

**USE AND USER'S SATISFACTION ON LIBRARY RESOURCES
AND SERVICES BY SCHOOL OF ENGINEERING AND
TECHNOLOGY, MIZORAM UNIVERSITY**

*A Dissertation submitted in partial fulfillment of the requirement for the
Degree of Master of Philosophy in Library and Information Science*

Submitted by

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M.Phil. Scholar

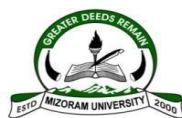
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DECLARATION

I, Mr. R.Laltlanzova, hereby declare that the subject matter of this dissertation entitled, “**Use and User’s Satisfaction on Library Resources and Services by School of Engineering and Technology, Mizoram University**” is the record of the work done by me, the content of this dissertation 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 dissertation has not been submitted by me for any research degree in any other University/ Institutes.

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

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CERTIFICATE

This is to certify that the dissertation entitled **“USE AND USER’S SATISFACTION ON LIBRARY RESOURCES AND SERVICES BY SCHOOL OF ENGINEERING AND TECHNOLOGY, MIZORAM UNIVERSITY”** submitted by **Mr. R.Laltlanzova** for the award of the degree of **Master of Philosophy in Library and Information Science** is carried out under my guidance and incorporate the student’s bonafide research. This is the candidate’s original work and is worthy of examination.

Aizawl, Mizoram

11th December, 2015

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ABBREVIATIONS AND ACRONYMS

AACR2	-	Anglo American Cataloguing Rules II
AC	-	Air Conditioner
AIDS	-	Acquired Immune Deficiency Syndrome
ARL	-	Association of Research Libraries
B.Tech	-	Bachelor of Technology
BC	-	Bliss bibliographic classification
CAS	-	Current Awareness Service
CBCS	-	Choice Based Credit System
CC	-	Colon Classification
CCTV	-	Closed Circuit Television
CD	-	Compact Disc
CDAC	-	Centre for Development of Advanced Computing
CD-ROM	-	Compact Disc Read-Only Memory
CE	-	Computer Engineering
CLC	-	Chinese Library Classification
CNG	-	Central News Agency
CSIR	-	Council of Scientific and Industrial Research
DBT	-	Direct Benefit Transfer
DDC	-	Dewey Decimal Classification
DST	-	Department of Science & Technology
E-Books	-	Electronic Books
ECE	-	Electronic and Communication Engineering
EE & RD	-	Extension Education and Rural Development
EE	-	Electrical Engineering
E-Journals	-	Electronic Journals
EM	-	Electro Magnetic
E-Resources	-	Electronic Resources
ESSO	-	Earth System Science Organization
FIST	-	Fund for Improvement of S&T Infrastructure

GPS	-	Global Positioning System
HAMP	-	Horticulture, Aromatic and Medicinal Plants
HBNI	-	HomiBhabha National Institute
HIV	-	Human Immunodeficiency Virus
HTML	-	Hyper Text Markup Language
I.M.B.A.	-	Integrated Programme in Master in Business Administration
ICAR	-	Indian Council of Agricultural Research
ICFRE	-	Indian Council of Forestry Research and Education
ICSSR	-	Indian Council of Social Science Research
ICT	-	Information and Communications Technology
IGCAR	-	Indira Gandhi Centre for Atomic Research
IITM	-	Indian Institute of Tropical Meteorology
ILMS	-	Integrated Library Management System
IMSc	-	Institute of Mathematical Sciences\
INFLIBNET	-	Information and Library Network
IP	-	Internet Protocol
IT	-	Information Technology
JPEG	-	Joint Photographic Experts Group
JRF	-	Junior Research Fellowship
KMC	-	Kasturba Medical College
KW	-	Kilowatt
LCC	-	Library of Congress Classification
M.B.A.	-	Master in Business Administration
M.Com.	-	Master of Commerce
M.Phil	-	Master of Philosophy
M.S.W.	-	Master of Social Work
MA	-	Master of Arts
MARC	-	Machine-Readable Cataloging
MLIS	-	Master of Library and Information Science
MoES	-	Ministry of Earth Sciences
MPEG	-	Motion Picture Experts Group

MS Excel	-	Microsoft Excel
MSc	-	Master of Science
NAAC	-	National Assessment and Accreditation Council
NEHU	-	North-Eastern Hill University
NET	-	National Eligibility Test
NGO	-	Non-Governmental Organization
NSS	-	National Service Scheme
OBC	-	Other Backward Class
ONGC	-	Oil and Natural Gas Corporation
OPAC	-	Online Public Access Catalog
PA	-	Professional Assistant
PC	-	Personal Computer
PDF	-	Portable Document Format
PG	-	Post Graduate
PhD	-	Doctor of Philosophy
PUC	-	Pachhunga University College
PV	-	Photovoltaics
R&D	-	Research and Development
RCC	-	Reinforced Cement Concrete
RFID	-	Radio Frequency Identification
SC	-	Schedule Caste
SEM	-	Structural Equation Modeling
SET	-	School of Engineering and Technology
SGML	-	Standard Generalized Markup Language
SLET	-	State Level Eligibility Test
SPA	-	Semi Professional Assistant
SPIC MACAY	-	Society for the Promotion of Indian Classical Music And Culture Amongst Youth
ST	-	Schedule Tribe
TLSS	-	Total Library Software System
UDC	-	Universal Decimal Classification

UG	-	Under Graduate
UGC	-	University Grants Commission
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
WiFi	-	Wireless Fidelity
WWW	-	World Wide Web
XML	-	Extensible Markup Language

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CHAPTER – 1

INTRODUCTION

1.1 Introduction

The academic libraries have been said as the heart of the institution for providing a place where the students and faculty can conduct their research and enhancing their knowledge. The academic Library sustains the university research and development and as the students can get the authenticated information source from the library to make quality education in a tremendous way. In every University, library act as the centre of the academic life. Library provides a lot of information among its users which resulted to knowledge and later to become a productive worker in the field. Information has become the major component in 21st century due to its pragmatic role in providing substantial resources. Information leads to transformation of the society and hence the present century is called as Information age or information society. Kemp(1976) said that “indeed, information has been described as fifth need of man ranking after air, water, food, and shelter”. So for the reason information can be considered inevitable in life cycle, it kept in touch with the human life.

The need of information has become increasing and much more valuable now in comparison with the entire history of humanity, and the amount is still growing tremendously due to the drastic change of technological innovations. For the academic perspectives University library is the epic centre of education and research for obtaining authentic information by the faculty, researchers, students and any users. A university library or any other library attached to an institution of higher education exists to support the goals of its parent organization. Since university libraries are an integral part of the higher education system, they should provide support services for the formal educational programs as well as providing facilities for research and for the generation of new knowledge. It is important for any information professional working in an academic or any other library to know the real needs of the user community. Understanding the needs of the target group will help to develop the diverse strategies that are appropriate to obtain effective results.

Any library should be users centric. Without any kind of users, library will be like a vehicle without driver. Anyira (2011) stated that the most crucial component of the 21st century library is the user. Every effort put into the establishment of a 21st century library is wasted if the library is not meant for use. According to Nwalo (2003) the library user is undisputedly, the most important person in any library setting. Aina(2004) deliberated that the library user is the focal point to the 21st century library and information services, as the library primarily exist to satisfy the user. This is the reason why the mission statement of any kinds of library

always reflects the determination of the other components of the library to render excellent services to library users. As such, a library is said to be productive if the library users are satisfied by getting their information needs from it.

User contentment is the main purpose of every service within the library and to make them satisfy with all the resources in every manner in consulting the resources. Anyira (2011) who is a library user? Nwalo (2003) defined him as anybody who visits the library with the purpose of exploiting its resources to satisfy his information need. The underlined word "visits" as used in the 21st century, include remote access to the library portal or website. Aina (2004) sees the term "user" to include all those who avail themselves of the services offered by a library. The term encompasses various terms such as patrons, clients, information users, information seekers, consumers, readers, etc. These terms can be used interchangeably, because they all apply to those seeking the services of a library.

