence they need the current information especially apart from the library resources.

6.1 Suggestions

After a through scrutiny of the suggestions obtained from both the users and the librarians, the scholar put forth herewith the following suggestions for improvement of library services to cater to the needs of the users and making the library more user-friendly so as to maximize the use of library resources.

- 1) The MZU and NEHU library should provide with the latest updates of the e-journals, e-books so as to make free and seamless access to everyone (students, scholars, staffs, faculties).
- 2) The users use the library at different time according to his/her convenient time for different reason. The university library has a lot of users from different field and therefore, to give satisfaction of different users, the library need to extend the working hour, at least open for half day during holiday so that the library users can access the resources.
- 3) The library needs to extend the functional timing beyond the official hour so as to provide benefits to the users who want to use the library after 7PM.
- 4) As the users are increasing from time to time, the ratio of book must be increased so that the library can issue the same book or the same resource to a large number of users at the same time.
- 5) Shelves rectification should be done judiciously so that the users can get to their required resources without any constraints.
- 6) Government documents and recent statistical publications from various government agencies should be placed separately in the documentation section which will be very useful for the users especially for the research scholars and the faculties.
- 7) The library also needs to take measures in providing the job information and competitive information for the aspirants.
- 8) As the library upgrades the system with new software for effective management of resources, proper training to the users' needs to be imparted periodically by the library to maximize the use of resources. It also needs to provide training to the users to search resources, database, e-journals, e-books etc. to expand the horizon of knowledge.
- 9) Department library needs to be initiated in every department with the induction of a technical hand who will take care of the documents and the need for the students and scholars. This is imminent in view of the fact that, due to time constraint many users are deprived of going to the central library
- 10) The duration of retaining of library resources need to be extended to one month instead of 15 days for the research scholars of both in MZU and NEHU so as to have a thorough study.
- 11) The users opined their views regarding subscription to more international journals as the journals subscribed by Mizoram University and North Eastern Hill University central libraries in science stream are inadequate which create a gap in academic research.
- 12) The librarians of both the universities proposed for reorganization of training courses to keep the professionals abreast of the current situation in ICT domain including proper management skills to handle the e-resources.

- 13) In view of the less skilled and professional staffs, the services are hampered which, however, can be resolved by induction of more technical hands to achieve excellence in library and information services.
- 14) Both the libraries need healthy user-centric collection development of print and electronic resources.
- 15) Periodic review of the implementation of rules and regulations need to be initiated by the members of the library committee to ensure optimum utilization of library resources and library policy and the users.
- 16) The library must be made the hub of all the activities planned and executed in the university library.
- 17) Academic departments must ensure the students to prepare their home assignment, research work, preparation for lectures, examination, information, recreation and aspiration in the library.
- 18) In collection development, the involvement of students is necessary as they relay their thought of procuring the books most suitable for their reading.
- 19) Proper utilization of finance is necessary for utilizing the fund for developing adequate infrastructure to support the academic works of the users.
- 20) The library must be made accessible from anywhere inside the campus through Wi-Fi using e-proxy server so as to excel their research work.
- 21) VPN (Virtual Private Network) should be provided to access off campus onset using the respective university portal .

6.2 Conclusion

The library in the present era witnessed dynamic changes in its services due to adaption information and communication technology and this is supplemented with the changes of information requirements of the users who insisted upon the e-resources. All electronic materials must be pertinent and suitable to a significant segment of the patrons of the library and suit to the changing academic needs leading thereby, to fulfill the objectives of the organization. Moreover, extraordinary concentration to the procurement of electronic resources must be initiated for the high-priority subject areas apart from the other subjects for sustainable research. Hence, to satisfy the ultimate need of the users, the library requires adopting certain parameters such as adequate budget allocation, technology support while considering procurement of e-resources.

Further, Information literacy forms the basis for lifelong learning which is common to all disciplines, to all learning environments, and to all levels of education (Mishra & Mishra, 2010,48-54). It has a practical implication among the library professionals including the users which, however, later is concerned with access while former is concerned with the selection, acquiring, expertise in management, the creation of database, analysis and other technical processing of the resources for instant delivery of information. The library professionals are generally tuned to the users need and conversant with the technology including information sources that can better assess the mechanism for acquiring the e-resources along with legal

implications. According to Doyle (1992), information literate person in 21st century need to,

- ⇒ Recognize the need for information;
- ⇒ Locate required information;
- ⇒ Formulate questions based on information needs;
- ⇒ Identify potential sources of information;
- ⇒ Develop successful search strategies;
- ⇒ Access sources of information including computer-based and other technologies
- ⇒ Evaluate information no matter what the source;
- ⇒ Organize information for practical application;
- ⇒ Integrate new information into an existing body of knowledge;
- ⇒ Use information in critical thinking and problem solving; and
- ⇒ Use information ethically and legally.

Hence, in the light of above discussions, the library professionals require developing competencies and skills for the sound collection of e-resources including its proper management for use by the patrons and preservation. Further, the library professionals need to gain the other dimensions of information literacy for the effective functioning of e-resources in the library.

Further, it requires corroboration with regular training among the library professionals increases the efficiency in managing the e-resources and it is essential to tune to the new technology including change of software. Equally orientation program is also necessary for the users so as to make the best use of the library resources both print and electronic uninterruptedly.