Library services need to be modernized in such a way that new technology have emerged which the library should have the ability to handle the modern users. There is a saying that time is money. In order to solve the huge time consumption among the users on the services of library update is necessary in every field. Modernization of library services means adopting modern method, tools, techniques and gadgets in providing library services. Modernization should also bring the increase in efficiency, effectiveness speed and reduction in cost per unit service or any combination of them in library services.

1.2 Significance and Scope of the Study

Satisfying users' needs in the academic libraries is the primary objective of Libraries and librarians. Every year, new students come to the university with different needs and expectations. Furthermore, new technologies, databases, and more innovative systems for accessing information, have made the library more complicated and challenging for librarians and users alike. The abundance of resources available and the difficulty in being able to evaluate these resources also creates problems for users. The inability to easily identify the specific use of a library's services because of the new technologies, and the difficulty to access information sources can all contribute to user dissatisfaction among academic library users.

University libraries today are faced with challenges on several elements such as megabook stores, online information providers, e-learning and multimedia products, document delivery services, and other competitive sources of information that seem to be threatening the role of academic libraries. As a result, university libraries may have to adopt a more strategic direction in which the creation and delivery of service satisfactions for their users play an important role. Hence, there is a need for university libraries to understand the user needs and satisfy their information and research needs, therefore support in an ongoing learning activities.

The scope of study will be confined to the faculty, students and staff under the School of Engineering & Technology (SET). The four departments operating in the school are Computer Engineering (CE), Electrical Engineering (EE), Electronic and Communication Engineering (ECE), and Information Technology (IT). All the departments are actively engaged in research teaching. It is a regular feature for the departments to organize seminars, summer institutes, refresher courses and several field practical works.

1.3 Review of Literature

Academic library plays vital role for the academic development of the users in their education and research. Users may be of different categories having different demands to standardize their educational pursuits. The library's main objectives are to provide relevant information to the users in diverse field of knowledge. The scholar study and review various literatures that relates about this work to have been knowledge on the area and to understand the works of other in the related area as follows:

Sridhar (1989) explains the meaning and scope of 'modernization of library services', indicates the unlimited potential of Information Technology (IT) in modernizing library services, examines the relation of modernized services to productivity, performance, innovation, etc., identifies a wide gap between what has been said to be possible and feasible in application of IT on services of Indian Libraries on one hand and achievements in application of IT in modernizing services on the other hand, explores various reasons for such a gap vis-a-vis ways of bridging the gap and overcoming the implementation and operational difficulties like over excitement unclear goals, lack of management support, resources, self-supporting approach, technology transfer, indigenization of IT, technology assessment, IT skills in library personnel, and cooperation between IT specialists and library personnel, and

under-utilization of available IT, and finally concludes by pointing out some prospective areas for improvement and modernization of library services using IT.

Mannan and Bose (1998) conducted research in 25 libraries and 100 users of different major categories of libraries in Bangladesh to measure the satisfaction level of users on library networking and resource sharing activities. The key variables for this study include the existing status of infrastructures and facilities, collections, mode of subscription of journals, user's visit to the libraries, availability of services and use of databases. User's suggestions to improve the library services have also been included.

Maughan(1999) describes the results of a survey on seven academic disciplines. The survey showed that all respondents regardless of academic disciplines consult a narrower range of materials than was expected and regularly consult older published materials. Less surprisingly, respondents express a desire for simpler and more integrated search systems.

Hiller (2001) reveals that the University Libraries triennial of Washington has conducted faculty and student library surveys since 1992. Surveys are sent to all faculties and a random sample of graduate and undergraduate students. Results have revealed significant variation within and between user groups concerning library satisfaction, use, priorities, and importance. There were 2,749 responses to the most recent survey in 1998, including more than 1,500 completed surveys returned from faculty. These large-scale surveys, while extraordinarily valuable, have proven costly and time-consuming to design, administer, and analyze. The ARL LibQUAL+ pilot offered an opportunity to employ a different methodology and design that focused on quality of service and library support through a Web-based survey. The article thus discusses issues and results associated with these different approaches.

Martensen (2003) also describes the development and application of a structural equation model which allows librarians to quantitatively measure library users' perceived quality, satisfaction and loyalty with a library as well as the degree to which specific elements of a library's services, collections and environment contribute to those perceptions.

Tenopir (2003) analyzes more than 200 recent research publications that focus on the use of electronic library resources and were published between 1995 and 2003. Eight major ongoing

studies (each with multiple publications) are identified as Tier 1 studies and are analyzed in detail, while about 100 smaller-scale studies are classified as Tier 2 studies and are examined together. The studies use a variety of research methods, including observation, surveys, interviews, experiments, and transaction log analysis. Observations, experiments, and logs also show what users do, but do not always reveal preferences or motivations. Each of these methods allows different types of conclusions and it is only when they are taken together that we can get a full picture of what users actually do, why they do it, what they would prefer, and what they are likely to do in the future.

The article of Yang(2004) stated that, in 2002 the Texas A&M University Libraries implemented a new electronic document delivery service called deliverEdocs. The service uses Iliad software. It is also mention that they began to offer free desktop delivery of any article, even those found on our own Libraries' shelves. This seems to be a new concept for the library staff and the users. While they received many comments from the users, they also needed an objective method to fully evaluate the new service. A customer satisfaction survey was developed to gain a better understanding of users' responses to deliverEdocs. The survey was sent in February 2003 to 400 registered users, and had a response rate of 54%. Among the areas surveyed were factors of users' satisfaction, users' expectation of turnaround time, change in order activity since deliverEdocs, users' preferred means of communication with interlibrary loan staff, and areas for improvement. The results of the survey gave us valuable feedback. The survey proved that users truly appreciated the new service.

Jackson and others (2005) paper gives a great challenge for present day libraries is to move from the thought process of being a destination location with a captive audience to positioning its services to meet the needs of its users. They also explore the frequency of library use and satisfaction of library resources and/or services by hospitality education patrons. Using data collected with patrons (N=368) of five Hospitality Management programs across the country, the study found significant differences in library access, use, and satisfaction based on gender, academic status, and international versus non-international patrons.

Kassim (2009) reports a part of a quantitative study that aims to evaluate the library's performance by measuring the users' satisfaction with (a) library services, (b) infrastructure/place/space and (c) collection/information provided by an academic library

in Malaysia. A self-developed questionnaire was used to gauge the respondents' opinions on their satisfaction level on the statements regarding the three dimensions. Descriptive and inferential statistics were used in the analysis of data using the Statistical Product and Service Solutions.

The article Gunasekera (2010) studies library user satisfaction with current information services and resources at the University of Peradeniya. A questionnaire based survey was used for data collection. The questionnaires were distributed among 800 undergraduates who visit the library. It was found that the undergraduates are overall satisfied with available library resources, services and facilities. But it further found that library resources and services are not being fully utilized by undergraduates. Based on these findings of the data analysis, it was recommended that a comprehensive information literacy program should be conducted to promote awareness and use of electronic information resources. It was also recommended that the library should increase the acquisition of electronic information sources while continuing to acquire general and reference materials to fulfill the current research needs of the users.

In their study on User Satisfaction of the Information Services in Government Engineering College Library, Salem, Gomathi & Dhanavandan (2012) evaluated the user's satisfaction of government engineering college Salem. In this study most of the respondents satisfied with the services. This paper reports the results of a survey of 178 patrons of an engineering library which demonstrate that (1) the construct is potentially useful for evaluating the performances of services within a library; (2) since the construct is affected by the demographic characteristics of the users, it should not be used to compare presumed levels of performance for libraries serving different communities; and (3) the construct is not related to the user's degree of library use.

Dhanavandan and Tamizhchelvan (2012) paper is about the evaluation of e-resources in the academic libraries in Tamil Nadu. They also discuss about the e-resources as such E-resources are resources in which information is stored electronically and it can be accessible through electronic systems and network environment. E-resources are a very broad term that includes a variety of different file formats. Instant access is quite possible with E-resources within a fraction of second. Acquiring knowledge from E-Books, E-Journals, Online resources, CDROM, Internet with related Databases are the impact of E-Resources. The

paper also identifies the availability of E-resources facility and accessing mode in the engineering institutions, it analyses the variance of electronic resources and services available in the engineering institutions in Tamil Nadu.

Kumar (2012) gives the details about the analysis of user satisfaction and service quality of the university libraries in Kerala. The paper also states that 'in university libraries user satisfaction and perceptions of quality depends on the extent to which customer expectations are matched by information products and services delivered by the library'. The users also expect that the library should be equipped with good resources and consistent services. Understanding users' references along service quality dimensions reveal their priorities and addressing the same would reduce the gaps in service quality. The present study is an attempt to evaluate the service quality and the extent of user satisfaction of the university libraries from the perspective of respondents from different user groups. The data for the study was collected from 842 users from the university libraries in Kerala through a well-structured questionnaire. The study found that the quality of services rendered by the university libraries is moderately good. The users of the university libraries in Kerala are largely satisfied with various aspects of service quality except responsiveness and are moderately satisfied with the physical facilities, collection, services, staff behavior etc.

Shafique and others (2012) survey large public sector university libraries of the Punjab Province and Islamabad Capital Territory (ICT) of Pakistan. The basic purpose is to get a broader understanding of users' perceptions about the library services. The survey is based on a questionnaire containing both open and close ended questions. The data were collected through mail, e-mail and personal visits. The study reveals that although respondents have shown their overall satisfaction with the library services, but the analysis of the data about users' satisfaction with major library services shows that they were not fully satisfied with their respective library services. The library users have also highlighted many problems, which they believed should be corrected. Findings of the study can be helpful for the library authorities and professionals for revisiting their library services and sources.

Rusuli (2013) evaluates the customer satisfaction model available for analyzing and measuring the factors/variables, the relationship of customer satisfaction on the use of libraries, particularly in academic libraries. In addition, this paper does not use SERVQUAL or LIBQUAL as commonly used by many researchers to assess the customer

satisfaction. A Structural Equation Modeling approach (SEM) was used in this study to evaluate the significant relationship between factors/variables selected.

Sivathaasan and Chandrasekar (2013) studies about the factor analysis of user satisfaction of University of Jaffna Library and investigate the factors determining satisfaction of users who use the academic library. This study was carried out at the University of Jaffna, Sri Lanka among the library users. Data was collected by distributing a questionnaire to users of the library, those who visited to the library during a particular period. The study was exploratory in nature and employed factor analysis to identify the important factors of user satisfaction in relation to library facilities and services. Results revealed that nine factors are considered important in determining user satisfaction. Among those, most important factors are printing facilities, periodicals, reading table and chairs, opening hours, library orientation programme.

The study of Saikia and Mujesh (2013) on 'use of library resources, user's satisfaction in library resources and services and information seeking behaviors of the students and research scholars of Tezpur University', 200 questionnaires were distributed among students and research scholars of Tezpur University to collect relevant data. Library is playing vital role to meet multidimensional demands of students, and research scholar for information and knowledge. It is felt that user guidance is necessary to help library users to meet their information needs and make users aware of the available library resources and services.

Abdulsalami, Okezie and Agbo (2013) discusses about the Knowledge and Information which is necessary in promoting the society in Nigeria. Their paper examines the role of library in the promotion of knowledge societies in Nigeria. From time immemorial, both terms 'knowledge and information', which are central to the topic of our seminar today have remained the 'stock in trade' or better still, the 'articles of trade' in libraries and librarianship. From its earliest, humble beginning, libraries have, till today, been closely associated with and thus closely related to both concepts. Hence, knowledge and information have remained the familiar 'focus of interest' of libraries and librarianship thus giving rise to the term knowledge society which has become a household term these days. Yet in too many cases, the understanding of it remains erroneous or shallow. At the same time, deep transformative currents related to knowledge and its production and dissemination in society promise to change the world as we know it, perhaps in the historically short time of a few generations. We are witnessing the beginnings of this transformation and our understanding of

the pattern of changes in the library services with very serious positive long-term consequences. That is why a profound understanding of knowledge societies, as they are emerging the world over, is of such great importance.

Academic library is, as stated by Sivathaasan (2013), the heart of any university which assists to conduct research programs successfully. The study explores to identify the impact of library collections on user satisfaction of the students reading at the Faculty of Management Studies and Commerce of University of Jaffna. In the present study, library collections and user satisfaction are considered as independent variables and dependent variable respectively. The study was analyzed by using both primary and secondary data with 202 students. This survey contributes to the Library, University of Jaffna to strengthen the user satisfaction through collections and makes key recommendations.

Rattan (2013) highlights the importance of library and information centres in managing a disaster or any emergency. The main thrust of the paper is to explore the possible roles that the library professionals may assume in case of disasters besides their regular or routine jobs. The concept of disaster management, types of man-made and natural disasters have also been discussed in detail. It also discusses library professionals' role in managing the emergencies for the local community in particular and for the library and information centres in general. Various components of information and communication technology helpful in the reduction of damage by natural disaster have also been discussed. It also briefly mentions the initiatives taken by UNESCO in educating and spreading awareness among people regarding reduction in the impact and effects of any potential disasters or any emergencies. The future vision from the librarian's point of view in making a disaster reduction plan and making society aware of disasters is also suggested at the end of the paper.

Joy and Idowu (2014) also investigated the utilization and user satisfaction of public library services in south west Nigeria. A descriptive survey research design was employed for this research and a total of 400 library users chosen across four states in South-West, Nigeria were used for the study. Questionnaire was the major instrument used for data collection. Frequency counts and simple percentages were used to analyze the obtained data. The results showed that there is an improvement in the use of these libraries. Also, lack of adequate facilities, inadequate/outdated information resources, internet /ICT services in Nigeria public

libraries were revealed by the users as major factors affecting user satisfaction of public library services in this 21st century of information and communication technology.

The developing countries, according to Sriram and Rajev (2014), need to provide various services in the academic libraries in order to sustain the development. The academic libraries have to afford services based on users' requirements. These services and facilities of the academic library users have significant impact on the users' satisfaction. This research is conducted to identify the various services and facilities required by the academic library users of Sur University College and their degrees of impact on its users' satisfaction. Primary data were collected from the academic library users. Printing and photocopying facilities found to have high significant impact on the Sur university college academic library users.

Motiang and others (2014) study defined User Satisfaction as an evaluation of a product or service in terms of whether that product or service has met their needs and expectations. The aim of the study was to evaluate the services and resources which the library provide and find out if the users are satisfied with them. The study focused mainly on the following problem areas; type of services required by the users, adequacy of information resources and user satisfaction of the services they receive. It was discovered that the users do make significant use of the library, its services and resources.

The study of Saini and others (2014), describes the user satisfaction of engineering colleges of the city of Jaipur. A well-structured questionnaire was designed to elicit the opinions of the Engineering college students. The response was gathered from 220 students. The result of the study provided information about the satisfaction of users with library collection like text books, reference books, periodicals, online resources, thesis and dissertation, newspaper etc. and services. The authors also have tried to found the reason of not satisfaction of the users. On the basis of finding, some suggestion have been put forth for maximizing satisfaction of engineering colleges students in libraries.

Bua and Yawe (2015) study sought to compare user-satisfaction with services in three academic libraries in Benue State, Nigeria. A sample of 500 registered library users was randomly selected for the study. The findings of the study revealed that; type of institutions was a function of user satisfaction with library service and those users of Federal University of Agriculture library Makurdi were significantly more satisfied with their library services

than users of Benue State University and College of Education Katsina-Ala libraries. The study recommends that academic libraries should store information materials in the right quantity and quality and they should be properly organized to meet the needs of clientele.

Pooja (2015) studies and identify the satisfactory level of about the Library Space, Infrastructure Facilities of the Central Library of KMC Mangalore. It gives a brief description about the Central Library, KMC Mangalore and discusses the results of a user satisfaction survey as a guide to improve the infrastructure, collection and services of a library. Research sought to develop user needs assessment and user satisfaction measurement instruments for the Central Library, KMC, Mangalore. Using focus group sessions and a questionnaire survey the research determined from a sample of users of the Central Library services, their expectation and perception of the service/facility provisions of the Central Library Service. On basis of the findings, user needs assessment and user satisfaction measurement instruments have been developed for the Central Library.