It is also equally important that the users are also required to develop the skill to retrieve the documents both through online and offline. Information literacy (IL) in such a scenario act as an embracing ability to define a problem, find information to solve the problem, evaluate information and use it effectively. Information literacy as a way to more efficient access, evaluation and use of information should be taken into account and used for improving information for the end-users. It is a set of information and knowledge of skill that enable individuals to recognize when information is needed and when it is not, how to locate, evaluate, integrate, use and effectively communicate information in an ethical way. In short information, literacy means knowing information about information. Information literacy refers to a constellation of skills revolving around information research and use. Hence, the library professionals should acquire the skills to access and use efficiently and effectively the myriad sources of information, information and communications technology, search techniques and knowledge of e-resources so as to satisfy successfully the various complex information needs of the users. Information Literacy is defined as the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand ([http:// www.infolit.org/](http://www.infolit.org/) (22.6.17)).

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(accessed on 19th July 2016)

Appendix-I

List of Journals subscribed for 2017-2018, MZU Central Library

Sl.No	Title of the Periodical
SCHOOL OF LIFE SCIENCES	
Department of Zoology	
1	International Journal of Radiation Oncology, Biology, Physics
2	Radiation Research
3	Journal of Bombay Natural History Society
Department of Botany	
4	PhysiologiaPlantarum
5	Plant Pathology
6	Photochemistry & Photobiology
Department of Biotechnology	
7	Molecular Phylogenetic and the Evolution
8	Indian Journal of Experimental Biology
9	Trends in Biotechnology
SCHOOL OF PHYSICAL SCIENCES	
Department of Physics	
10	Indian Journal of Pure and Applied Physics
11	PRAMANA: Journal of Physics
12	Progress in Particle & Nuclear Physics
13	Surface Science Report
Department of Chemistry	
14	Resonance
15	Current Science
16	Indian Journal of Chemistry Part A
17	Indian Journal of Chemistry Part B
18	Proceedings Mathematical Sciences
19	Environmental Technology
20	Environmental Science & Pollution Research
Department of Mathematics	
21	Bulletin of the American Mathematical Society
22	Dynamics of Partial Differential Equations
23	Indian Journal of Pure and Applied Mathematics
24	Non Linear Analysis: Real World Applications
Department of Common Journals for University	
25	Nature
26	Science
27	Scientific American
28	New scientist
29	Current Contents in Agriculture & Biological Sciences
30	Current Contents in Social and Behavioural Sciences
31	Current Contents in Arts & Humanities
SCHOOL OF EARTH SCIENCES & NRM	
Department of Forestry	
32	Ecology

33	Journal of Tropical Forest Science
34	Journal of Forestry
35	Tropical Ecology
36	Indian Forester
37	Forest Trees & Livelihoods
38	Indian Journal of Ecology
39	Indian Journal of Agricultural Research
40	Indian Journal of Forestry
41	Indian Journal of Soil Conservation
Department of Environmental Science	
42	Chemosphere
43	Indian Journal of Traditional Knowledge
44	Ecology Environment & Conservation
45	Pollution Research
46	Conservation & Society
Department of Geology	
47	Gondwana Research
48	Journal of Metamorphic geology
49	Journal of Petrology
50	Journal of Asian Earth Sciences
Department of Horticulture, Aromatic & Medicinal Plants (HAMP)	
51	Bioscience
52	Conservation biology (incl. conservation)
53	Journal of Herbs Spices & Medicinal Plants
54	Indian horticulture
55	Indian Journal of Agricultural Sciences
Department of Geography	
56	Annals of Assn. of An Geographers Incl. Professional Geographers
57	Antipode
58	Geographical Journal
59	Geographical Review
60	Trans of inst Indian Geographers FORM: inst of Indian Geographers
61	Indian Journal of Regional Science (India & SAARC)
62	Spatial Economic Analysis
63	Trans of Inst of British Geographers
Department of Extension Education & Rural Development	
64	Community development Journal
SCHOOL OF ENGINEERING & TECHNOLOGY	
Department of Electronic Engineering	
65	IETE Journal of Research & IETE Tech Review
66	Electronic design
67	Asia Electronics Industry
68	Journal of Inst of Telecommunications professionals
69	Journal of Inst of Engineers-B (EE,ETE& Computer Engg.)
Department of Information Technology	
70	Enterprise Information Systems

71	Journal of Machine Learning Research
72	Foundations & Trends in Communications & Info. Theory
Department of Computer Engineering	
73	International Journal of Machine Learning and Cybernetics
74	IOSR Journal of Computer Engineering
75	Journal of Computer Engineering & Technology
76	Design Automation for Embedded Systems
77	Indian Journal of Information Technology
Department of Electrical Engineering	
78	IEEJ Trans on Electrical & Electronic Engineering
79	Canadian Journal of Electrical & Computer Engineering
Department of Common Journals for school of Engineering & Technology	
80	IEEE, ASPP Online
Department of Civil Engineering	
81	Indian Geotechnical Journal
82	Journal of Transportation Engineering
83	Journal of Environmental Engineering
84	ACI Structural Journal
SCHOOL OF FINE ARTS, ARCHITECTURE AND FASHION TECHNOLOGY	
Department of Planning and Architecture	
85	Journal of Architectural Education
86	Journal of Architectural Conservation
87	Journal of Urban Design
88	Architectural Design
89	Journal of Design History
90	Journal of Green Building
91	Journal of Architecture and Urbanism
SCHOOL OF ECONOMICS MANAGEMENT & INFORMATION SCIENCE	
Department of Economics	
92	Economic Affairs
93	Economica
94	Review of Economic Studies
95	AM Economic Review (<i>JEL + JEP + AE & MACRO + EP & MICRO ECO</i>)
96	Asian Economic Review
97	Indian Journal of Economics
98	Journal of Rural Development
99	Political Economy Journal of India
100	Indian Journal of Gender Studies
101	Economic Journal (Includes Econometrics Journal)
102	Cambridge Journal of Economics
Department of Commerce	
103	Harvard Business Review
104	California Management Review
105	Financial Markets Institutions & Instruments
106	Effective Executive
107	IUP Journal of Knowledge Management
108	Southern Economist

109	IUP Journal of Supply Chain Management
110	IUP Journal of Accounting Research and Audit Practice
111	Case Folio
112	Chartered Accountant
113	Management Accountant
114	IUP Journal of Bank Management
115	IUP Journal of Brand Management
116	IUP Journal of Business Strategy
117	IUP Journal of Management Research
118	IUP Journal of Entrepreneurship Development
119	IUP Journal of Marketing Management
120	Asian Journal of Management Cases
121	SEDME Journal
122	PRAJNAN
123	Management Review
124	VIKALPA (Academic)
125	Indian Accounting Review
126	Journal of Institution of Public Enterprises
127	Finance India
128	Indian Journal of Accounting
129	Journal of Entrepreneurship
Department of Management	
130	Academy of Management Review
131	SLOAN Management Review
132	Asia Pacific Journal of Human Resources
133	Global Business Review
134	Journal of Management
135	Productivity
136	Indian Management
137	India Journal of Marketing
138	Indian Journal of Training and Development
139	Vision
140	International review of Business and Finance
Department of Library & Information Science	
141	Annals of Library & Information Studies
142	SRELS Journal of Information Management
143	Journal of Librarianship & Information Science
144	Library Trends
145	Library Technology Reports
146	Library & Information Science Research
147	Library Herald
Department of Mass Communication	
148	Media Asia
149	Global Media & Communication
150	New Media & Society
151	Journal of International Communication
152	Media Culture & Society

SCHOOL OF SOCIAL SCIENCES	
Department of Psychology	
153	Journal of Cross Cultural Psychology
154	Journal of Counselling Psychology
155	Journal of Abnormal psychology
156	Journal of Social Psychology
Department of Social Work	
157	British Journal of Social Work
158	Journal of Social Work
159	Social Work Research
160	Social Work
161	Social Action
162	Social Change
163	Man & Development
164	Sociological Bulletin
165	Indian Journal of Social Development
166	International Journal of Rural Management
167	Journal of Health Management
168	Social Welfare
169	Kurukshetra
170	Social Work Abstracts
Department of Public Administration	
171	Journal of South Asian Development
172	World Focus
173	International Review of Administrative Sciences
174	Progress In Development Studies
175	Journal of developing societies
176	Economic and Political Weekly
177	Indian Journal of Public Administration
178	Gandhi Marg
179	Documentation in Public Administration
180	Urban Affairs Review
Department of Political Science	
181	Journal of International Affairs
182	Comparative Political Studies
183	Foreign Policy
184	Foreign Affairs
185	India Quarterly
186	Indian Journal of Political Science
187	Strategic Analysis
188	World Affairs
189	Social Scientist
190	American Journal of Political Science
Department of History & Ethnography	
191	Antiquity
192	Bulletin of School of Oriental & African Studies
193	Current History

194	Ethnohistory
195	Journal of Social History
196	Oral History
197	Past & Present
198	American Anthropologist
199	Studies in History
200	Eastern Anthropologist
201	Indian Historical Review
202	Indian Economic & Social History Review
203	Medieval History Journal
Department of Sociology	
204	Contemporary Education Dialogue
205	Contribution to Indian Sociology
206	History & Sociology of South Asia
207	Journal of Education for Sustainable Development
208	Science Technology & Society
209	Society & Culture in South Asia
210	International Sociology
211	Journal of Southeast Asian Studies
212	ActaSociologica
213	American Sociological Review
214	Indian Journal of Industrial Relations
SCHOOL OF EDUCATION & HUMANITIES	
Department of English	
215	Antioch Review
216	Kenyon Review
217	Essays in Criticism
218	Critical Quarterly
219	Comparative Literature Studies
220	Critique: Studies in Contemporary Fiction
221	TDR/drama Review
222	Journal of Commonwealth Literature
223	Modern Fiction Studies
224	Pmla Includes Profession
225	Studies in English Literature
226	Studies in Novel
227	World Literature Today
Department of Mizo	
228	Indian Literature
Department of Education	
229	AM Educational Research Journal
230	Educational Review
231	Journal of Educational Psychology
232	Journal of Educational Research
233	Journal of Educational Planning & Administration
234	Journal of Higher Education
235	Review of Educational Research