Nieuwenhuysen, Alewaeters and Renard (2015) give new challenges that are faced by libraries and information centers and that are caused by the proliferation of heterogeneous electronic publications accessible through the Internet and the WWW. Methods based on information and communication technology are developed worldwide to cope with these challenges. Some of these are presented with their advantages and disadvantages. Access to the electronic sources should ideally be offered integrated seamlessly with the more classical access to hard copy materials in the collection of the library or in collections elsewhere through interlibrary lending and document supply. A recent focus of attention is integration of sources to which access has been purchased by the library with electronic open access information sources that are in principle available even without the efforts of a library. These library services can provide added value in various ways, when users apply this system in their searches for information.

1.4 Research gap

The above reviewed literature more or less has studied some of the related areas of this work but none of them covers the problems chosen for study by the scholar. It is therefore certain that there is scope to take up a research work under the specified topic of “use and user’s satisfaction on library resources and services in Mizoram University”.

1.5 RESEARCH DESIGN

1.5.1 Statement of the Problem

Resources in Mizoram University Central library such as books, periodicals, reference books, CD, Floppy, thesis, dissertation, e-resources, etc. are being provided to the users of the library. Apart from them, periodical awareness programs are also being given to the users and in the process, the library incurs a lot of expenditure. But, the users feel the absence of the need based information resources causing thereby discontentment among them. This may be due to the fact that the users are not aware of the information resources available in the library or they need skills to use the resources especially the electronic resources or the library is not subscribing adequate e-resources. Certain facts are lying behind which need to be explored through research. Further, the users to satisfy their need either visit other libraries or get the resources by themselves.

1.5.2 Objectives of study

The objective of this research work within the scope of study is to:

- Find out the availability of library resources and services provided to the users;
- Ascertain the type of information needs of the users;
- Study the usage of library resources both traditional and electronic;
- Determine the level of satisfaction of users towards library resources and services.

1.5.3 Research Methodology

Since the study has to be focused on the population within the School of Engineering and Technology (SET), the scholar will adopt the following methods to collect data for the inference of research finding:

- **Questionnaire Method**

Two structured questionnaires are designed to collect relevant data for study and out of which one is meant for the librarian and the other one for the users. The collected data through these questionnaires is tabulated and interpreted with the help of graph prepared with MS Excel sheet to draw finding. A total number of 262 users are the total population for the present study.

- **Interview method**

The scholar conducted an interview to various users within the scope of study. Views and ideas of such users are of very relevant and helpful to have ideas within the research study and supplements data collected through questionnaire.

1.5.4 Chapterisation

This study is divided into five chapters and bibliography which is supported by appendices. Chapter one under the topic of 'Introduction' spells about the concept of user and its satisfaction, reviewed 14 related literatures, discusses scope of study with objectives, and methodology of study. Chapter two having 'Mizoram University Profile' discusses various information of Mizoram University with detail information of the School of Engineering and Technology to which the study is confined. Chapter three under the caption of 'Library Resources and Services to SET' describes various information resources that can be available for SET in the library in detail. Chapter four 'Data Analysis and Findings' contains various data in tabulated form collected through research questionnaires and interviews conducted by the scholar with the support of graph drawn by MS Excel and research findings was drawn under this chapter. Chapter five spells the conclusion of the research work as well as suggestions drawn from the study.

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CHAPTER -2

MIZORAM UNIVERSITY PROFILE

2.1 Introduction

Education plays a very important part in human lives. It is crucial for all development nowadays. To have luxurious life and better future one should be educated. Education helps us to become a good citizen, productive worker, gain reputation, development in every sphere as well. University plays a distinctive role for every students, the reason is that it is the place where we learn for our specific professional stream. Thus, to become an educated person we need to go to school and for higher education to the University (Education Service- Education Solution, Education Needs 2011).

As of 3rd September 2015, there are 733 Universities in India. Out of which 46 are Central Universities, 336 are State Universities, 127 are Deemed Universities and 224 are Private Universities. Mizoram University occupies the rank of 280 by this date. Senate of Serampore College (University)/ University of Calcutta, Serampore Town, in Hooghly District, West Bengal established in 1818 is the oldest University in India. "The higher education system in India includes both private and public universities. Public universities are supported by the Government of India and the state governments, while private universities are mostly supported by various bodies and societies. Universities in India are recognized by the University Grants Commission (UGC), which draws its power from the University Grants Commission Act, 1956. In addition, 15 Professional Councils are established, controlling different aspects of accreditation and coordination. The different types of universities (Wikipedia 2015) may be explained as below:

- 1) **Central Universities:** Central Universities or Union universities are established by an Act of Parliament and are under the purview of the Department of Higher Education in the Union Human Resource Development Ministry. The UGC lists 46 central universities.

- 2) **State Universities:** Universities run by the state government of the states and territories of India, and usually established by a local legislative assembly act are called State University. As of 3 September 2015, the UGC lists 336 state universities. The oldest establishment date listed by the UGC is 1857, on which three state universities, viz., University of Mumbai, University of Madras and University of

Calcutta are established. Note that most of State Universities are "affiliating universities" in that they administer a large number of "affiliated colleges" (many located in very small towns) that typically offer a range of undergraduate courses, but may also offer post-graduate courses. More established colleges might also offer PhD programs in some departments with the approval of the affiliating university.

- 3) **Deemed University, or "Deemed to be University"**: This kind of University is a status of autonomy granted by the Department of Higher Education on the advice of the UGC, under Section 3 of the UGC Act. The UGC list 128 deemed universities as on 23 June 2008. According to this list, the first institute to be granted deemed university status was Indian Institute of Science which was granted this status on 12 May 1958. Note that in many cases, the same listing by the UGC covers several institutes. For example, the listing for HomiBhabha National Institute (HBNI) covers the Institute of Mathematical Sciences (IMSc), the Indira Gandhi Centre for Atomic Research (IGCAR) and other institutes.

- 4) **Private Universities**: They are approved by the UGC. They can grant degrees but they are not allowed to have off-campus affiliated colleges. The UGC list 224 private universities as on 3 September, 2015.”

2.2 Establishment of Mizoram University

On 25th April 2000 by an Act of Parliament of India, Mizoram University was established as a Central University and started functioning on 2nd July 2001. Previously, North-Eastern Hill University (NEHU) functioned in Aizawlas Mizoram Campus. The campus was inherited by Mizoram University. The campus of Mizoram University covers an area of 978.1988 acres, and is located at Tanhril, Aizawl. Mizoram University is a central university under the University Grants Commission, Government of India, and was established on July 2, 2001, by the Mizoram University Act (2000) of the Parliament of India. The President of India is the official Visitor, and the Governor of Mizoram acts as the Chief Rector as per Mizoram University (Amendment) Bill, 2007. According to the Act, the objectives of the university are "to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit, to make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry and other allied disciplines in the educational programmes of the University; to take appropriate

measures for promoting innovations in teaching-disciplinary studies and research; to educate and train man-power in the development of the state of Mizoram; and to pay special attention to the improvement of the social and economic conditions and welfare of the people of that State, their intellectual, academic and cultural development". Keeping these objectives in view, Mizoram University has embarked on various programmes for academic and administrative development'. Mizoram University was established to promote education within the society in the region. The objectives of Mizoram University are to:

- Impart an advanced education and make provisions for research facilities;
- Promote innovations and trained man power in the State;
- Making the society an information literate;
- Develop the society

The Mizoram University is an eco-friendly University meanwhile during the month of March–April 2013, Green audit of the University Campus was conducted and the University was awarded Grade 'A' by the Mizoram State Pollution Control Board. Later in 21st February, 2014, National Assessment and Accreditation Council (NAAC), Bangalore accredited Grade 'A' (3.12 out of 4 point scale), which will be valid up to 21st February 2019. The University has 16% of students coming from various parts of the country; it has always a visitor from eminent dignitaries, scholars and researchers, activists, and politicians from different parts of India and abroad constantly takes place. The atmosphere of the University campus is lively and diverse. There are lots of co-curricular activities like the Red Ribbon Club, Techno Club, NSS and SPIC MACAY-Heritage Club, where faculty and students play an active role. University faculties and students also actively involved in such various social services.

Mizoram University Students Union also used to conduct the sports meet, Mizoram University Fest and other events within the University. The University also used to participate in many other activities in different parts of the state. The University also gained reputation in winning the All India Inter-University Football Tournament (East Zone) in 2008 and 2009. In 2012, the University also won the All India Inter-University Women's Hockey (East Zone). University also used to get the 2nd position in different Inter University Football Tournament.

2.3 Administration and Management

Management and good administration is needed in all types and sizes of organization, at all organization and institutional levels, and in every institution and organizational work areas throughout the world. Management involves coordinating and overseeing the work activities of others so that their activities are completed efficiently and effectively. Mary Parker Follet (1941) defines management as, “The art of getting things done through people”. This shows that in every management and administration process everyone within the field played an important role. Henry Fayol (1962) has stated 14 principles of Management for good administration as follows:

- Division of Work
- Authority
- Discipline
- Unity of Command
- Unity of Direction
- Subordination of individual interest to group interest
- Remuneration
- Centralization
- Scalar Chain
- Order
- Equity
- Stability
- Initiative
- Espirit de corps

By obtaining the above principles in every institutions and organization will absolutely have a good result. For good management process the elite in the management block need to perform certain activities to efficiently and effectively coordinate the work of others. They can be classified as:

- Planning involves defining goals, establishing strategies for achieving those goals, and developing plans to integrate and coordinate activities.

- Organizing involves arranging and structuring work to accomplish the organization's goals.
- Leading involves working with and through people to accomplish organizational goals.
- Controlling involves monitoring, comparing, and correcting work performance. (http://discovery.bitspilani.ac.in/dlpd/courses/coursecontent/courseMaterial/mgtszc211/principles_of_management_notes.pdf)

Councils and committee are the most common words within an organization, institutions, Departments etc. The councils and committee plays a very important role in shaping the smooth flow of the institution. It is the councils and committee who step forward for the attainment of all good aspects and all the growth and development of the University.

A Council is defined (Wikipedia 2015) as 'A council is a group of people who come together to consult, deliberate, or make decisions. A council may function as a legislature, especially at a town, city or county level, but most legislative bodies at the state or national level are not considered councils. At such levels, there may be no separate executive branch, and the council may effectively represent the entire government. A board of directors might also be denoted as a council. A committee might also be denoted as a council, though a committee is generally a subordinate body composed of members of a larger body, while a council may not be. Because many schools have a student council, the council is the form of governance with which many people are likely to have their first experience as electors or participants'. Another definition is that (Dictionary.com 2015):

1. An assembly of persons summoned or convened for consultation, deliberation, or advice.
2. A body of persons specially designated or selected to act in an advisory, administrative, or legislative capacity: the governor's council on housing.
3. (In certain British colonies or dependencies) an executive or legislative body assisting the governor.
4. An ecclesiastical assembly for deciding matters of doctrine or discipline.

2.3.1 Executive Councils of Mizoram University

The formation of Mizoram University Executive Council, the apex council of the university, is clearly stated in the Statute which can be had from the university website that reads "Constituted in terms of the provisions of Mizoram University Statute 11(1) (a) read with

Statute 2(1) and Statute 4(6)” with the following members: (Mizoram University Executive Council 2015, source: <http://www.mzu.edu.in/index.php/about-mzu/committees/executive-council>)

Table-1: Executive Councils of Mizoram University

11(1)(a)(i)&2(1)	Vice-Chancellor, Ex-Officio Chairman
11(1)(a)(iii)	Four Deans of Schools by rotation according to Seniority, to be nominated by the Vice Chancellor
11(1)(a)(iv)	One Professor, other than a Dean, by rotation according to seniority, to be nominated by the Vice Chancellor.
11(1)(a)(v)	One Reader (Associate Professor) by rotation according to seniority, to be nominated by the Vice Chancellor.
11(1)(a)(vi)	Principals of Colleges maintained by the University.
11(1)(a)(vii)	One Principal from the Colleges in the state of Mizoram by rotation, according to seniority to be determined with reference to the date of establishment of the college concerned, to be nominated by the Vice Chancellor.
11(1)(a)(viii)	An Officer of the Government of Mizoram not below the rank of Secretary, to be nominated by the State Government.
11(1)(a)(ix)	Two members of the Court, to be nominated by the Visitor.
11(1)(a)(x)	Four Persons to be nominated by the Visitor.
4(6)	The Registrar, Ex-Officio Secretary

2.3.2 Academic Council of Mizoram University

Academic council is the body which considered various academic matters of the university. Its constitution of the members reads that, “in terms of provisions of Mizoram University Statute 13(1)(a) & 13(1)(b) read with Statute 2(1)& Statute 4(6)” it has the following members for a term of three years: (Mizoram University Academic Council 2015: source: <http://www.mzu.edu.in/index.php/about-mzu/committees/academic-council>)

Ex-Officio members:

- i. Vice-Chancellor(Ex-Officio Chairperson)
- ii. Pro-Vice-Chancellor.
- iii. Deans of Schools.

- iv. Dean of Students' Welfare.
- v. Heads of Departments and Centres of Studies.
- vi. Librarian
- vii. Principals of Colleges maintained by the University.
- viii. All Professors other than Heads of the Departments and Centres.

Principals of Affiliated Colleges:

- ix. Three Principals of Colleges admitted to the privileges of the University to be nominated by the Vice-Chancellor by rotation according to seniority.

Representatives of Teachers of the University:

- x. Five Teachers of the University, other than those under (i) to (viii) above, by rotation according to seniority, of which two shall be Readers (Assoc. Professors) and Three Lecturers (Asst. Professors).

Vice-Chancellor's Nominees:

- xi. Four persons of academic eminence who are not employees of the University or of a College or Institution affiliated to it, to be nominated by the Vice-Chancellor.

Representatives of Teachers of Affiliated Colleges:

- xii. Three teachers of the Colleges admitted to the privileges of the University, elected from amongst themselves.

Representatives of Teachers of Pachhunga University College:

- xiii. One teacher of Pachhunga University College to be elected teachers from amongst themselves.

Representatives of Teachers of Postgraduate Departments of the University:

- xiv. One Teacher of Post Graduate Department to be elected by teachers from amongst themselves.

Representatives of Post graduate Students of the University:

- xv. Two Post-Graduate students of the University and one from Science and one from Humanities, and one Research Scholar.

2.3.3 Finance Committee of Mizoram University

The committee is a university run panel for the benefit of Mizoram University. The committee is always responsible for liaising with the institutional bodies to raise funds. The overall functioning and proper funding from different source to Mizoram University is managed and allocate by the Finance Committee. The Finance committee is always required to:

- Develop a comprehensive budget for implementation of the strategic plan.
- Ascertain resource requirements for strategic plan period
- Obtain works operational plans
- Liaise with external donors with regard to funding
- Conduct a review of the current fee structure and its intended purpose
- Report to membership on the status of funding of activities
- Review internal financial resources and make recommendations
- Report to membership on the implementation of budgeted activities
- Ensuring audit of finances and make a report.

The above point clearly explains how the finance committee works in different institutions. In terms of provisions of Mizoram University Statute 17 & Statute 5(5), a Finance Committee may be formed to look into the financial matters of the university as:(Mizoram University Finance Committee 2015, source: <http://www.mzu.edu.in/index.php/about-mzu/committees/finance-committee>)

1. Ex-Officio Chairman, Vice Chancellor,Mizoram University,
2. Members Nominated by the Vice Chancellor,
3. Visitor's Nominees,
4. Secretary(Ex-Officio), Finance Officer,Mizoram University.

2.3.4 Mizoram University Court

In terms of provisions of Mizoram University Statute 10(1)(a) read with Statute 2(1) & Statute 4(6), University Court members may be appointed with the following

members.(Members of University Court, source: <http://www.mzu.edu.in/index.php/about-mzu/university-court>)

Ex-officio Members

- (i) The Vice-Chancellor, Chairperson
- (ii) Pro- Vice Chancellor
- (iii) Dean, Students' Welfare
- (iv) Finance Officer
- (v) Librarian
- (vi) Proctor
- (vii) Registrar, Member Secretary

Representatives of Schools and Departments

- (viii) Deans of School of Studies, Ex-Officio
- (ix) All Professors, Ex-Officio
- (x) Heads of Departments, who are not Professors, Ex-Officio
- (xi) Two Readers (Associate Professor), who are not Heads of Departments and Two Lecturers (Assistant Professor) by rotation.