Department of Education (M.Ed)	
236	Asia Pacific Journal of Teacher Education
237	Teaching & Teacher Education
Department of Hindi	
238	Hans
239	Tadbhava
240	Bahuvachan
241	Anuvad
242	Sampreshan
GENERAL PERIODICALS	
Popular Magazines	
243	National Geographic
244	Discover
245	Forbes Asia
246	Readers Digest
247	Voice & Data
248	University News
249	Time
250	Dalal Street Investment Journal
251	Business Today
252	Caravan
253	PC Quest
254	Timeout
255	Electronics for You
256	Electronics World
C.D Trade Centre	
257	Frontline
258	India Today
259	Outlook
260	Sportstar
261	Competition Success Review
262	Competition Refresher
263	Civil Service Chronicle
264	PratiyogitaKiran
265	Contemporary Issue
266	Competition Wizard
267	Digit
268	General Knowledge Refresher
269	General Knowledge Today
270	PratiyogitaDarpan
271	Overdrive
272	Eastern Panorama
273	Chronicle Year Book
274	Competition Success Year Book 2017
275	Civil Service Chronicle 2017
276	Manorama Year Book 2017

Source: Field Survey and the Central Library

Appendix-II

List of Peer Review and Indian Journals subscribed for 2017, NEHU Central Library

Sl.No	SCHOOL OF LIFE SCIENCES
Department of Bio-Chemistry	
1	Biochemistry and Cell Biology
2	Antioxidant and Redox Signalling
3	International Journal of Cancer
4	Journal of Molecular Cell Biology
Department of Bio-Technology and Bio-Informatics	
5	Nature Review Genetics
Department of Botany	
6	Applied and Environmental Microbiology
7	Biotropica
8	Botany
9	Genome
10	Soil Biology and Biochemistry
11	Plant Molecular Biology
12	Journal of Biosciences
13	Phytomorphology
14	IJABR(International Journal of Advanced Biological Research)
15	IJSN (International Journal of Science and Nature)
16	Indian Forester
17	Indian Journal of Forestry
18	Indian Journal of Genetics and Plant Breeding
19	Indian Journal of Plant Physiology
Department of Zoology	
20	Bulletin of Environmental Contamination & Toxicology
21	Canadian Journal of Fisheries and Aquatic Sciences
22	Physiology
23	Fundamental and Applied Limnology
24	Journal of Applied Genetics
25	Apidologie
26	Applied Entomology and Zoology
27	Australian Journal of Zoology
28	Zoology and Ecology
29	Journal of Endocrinology
30	Physiological & Biological Zoology
31	Trends in Genetics
32	Indian Journal of Entomology
33	Indian Journal of Experimental Biology
SCHOOL OF PHYSICAL SCIENCES	
Department of Chemistry	
34	Chemistry: An Asian Journal (small)(Online only)
35	Catalysis Communications
36	Journal of Heterocyclic Chemistry

37	Synlett
38	Synthesis
39	Indian Journal of Chemistry (Section: A & B)
40	Current Science
41	Journal of Chemical Sciences
42	Resonance
Department of Mathematics	
43	American Mathematical Monthly
44	Bulletin of American Mathematical Society Journal
45	Journal of Differential Geometry
46	Journal of the American Mathematical Society
47	Proceedings of the American Mathematical Society
48	Transactions of American Mathematical Society
49	Transactions of Moscow Mathematical Society
50	Illinois Journal of Mathematics
51	Acta Mathematica
52	Journal of Symplectic Geometry
53	Topology Proceedings
54	Algebraic and Geometric Topology
55	Annals of Mathematics
56	Asian Journal of Mathematics
57	Canadian Mathematical Bulletin
58	Journal of the European Mathematical Society
Department of Physics	
59	Advances in Physics
60	Annals of Nuclear Energy
61	Nuclear Physics News (online Accessible)
62	International Journal of Physics & Applications
63	Physics Letters B
64	Pramana
65	Indian Journal of Physics
66	Indian Journal of Pure and Applied Physics
67	International Journal of Pure and Applied Physics
Department of Statistics	
68	Australian & New Zealand Journal of Statistics
69	American Statistician
70	Metron
71	Calcutta Statistical Association Bulletin
72	Journal of Indian Society of Agricultural Statistics
73	Journal of Probability and Statistics
74	Journal of Indian Statistical Association
75	Aligarh Journal of Statistics
SCHOOL OF TECHNOLOGY	
Department of Architecture	
76	Aperture
77	Japan Architecture
78	Topos

79	Wired
80	Architecture + Design
81	Home Trends
82	Journal of Landscape Architecture
83	Journal of the Indian Institute of Architects
84	Lighting India
85	Marg Magazine
86	New Buildings Materials & Construction World
87	Seminar
Department of Bio-Medical Engineering	
88	ActaBiomaterialia
Department of Energy Engineering	
89	International Journal of Sustainable Energy (formerly known as International Journal of Solar Energy)
Department of Nano-Technology	
90	Journal of Nanoparticles Research
SCHOOL OF SOCIAL SCIENCES	
Department of Creative & Cultural Studies	
91	Critical Art
92	Journal of Folklore Research
93	Journal of American Folklore
94	Art India
Department of History	
95	Antiquity
96	Asian Perspectives
97	Current World Archaeology
98	History & Theory
99	Oxford Journal of Islamic Studies
100	Indian Economic & Social History Review
101	Indian Historical Review
102	Studies in History
103	Quarterly Review of Historical Studies
104	Dialogue
Department of Law	
105	All India Reporter
106	Current Central Legislation
107	Down to Earth
108	Indian Bar Review
109	Indian Journal of Human Rights & the Law
110	Indian Journal of international Law
111	Corporate Law Adviser
112	Criminal Law Journal
Department of Political Science	
113	South East Asia Research
114	Human Rights Quarterly
115	Daedalus
116	American Political Science Review