Representatives of Affiliated Colleges

- (xii) Five Principals of Colleges in the State of Mizoram.
- (xiii) Four Teachers from Affiliated Colleges in the State of Mizoram.
- (xiv) Representatives of Parliament
- (xv) Person Representing Learned Professions and Special Interests
- (xvi) Representatives of Students
- (xvii) Representatives of the Non-Teaching Staff
- (xviii) Representatives of the State Government
- (xix) Members of the Executive Council who are not otherwise members of the Court.

2.4 Academic

The University offers various academic degrees like M.A., M.Sc., M.Com., M.S.W., I.M.B.A., M.B.A., MLIS, B.Tech in Information Technology, Computer Engineering and Electrical Engineering, Electronics and Communication Engineering as well as M.Phil and

Ph.Ddegrees. The University also has the distinction of having unique departments like the Department of Horticulture, Aromatic and Medicinal Plants (HAMP); the Department of Environmental Sciences and the Department of Extension Education & Rural Development. Academic departments are divided into schools and are administered by Dean. Different schools and the academic departments of Mizoram University along with the year of establishment and course offered are classified as under:

Table-2: Schools and Department of MZU

Sl.No.	Schools and Department	Year of Estd.	Programmes Offered
1. School of Economics, Management and Information Sciences			
1.	Department of Economics	1979	M.A., M.Phil., Ph.D.
2	Department of Commerce	2002	M.Com., M.Phil., Ph.D.
3	Department of Library & Information Science	2002	MLIS, M.Phil., Ph.D.
4	Department of Management	2006	IMBA, MBA, M.Phil., Ph.D.
5	Department of Mass Communication	2010	MJMC
2. School of Social Sciences			
1	Department of Public Administration	1985	M.A., M.Phil., Ph.D.
2	Department of Political Science	2002	M.A., M.Phil., Ph.D.
3	Department of History & Ethnography	2002	M.A., M.Phil., Ph.D.
4	Department of Psychology	1983	M.A., M.Phil., Ph.D.
5	Department of Social Work	2002	MSW, M.Phil., Ph.D.
3. School of Education and Humanities			
1	Department of Education	1979	M.A., M.Phil., Ph.D.
2	Department of English	1979	M.A., M.Phil., Ph.D.
3	Department of Hindi	2010	M.A., M.Phil., Ph.D.
4	Department of Mizo	1997	M.A., M.Phil., Ph.D.
4. School of Engineering & Technology			
1	Department of Computer Engineering	2011	B.Tech.
2	Department of Electrical Engineering	2011	B.Tech.
3	Department of Electronic and Communication Engineering	2007	B.Tech.
4	Department of Information Technology	2007	B.Tech.

5	Department of Civil Engineering	2014	B.Tech.
5. School of Life Sciences			
1	Department of Biotechnology	2007	M.Sc., M.Phil., Ph.D.
2	Department of Botany	2005	M.Sc., Ph.D.
3	Department of Zoology	2005	M.Sc., M.Phil., Ph.D.
6. School of Physical Science			
1	Department of Chemistry	2006	M.Sc., Ph.D.
2	Department of Mathematics & Computer Science	2006	M.Sc., Ph.D.
3	Department of Physics	2003	M.Sc., Ph.D.
7. School of Earth Sciences & Natural Resources Management			
1	Department of Environmental Science	2002	M.Sc., Ph.D.
2	Department of Forestry	1990	M.Sc., Ph.D.
3	Department of Geography & Resource Management	2003	M.Sc., Ph.D.
4	Extension Education & Rural Development	2007	N.A
5	Department of Geology	2002	M.Sc., Ph.D.
6	Department of Horticulture, Aromatic & Medicinal Plants	2007	M.Sc., Ph.D.
8. School of Fine Arts, Planning & Architecture			
1	Department of Planning & Architecture	N.A	B.Arch.

Source: Mizoram University Annual Report, 2013-2014

2.5 About the Faculty and the Academic Activity

Mizoram University faculty is composed of men and women who are all very expert with quality on their own respective subject. Faculty members are passionate and curious individuals, most of them continue their own research while teaching in Mizoram University. As India is a land of diversity in race, region, caste, language, mate, landform, flora and fauna and so on, many people with different characteristics from different place came and joint the faculty in bringing with them a diverse wealth of knowledge. Out of a total of 207 faculties as on 1st January, 2015, there are 60 Professors, 23 Associate Professors and 124 Assistant Professors who currently work in Mizoram University.

The Academic Departments continue to make consistent progress in teaching and research activities. As of 2014, the research projects undertaken by the University comes to a total of 86 research projects (5 minor projects and 81 major projects) amounting to a total of Rs. 262.901514crores(Rs. 4.85 lakhs for minor and Rs. 262.416514 crores for major) which shows an increase of over Rs. 9 crores from the previous year. These projects are funded by various agencies such as UGC, ICSSR, CSIR, DST-FIST, DBT, World Bank- ICAR, MoES, CDAC, ICFRE(Dehra Dun), ESSO (IITM, Pune), Ministry of Environment and Forest (Gol) and others.

In 2014, the number of research publications of the University comes to the total of 154 International, 255 National and 22 others, out of which the break-up is 18 authored books, 31 edited books, and 214 articles, 16 articles in e-Journals, 52 conference Proceedings and 100 chapters in books. A number of International and National Seminars/Conference/ Workshops, have been organized by the academic departments while the faculties have attended a total of 107 International and 584 National Seminars/Conference/Workshops both within and outside the University.

Several members of the faculty and non-teaching staff as well as some departments, are actively involved in social and extension services and consultancy programmes such as such as in the areas of adolescence education, parenting, career choices, media impact, tobacco control, drug addiction, mental health, psychological assessment, HIV-AIDS etc. under the State and Central Government as well as several NGO's, in fulfillment of institutional social obligations as envisages in the University's Act. The University is also given the responsibility of monitoring the central SSA scheme in Mizoram State and conducts annual Science Camps for school children under INSPIRE programme.

2.6 Affiliated Colleges to Mizoram University

At present Mizoram University have 28 affiliated Colleges out of which 1 were a constituent College, there were nearly 5000 students who are enrolled under the academic departments. List of colleges which were affiliated under Mizoram University along with their details are given below:

Table-3: Affiliated Colleges to Mizoram University

Sl. No.	Name of the College/Institution	Years of Estd.	Nature of Affiliation	UGC Recognition	Course Conducted
1	Pachhunga University College	1958	Constituent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Socio, Psy, Eco, Geog, Phil, Pol.Sc, Pub.Adm, MIL
					B. Sc. Hons in Phy, Chem, Maths, Bot, Zool, Geol, Statis, B. Com Hons., Diploma in Pisciculture
2	Lunglei Govt. College	1964	Permanent	2(f) & 12B	BA Hons in Edu, Eng, Mizo, Hist, Eco, Pol. Sc., Geog, Phil, MIL
					B. ScHons in Phy, Chem, Maths, Bot, Zool,
3	Govt. Champhai College	1971	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Pol. Sc., Eco, Geog, End, MIL
					B.ScHons in Phy, Chem, Maths, Bot, Zool, BCA
4	Govt. Serchhip College	1973	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Pol Sc. Edu, Eco, Socio, Hindi, MIL B. Com Hons.
5	Govt. Aizawl College	1975	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Pol Sc, Edu, Eco, Socio, MIL, B. Com Hons.
6	College of Teachers Education	1975	Permanent	2(f) & 12B	B. Ed
7	Govt. Saiha College	1978	Permanent	2(f) & 12B	BA Hons in Hist, Pol. Sc,