117	International Organization
118	Review of Politics
119	International Studies
120	Indian Journal of Political Science
121	Indian Journal of Public Administration
122	Strategic Analysis
123	Studies in Indian Politics
Department of Sociology	
124	International Journal of Comparative Sociology
125	International Sociology
SCHOOL OF ECONOMICS, MANAGEMENT & INFORMATION SCIENCES	
Department of Commerce	
126	Journal of Management
127	Leadership
128	Accounting Review
129	MIT Sloan Management Review
130	Asian journal of management cases
131	Global Business Review
132	Journal of Emerging Market Finance
133	Journal of Entrepreneurship
134	Vikalpa (IIMA)
135	Vision- The Journal of Business Perspective
136	Management Accountant
Department of economics	
137	American Economic Review (with J.E.L & J.E.P. + Paper & proc.+ AE + EP + Macro + Micro)
138	American Journal of Agricultural Economics + Applied Eco. Persp& Policy(Acad)
139	Review of Economics and Statistics
Department of Journalism & Mass Communication	
140	Journal of Popular Film & Television
141	International Journal of Communication
142	Media Watch
Department of Library & Information Science	
143	IFLA Journal
144	Journal of Information Sciences
145	Journal of Librarianship and Information Science
146	Indian Journal of Information Library and Society
147	SRELS Journal of Information Management
148	Annals of Library & Information Studies
149	IASLIC Bulletin
150	Library Herald
Department of Tourism & Hotel Management	
151	Cornell Hospitality Quarterly
152	Express Hospitality (food and beverages)
153	National Geographic Traveller
SCHOOL OF HUMAN AND ENVIRONMENTAL SCIENCES	
Department of Anthropology	

154	Current Anthropology(very large) (Print+Online)
155	Anthropology Today
156	Journal of the Indian Anthropological Society
157	Man in India
Department of Environmental Studies	
158	Environmental Science and Policy for Sustainable Development
159	Asian Journal of Water, Environment and Pollution
160	Environmental Pollution Control Journal
161	Indian Journal of Environmental Protection
162	Indian Journal of Environmental Science
163	Indian Journal of Traditional Knowledge
164	Indian Journal of Ecology
165	Indian Journal of Soil Conservation
Department of Geography	
166	Economic Geography
167	Geographical Journal
168	Antipode
169	Geographical Review
170	Indian Journal of Regional Science
SCHOOL OF HUMANITIES	
Department of English	
171	American Literature
172	MELUS
173	Diacritics
174	Essays in Criticism
175	PMLA
176	Man and society
177	Literary Criterion
Department of Hindi	
178	Bahuvachan
179	Hans
180	India Today (Hindi)
181	Kadambini
182	NayaGyanoday
183	PragatisheelVasudha
184	PustakVarta
185	Samayantar
186	ShodhDisha
187	Vagarth
188	Akar
189	AlochanaTroiMasikPatrika
190	Anuhad
191	Anuvad
192	Pahal
193	SamakalinBharatiyaSahitya
194	Samyantar
195	Tadbhav

196	Vak
197	VartmanSahitya
Department of Khasi	
198	KaSnengKhasi
Department of Linguistics	
199	Linguistics of the Tibeto-Burman Area (LTBA)
200	Linguistics Inquiry
201	Indian Journal of Applied Linguistics
202	Indian Linguistics
203	International Journal of Translation
Department of Philosophy	
204	American Journal of Theology and Philosophy
205	American Philosophical Quarterly
206	Culture and Dialogue
207	Mind
208	Philosophical Review
SCHOOL OF EDUCATION	
Department of Adult & Continuing Education	
209	Adult Education Quarterly
210	Journal of Special Education
211	Indian Journal of Gender Studies
212	Indian Journal of Adult Education
213	Indian Journal of Gerontology
214	Journal of Rural Development
215	Kurukshetra- A Journal of Rural Development
216	Indian Journal of Extension Education
217	International Journal of Psychology and Counselling
218	Journal of Social & Economic Policy
219	Journal of Human Values
Department of Education	
220	Journal of Teacher Education
221	Review of Educational Research
222	Harvard Educational Review
223	Journal of Educational Planning and Administration
224	Journal of educational Research and Extension
225	Journal of the Indian Academy of Applied Psychology
226	Indian Psychological Review
Centre for Science Education	
227	School Science Review
General Periodicals	
228	Contribution to Indian Sociology
229	Social Change
230	Indian Journal of Agricultural Economics
231	Sociological Bulletin
232	Indian Economic Review
233	News on North East

Source: <http://www.nehu.ac.in/library/journals2017.pdf>

Mr. Vanlalneia
Ph.D. Research Scholar
Dept. of Lib. & Inf. Science
Mizoram University, Aizawl

Questionnaire

on

**USAGE OF LIBRARY RESOURCES IN CENTRAL UNIVERSITIES OF
NORTH-EAST INDIA: A COMPARATIVE STUDY OF MIZORAM
UNIVERSITY AND NORTH EASTERN HILL UNIVERSITY**

Sir/Madam,

I am pursuing Ph.D Course in the Department of Library & Information Science, Mizoram University under the supervision of Dr. R.N. Mishra, Associate Professor. You are kindly requested to fill-up questionnaire for the said purpose. Data will be used for the research purpose.