					Edu, Eco, Mizo, Eng, Socio, MIL
8	Govt. Kolasib College	1978	Permanent	2(f) & 12B	BA Hons in Eng, Edu, Eco, Hist, Pol. Sc., Mizo, Geog, Pub Adm., MIL, B. ScHons in Phy, Chem, Maths, Bot, Zoo, BCA
9	Govt. Hnahthial College	1979	Permanent	2(f) & 12B	BA Hons in Hist, Edu, Pol. Sc, Mizo, Eco, MIL
10	Govt. Hrangbana College	1980	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Edu, Pol Sc., Geog, Pub Adm., Psy, Eco. B. Con Hons
11	Govt. Lawngtlai College	1980	Permanent	2(f) & 12B	BA Hons in Eng, Pol. Sc., Hist, Eco, Edu, Mizo, MIL, Geog, Socio, Pub. Admin.
12	Govt. Zirtiri Res. Science College	1980	Permanent	2(f) & 12B	B.ScHons in Phy, Chem, Zoo, Bot, Maths, Home Sc., B.Sc Pass in Bio Chem, Electronics, BCA
13	Govt. Mamit College	1983	Permanent	2(f) & 12B	BA Hons in Eco, Pol Sc., Hist, Edu, MIL
14	Govt. J. Buana College	1983	Permanent	2(f) & 12B	BA Hons in Eco, Pol. Sc., Hist, MIL
15	Mizoram Law College	1983	Permanent	2(f) & 12B	LL.B
16	Govt. Saitual College	1984	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Pol Sc. Hist, Eco, Edu, Geog, MIL
17	Govt. Khawzawl College	1985	Permanent	2(f) & 12B	BA Hons in Edu, Hist, Pol.Sc., Eng, Eco, MIL
18	Govt.	1986	Permanent	2(f) & 12B	BA Pass in Eng, Mizo,

	ZawlnuamCollege				Pol.Sc., Hist, Edu, Eco, MIL
19	Govt. Aizawl North College	1988	Permanent	2(f) & 12B	BA Hons in Eng, Eco, Hist, Pol Sc. Pub. Adm., Mizo, Edu, Geog, MIL
20	Govt. Aizawl West College	1990	Permanent	2(f) & 12B	BA Hons in Eng, Eco, Hist, Pol. Sc. Pub. Admin, Psy, Mizo, Edu, MIL
21	Govt. T. Romana College	1992	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Pol. Sc, Eco, Edu, Pub. Admn, Socio, MIL
22	Govt. J. ThankimaCollege	1992	Permanent	2(f) & 12B	BA Hons in Eng, Mizo, Hist, Pol. Sc. Edu, Eco, MIL
23	Kamalanagar College	1992	Permanent	2(f) & 12B	BA Hons in Hist, Eng, Pub. Adm., Pol. Sc., Edu, MIL, BA Pass in Eco. Mizo, Hindi
24	Govt. Johnson College	1993	Permanent	2(f) & 12B	BA Hons in Eng, Eco, Mizo, Hist, Pol. Sc., Edu, MIL
25	RIPANS	1996	Permanent	-	B.Sc. Nursing, B. Pharm, B. Sc MLT
26	DOEACC, Aizawl	2000	Provisional	-	BCA, MCA
27	Mizoram College of Nursing	2005	Provisional	-	B.Sc. Nursing
28	HATIM	2008	Provisional	-	B.C.A, BSW, BA Pass in Hindi, B.Com Hons

(Source: <http://mzu.edu.in/index.php/about-mzu/affiliated-colleges/profile-colleges>)

From the above table we can know the various Mizoram colleges who were under UGC. We can also trace the year of establish, course conducted, nature of affiliation, under which Act UGC has recognized.

2.7 Academic Calendar

Since different universities have different academic calendar, Mizoram University also have mandate the academic calendar to the colleges as well as the University. Every colleges and the university who are registered under the Mizoram University should abide by the following academic calendar:

(a) Academic Calendar (Post-Graduate):

Table-4: Academic Calendar (Post-Graduate)

Notification for admission	Last week of April
Last date of submission of PG/MPhil/Pre PhD admission forms	30th June or 14 days from the date of declaration of Mizoram University U.G. Final Year results
Commencement of 1st & 3rd Semester, MPhil and Pre-PhD courses	1st Working Day of August
Examinations of 1st & 3rd Semester	1st - 18th December
Examinations of MPhil & Pre- PhD	1st week of December
Winter Vacation	19th December to 18th February
Commencement of 2nd & 4th Semester Classes	19th February
Examinations of 2nd & 4th Semester	1st July to 19th July
Semester Break	20th July to 31st July

(b) Academic Calendar (Under Graduate):

Table-5: Academic Calendar (Under Graduate)

Commencement of 1st, 3rd & 5th Semester classes	1st June
Examinations of 1st, 3rd & 5th Semester classes	17th October - 4th November
Mid Semester Break	5th - 13th November
Commencement of 2nd, 4th & 6th Semester classes	14th November
Examinations of 2nd, 4th & 6th Semester classes	1st - 21st May
Winter Vacation	17th December - 16th January

While preparing the above academic calendar, the following guidelines were taken for consideration:

1. The University/Colleges shall have at least 180 teaching days i.e. 36 weeks of actual teaching in a 5day week in a year.
2. In the University and Colleges, 6 weeks shall be devoted to admission/examination/preparation for examinations.
3. The University and College shall have a vacation of 8 weeks.
4. The University / Colleges shall have 2 weeks public holidays.
5. The list of academic holidays for the University and Colleges shall be as notified by the University.
6. In addition to the holidays notified by the University, the Principals of the Affiliated Colleges shall be competent to declare local holidays according to their need and significance of the day under intimation to the University.
7. Winter vacation for the Colleges shall be fixed by the Principals of the respective Colleges subject to Clause 6 above.

2.8 Fellowship and Scholarship

As a student, in order to support our further studies several schemes of fellowship and scholarship were introduced by different organizations and commission. Any students can apply such fellowship and scholarship. But in such cases, the fellowship and scholarship has a specific criterion regarding the applications, some are merit based, some are based on the social status, some based on single girl child, etc.

(a) List of fellowship:

- UGC-NET/JRF Fellowship in Sciences, Engineering & Technology, Humanities and Social Sciences (UGC).
- Ragiv Gandhi National Fellowship for SC/ST (UGC)
- Maulana Azad for National Fellowship or Minority Students (UGC).
- Research Fellowship in Sciences for Meritorious Students (UGC).
- DST Inspire Fellowship (Department of Science and Technology).
- UGC-MZU Fellowship for Non-NET M.Phil/PhD. Students.

(b) List of scholarship:

- Post Matric scholarships to the students belonging to Schedule Tribe for studies in India (Mizoram Board Scholarship).
- Post Matric scholarship for students belonging to minority communities.

- Merit-cum-Means Based Scholarship Scheme for Minority Communities Students.
- Stipend and Book Grant under NEC (Mizoram Board Scholarship).
- Overseas scholarship (Mizoram Board Scholarship).
- Post-Graduate Indira Gandhi Scholarship for single girl child (UGC).
- Post Graduate Merit Scholarship Scheme For University Rank Holders in General & Honours Courses at Undergraduate Level (UGC).
- ONGC Scholarship (Oil and Natural Gas Corporation).

2.9 Research and Exchange Programme

Mizoram University has signed a memorandum of Understanding with various National and International Institutes for Research Collaboration and Exchange Programmes such as:

- National Institutes of Orthopedically Handicapped, Kolkata.
- Indian Institutes of Mass Communication, New Delhi.
- Software Technology Park in India. (Ministry of Information and Technology, Govt. of India)
- Zoram Energy Development Authority, Mizoram.
- DonghaeSericite Regional Innovation System Centre, Department of Environmental Engg, Kwandong University, Gangwon, Korea.
- Minnesota University, USA.