Thanking you

The respondent is requested to put (✓) mark in the space provided in each question or provide information wherever necessary.

1. Name of the Institution: _____
Name of the Library: _____
2. Year of establishment: _____
3. Name of the Librarian: _____
or Library in-charge
4. Qualification of the Librarian: _____
5. e-Mail of the Library/ Website, if any _____
6. **LIBRARY STAFF**
Professional _____ Semi Professional _____
Non-Professional _____ Temporary _____
Contractual _____
Other than the above category _____

LIBRARY RESOURCES

7. Total collections/ resources of the Library (Pl. provide the addition data)

Sl.No	Description	Total	Addition	Addition	Addition	Addition
		2013	2014	2015	2016	2017
1	Books					
2	Back volumes					
3	National Journals					
4	Int. Journals					
5	Back vol. Journals					
6	National Journals					
7	Int. Journals					
8	Theses					
9	Reference Tools					
10	Micro film / Micro fische					
11	CD-ROM					
12	DVD					
13	E-Books					
14	Databases National					
15	Databases International					
16	Any other such as Rare, Grey literature etc.					

8. No. of Journals procured for different Departments.

S.No.	Department	National Journal	International Journal	Total
1				
2				
3				
4				
5				
6				

7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				

29				
30				

9. Total number of Books procured for different Departments

S.No.	Department	Indian	Foreign	Total
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

LIBRARY BUILDING

10. Does the Library provide adequate space for various types of services to the clientele? Yes No
11. Does the Library provide enough number of seats for the faculties/ researchers/ students? Yes No
12. Do you provide Research Cubical/ Research Carrels? Yes No
13. Please mention the classification scheme followed in the Library.
- a. DDC; Please mention the edition _____
- b. CC; Please mention the edition _____
- c. UDC. Please mention the edition _____
14. Physical form of catalogue adopted.
- a. Card;
- b. Ledger.

15. Catalogue code used in the library?

- a. CCC;
- b. AACR-1;
- c. AACR-2;
- d. Any other (Please mention) _____

READER'S SERVICE

16. Total working hours of the library?

- a. Week days _____ Hours (Time From _____ to _____)
- b. Saturday _____ Hours (Time From _____ to _____)
- c. Sunday _____ Hours (Time From _____ to _____)

17. Does the library remain open during holidays and vacation? Yes No

18. If yes, mention the closing period of the Library.

- a. During Vacation From _____ to _____
- b. Any other (please mention) From _____ to _____

19. Charging system followed.

- a. Browne;
- b. Newark;
- c. Two card system of Ranganathan
- d. Any other system (Please specify) _____

20. Do you provide Documentation Service? Yes No

21. Do you provide any bibliographic/ Current Content Service? Yes No

22. Status of computerisation of the library. Partial Total

If partial, which section(s) of the library are computerized?

Acquisition

Cataloguing

Circulation

Serials control

Back volume

Text Book

Any other (Please mention) _____

23. Which library software do you use in the library?

- Libsys
- CDS/ISIS / WINISIS
- SLIM++
- SOUL
- TLMS

Any other (Please specify) _____

24. How do you spread out your institute's campus LAN?

- All Departments
- Central Library
- All Labs/Centres/Units
- Entire campus including hostels
- Individual rooms of all students
- All Faculties and officers residences
- Any other

25. Are your campus network and library network connected to internet?

Yes No

If yes, please specify your Internet Service Provider (ISP)

- ERNET(ex: ac.in, edu.in, res.in)
- VSNL
- NICNET
- Any other

26. Type of internet connection is being used in the library, departments, students' halls and residences.

Library

- Dial-up
- Leased
- Radio link
- Cable network
- V-sat

- Any other

Department

- Dial-up

- Leased

- Radio link

- Cable network

- V-sat

- Any other

Student's halls/rooms

- Dial-up

- Leased

- Radio link

- Cable network

- V-sat

- Any other

Residence

- Dial-up

- Leased

- Radio link

- Cable network

- V-sat

Any other

27. Is the library a member of any library networks, and any consortium in India?

Yes No

If yes, please state the following.

Library Networks

- DELNET
- CALIBNET
- BONET

- MALIBNET
- INFLIBNET
- Any other _____

Consortium:

- INDEST
- CSIR
- UGC-Info E-journals
- Any other _____

28. What are all the e-resources (*full-text and bibliographic databases*) subscribed for you by INDEST consortium

Full-text databases:

- Science Direct
- ACM Digital Library
- IEEE Online
- Springer link
- Proquest
- ASME
- ASCE
- Nature
- ASTM journals and Standards
- Standards (CD/intranet)
- J-Gate
- JCCC
- Any other _____

29 Does your library subscribe to any e-databases on its own budget apart from those paid by INDEST consortium?

Yes No

If yes, please state the following.

- ASTM journals and standards
- Engineering village2 (Compendex& INSPEC)

- Web of Science
- Any other _____

30. What are the Network Services (NS) provided by the library?

Services	Yes	No
▪ Electronic Data Interchange (EDI)	<input type="checkbox"/>	<input type="checkbox"/>
▪ Automated Cataloguing	<input type="checkbox"/>	<input type="checkbox"/>
▪ Automated Circulation	<input type="checkbox"/>	<input type="checkbox"/>
▪ Virtual Reference	<input type="checkbox"/>	<input type="checkbox"/>
▪ E-CAS	<input type="checkbox"/>	<input type="checkbox"/>
▪ Online Databases	<input type="checkbox"/>	<input type="checkbox"/>
▪ CD-ROM/DVD	<input type="checkbox"/>	<input type="checkbox"/>
▪ Electronic Thesis and Dissertations (ETD)	<input type="checkbox"/>	<input type="checkbox"/>
▪ Multimedia Databases (<i>audio and video etc.</i>)	<input type="checkbox"/>	<input type="checkbox"/>
▪ Standards (<i>CD-ROM or intranet version</i>)	<input type="checkbox"/>	<input type="checkbox"/>
▪ Internet facilities	<input type="checkbox"/>	<input type="checkbox"/>
▪ E-mail	<input type="checkbox"/>	<input type="checkbox"/>
▪ Video and Teleconferencing	<input type="checkbox"/>	<input type="checkbox"/>
▪ Facsimile Transmission (Fax)	<input type="checkbox"/>	<input type="checkbox"/>
▪ Videotext or Teletext	<input type="checkbox"/>	<input type="checkbox"/>
▪ E-learning	<input type="checkbox"/>	<input type="checkbox"/>
▪ E-publishing	<input type="checkbox"/>	<input type="checkbox"/>
▪ Web-based document delivery	<input type="checkbox"/>	<input type="checkbox"/>
▪ Support	<input type="checkbox"/>	<input type="checkbox"/>
▪ Any other services _____		

Note: If the answer is 'No' the subsequent related questions need not be answered.

31. If your library provides Electronic Data Interchange (EDI) services, please tick mark the area(s) covered.

- Ordering of library materials
- Budgeting
- Any other services _____

32. If your library provides automated library catalogue services, please tick mark the type of service(s)?

- OPAC
- WebOPAC
- Both
- Any other services _____

33. Does the Library provide the following services?

- Current Content
- E-SDI
- Alert
- New Arrivals
- News Paper Clipping
- Any other services _____

34. If your library provides online information access, please tick mark the type of materials provided access.

- E-books
- E-journals
- Abstracting databases
- Open access journals (free)
- Any other services _____

35. Does the library provides CD-ROM services, please tick mark the type of service(s).

- Standalone
- Networked
- Both
- Any other services _____

36. If your library provides communication network services, please tick mark the type of services available

- e-mail
- Telephone
- Facsimile (fax)
- Voice mail
- Videotext
- Teletext

Any other services _____

37. Does the library provides any support services, please tick mark the type of assistance in accessing electronic resources.

- User orientation/education
 - User Training
 - Staff Training
 - Any other means
-

38. Please provide the infrastructure facilities available in the library

No. of computers	<input type="text"/>	No. of photocopies	<input type="text"/>
No. of Fax machine	<input type="text"/>	No. of Scanners	<input type="text"/>
No. of telephones	<input type="text"/>	No. of Barcode readers	<input type="text"/>
No. of Audio-Visuals	<input type="text"/>	No. of VCP/VC	<input type="text"/>
No. of Printers	<input type="text"/>	No. of Projectors	<input type="text"/>

39. Do you provide security to protect the library resources?

Yes No

If yes, mention what type of security

Signature of the Librarian

Mr. Vanlalneia
Ph.D. Research Scholar
Dept. of Lib. & Inf. Science
Mizoram University, Aizawl

Questionnaire

on

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The respondent is requested to put (✓) mark in the space provided in each question or provide information wherever necessary.

1. Name: _____
2. Sex Male Female
3. Address/Contact/email/etc: _____

4. Name of the Institute: _____
Department: _____
5. Designation Research Scholar
 Guest /Part-Time Lecturer
 Assistant Professor
 Associate Professor
 Professor
6. Frequency of Library visit Weekly
 Twice in a month
 Monthly
 Once in a year
 Never

7. Purpose of library visit
- Reading books
 - Reading Periodical/ Newspapers
 - Borrow books
 - Access other library resources
 - Indolent
 - Inditing
 - Writing a book
 - Preparing a lecture note
 - Update knowledge
 - Starting a project
 - Browse internet
 - Others (Pl. specify)
-
-

8. Pl. mention the use of information from the following sources? (Measurement has been done under 10 point scale)

(Please use the following code i.e,)

- a. Heavily used = 4, b. Frequently used = 3, c. Neutrally used = 2
d. Occasionally used = 1, e. Never used = 0.

- _____ Text Books
- _____ Electronics documents (Internet, TV, Radio)
- _____ Periodicals, Magazines , Newspapers
- _____ Conference/ Seminars Proceedings
- _____ Thesis/Dissertations
- _____ Abstracts/Indexes
- _____ Government documents
- _____ Statistical publications
- _____ Reference Books (Encyclopedias, Yearbooks, Reports, etc.)

9. What is your most convenient time to visit the library?

- Before 10 am
- Between 10:00am to 2:00pm
- Between 2:00 pm to 7:00 pm
- After 7:00 pm

10. Does the library display new arrival of documents? Yes No

11. Mention the type of access system you prefer to use in the library.

Open system

i) Internet

ii) Intranet

Close system

12. Whether accessing the Central Library from the Department? Yes No

13. Type of information you need: Current

Retrospective

Others (Please specify)

14. Searching for Preferred Document : Textbook

Periodicals

Reference Tools

Conference-Seminar proceedings

Patents

Standards

Reviews

Newsletters

Index

Abstracts

Bibliographies

Micrographics

Theses/Dissertation

Research Reports

Any other (Please Specify)

15. Which information sources do you prefer to use?

Printed

Online

CD-ROM

Audio-Video Tapes

Others (Please specify)

16. Do you have access to internet? Yes No
 If yes, state the purpose of accessing the internet:
 e-Book
 e-Journals
 e-Patents
 e-Reports
 e-Proceedings
 Databases
 any other (Please specify)
-
17. Are you satisfied with the library services? Yes No
 If no, please specify the reason _____
 If yes, please rate your satisfaction. Excellent Good
 Moderate No comment
18. Which e-resources you like most to use?
 e-journal
 e-book
 e-content
 e-report
 e-Theses/Dissertations
 Others (Please specify)
-
19. Are you using the UGC Infonet Digital Libaray Consortium and INDEST Consortium?
 Yes No
20. Which place you used or prefer to use to access e-resources?
 Library
 Computer Center
 Department
 On Campus Location (wifi)
 Off Campus Location

21. Do you have a Department Library? Yes No
22. Does the central library provide required e-information service? Yes No
23. Do you find any difficulty in locating information/documents? Yes No

If yes, please state the reason.

24. Do you find any difficulty in using the library software? Yes No

If yes, please state the reason _____

25. Do you use to seek help of any library staff in locating your required information or using a particular service? Yes No

26. Does your library provide access to electronic form of information?

Yes No

If yes, please tick mark what type of e-resources are available in the library from the following:

- | | |
|--|-----------------------------------|
| <input type="checkbox"/> e-journal | <input type="checkbox"/> e-book |
| <input type="checkbox"/> e-content | <input type="checkbox"/> e-report |
| <input type="checkbox"/> e-thesis/dissertation | <input type="checkbox"/> others |

27. Any other information and suggestion you would like to share for development of the library:

Signature & Date

DECLARATION

MIZORAM UNIVERSITY

2018

I, Vanlalneia, do hereby declare that the subject matter of this thesis entitled **“Usage of Library Resources in Central Universities of North East India: A Comparative Study of Mizoram University and North Eastern Hill University”** is the record of work done by me, that the contents of this thesis did not form the basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the Mizoram University for the degree of Doctor of Philosophy in Library and Information Science.

Aizawl, Mizoram

Dated: July 2018

(VANLALNEIA)

Research Scholar

Dept. of Library & Information Science

Mizoram University

(Head)

(Supervisor)



MIZORAM UNIVERSITY

(A Central University accredited 'A' Grade by NAAC in 2014)

Department of Library & Information Science

Aizawl, Mizoram. PIN - 796 004

PO Box 190

Tele-Fax: (0389) 2331608 E mails: semis.dlis@gmail.com

CERTIFICATE

This is to certify that the thesis entitled *“Usage of Library Resources in Central Universities of North East India: A Comparative Study of Mizoram University and North Eastern Hill University”* submitted by *Vanlalneia* for the award of *Doctor of Philosophy* in *Library and Information Science* is carried out under my guidance and incorporates the students bonafide research and this has not been submitted for award of any degree in this or any other university or institute of learning.

Date: July, 2018

Place: Aizawl

(Prof. R.N. Mishra)

Supervisor

(Head)

ACKNOWLEDGEMENT

Dear **Lord Almighty**, I thank you for granting me physical and mental health and the ability to bear with all the hard times to complete my research work which I have been engaging for many past years. I thank my supervisor **Professor R.N. Mishra** for guiding me and encouraging me throughout my studies, without his commitment, guidance and cooperation, it is impossible for me to complete my thesis.

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A special thanks to **Dr. Lalhriatpuii**, Associate Professor, Department of Economics, Mizoram University, who cheer me up without ends to stand my feet on a higher pedestal. Guiding me in a systematic and standard way to do a research and with all her tremendous assistance since my earlier stage of research work, I am able to go this far.

To all the research scholars and faculty of Mizoram University and North Eastern Hill University, I cannot thank them enough for their patience and sparing their valuable time in responding my questionnaire, without their responses, it will be impossible for me to do further studies, therefore I give lots of thanks to those who all responded to my questionnaire and I wish them great success in life too.

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LIST OF ABBREVIATION

CD	-	Compact Disc
CAS	-	Current Awareness Service
SDI	-	Selective Dissemination of Information
MZU	-	Mizoram University
NEHU	-	North Eastern Hill University
M.Phil	-	Master of Philosophy
Ph.D	-	Doctor of Philosophy
IGNOU	-	Indira Gandhi National Open University
OPAC	-	Online Public Access Catalogue
UGC	-	University Grant Commission
INFONET	-	Information Network
INFLIBNET	-	Information Library Network
RFID	-	Radio Frequency Identification
CCTV	-	Closed Circuit Television
LAN	-	Local Area Network
BIBLIOQUEST	-	Bibliography-on-Request
CVS	-	Citation Verification Service
DSS	-	Database Search Service
DDS	-	Document Delivery Service
QD	-	Questionnaire Distributed
QR	-	Questionnaire Received
RS	-	Research Scholar
F	-	Faculties
TQD	-	Total Number of Questionnaires Distributed
TQR	-	Total Number of Questionnaires Received
E	-	Electronic
ETD	-	Electronic Theses and Dissertations
SE	-	Standard Error
SD	-	Standard Deviation
SV	-	Standard Variance

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In

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by

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ABSTRACT

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