2.10 Mizoram University: Central Library

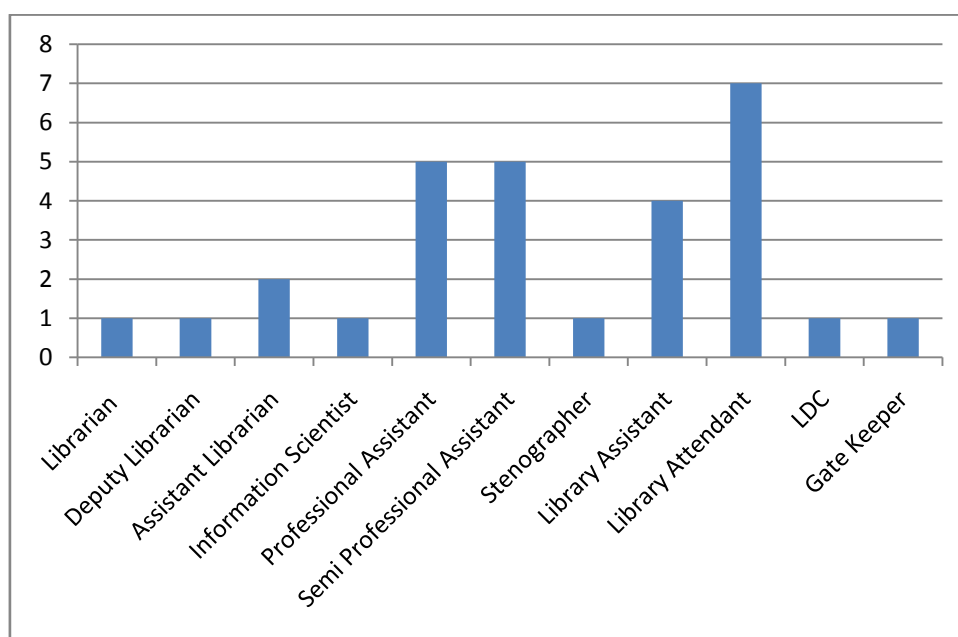
Central Library of Mizoram University is placed at the central part of the University campus where every department can easily access the Library. The total square meter of the Central Library is as of 2014 is 4,496.62 sq.m. Library is the heart of the University where students, faculty and staff acquire the resources for their achievements. Central Library provides the major resources to the University as well as every user. Every University usually has 1 librarian, who is the head of the library. Such that Mizoram University also has 1 Librarian.

2.10.1 Staff Position:

Mizoram University has a number of in service, out of which the Central Library has 29 staff. All the staff employed are regular, no contingency are employed. Following are the details of staff position as on September 2015:

Table-6: Staff Position

Sl. No.	Designation	No. of Incumbent		Out of Total Teaching/ Non Teaching				Total
		Male	Female	SC	ST	Gen.	OBC	
1	Librarian		1		1			1
2	Deputy Librarian	1				1		1
3	Assistant Librarian		2		2			2
4	Information Scientist	1			1			1
5	Professional Assistant	3	2		4		1	5
6	Semi Professional Assistant	3	2		5			5
7	Stenographer		1		1			1
8	Library Assistant	2	2		4			4
9	Library Attendant	3	4		7			7
10	LDC	1			1			1
11	Gate Keeper	1			1			1
TOTAL		15	14		27	1	1	29



Graph-1: Staff Position

2.10.2 Library Activities:

The activities of the library are as follows:

- Providing lending services;

- Reprographic Services;
- Conducting Orientation Programme for newly admitted students;
- Automation of Library holdings since 2008 and making the bibliographic search available within University campus network using webOPAC;
- Automated circulation system using barcode technology has been used since 1st Dec 2008;
- Digitization of Mizoram University's own documents and publications had been pursued for setting up of an Institutional Repository;
- Providing a separate room for accessing and downloading of e-resources;
- Power backup of 100KW stand alone solar PV power plant had been installed for uninterrupted power supply in the beginning of the year 2013;
- For security purposes, 4CCTVs had been installed in vital location of the buildings;
- For blind students Computerized Braille System had been successfully installed and operate since December 2011; Three numbers of Biometric Visitors/ Attendance System had been procured to replace the manual hand written Visitor's Registers kept in the main gate of Central Library.

2.10.3 Use of Library by School of Engineering and Technology (SET)

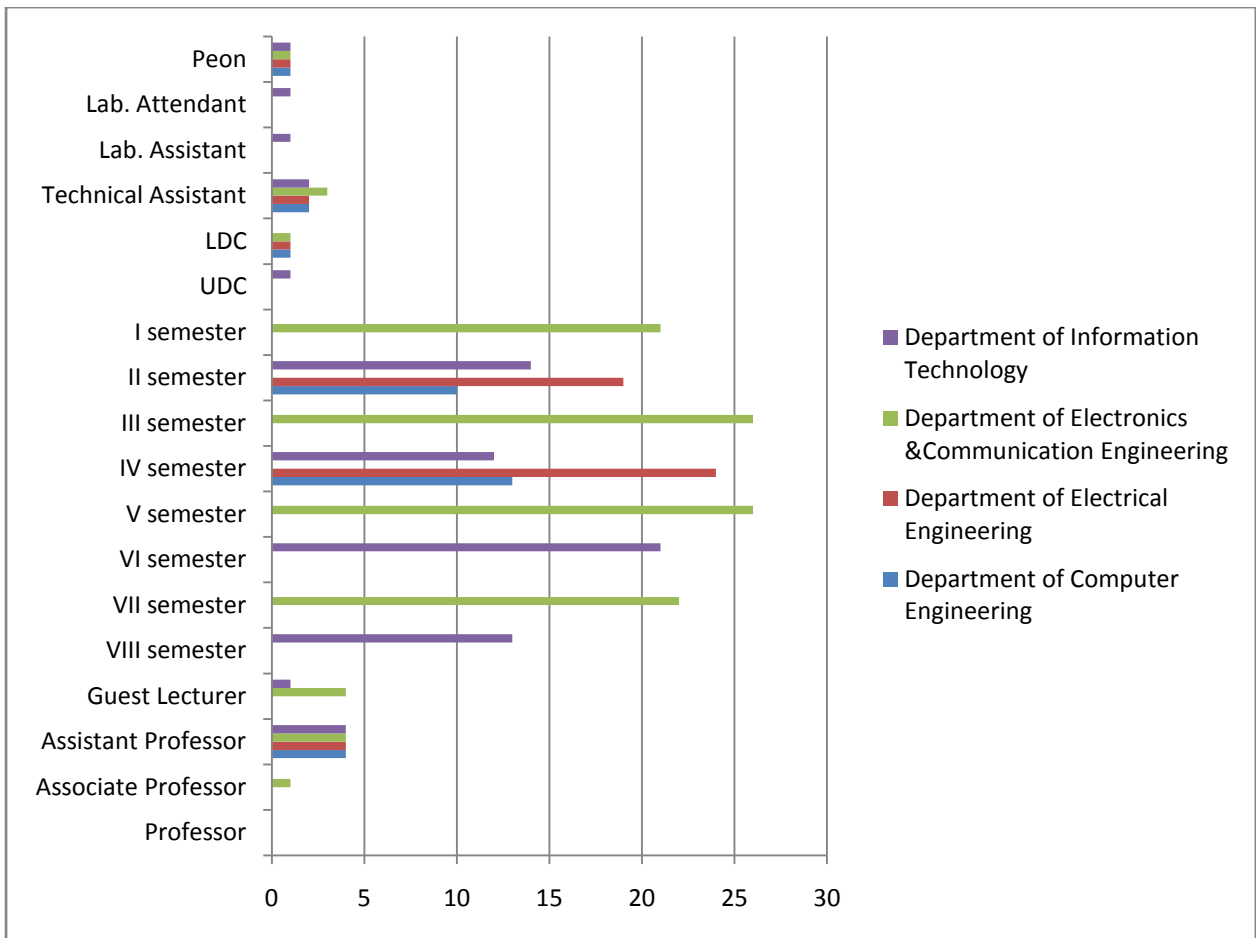
As the scope of study is confined to the faculty, students and staff under the School of Engineering & Technology (SET), it is necessary to give the detail information about the school. The four departments operating in the school are Computer Engineering, Electrical Engineering, Electronic and Communication Engineering and Information Technology. Most of the departments are actively engaged in research teaching. It is a regular feature for the departments to organize seminars, summer institutes, refresher courses and several field practical works. List of users under the School of Engineering and Technology are given in the table below:

Table-7: No. of library users under the School of Engineering & Technology (SET).

Designation	Department of Computer Engineering	Department of Electrical Engineering	Department of Electronics & Communication Engineering	Department of Information Technology	Total
Professor	0	0	0	0	0
Associate Professor	0	0	1	0	1

Assistant Professor	4	4	4	4	16
Guest Lecturer	0	0	4	1	5
VIII semester	0	0	0	13	13
VII semester	0	0	22	0	22
VI semester	0	0	0	21	21
V semester	0	0	26	0	26
IV semester	13	24	0	12	49
III semester	0	0	26	0	26
II semester	10	19	0	14	43
I semester	0	0	21	0	21
UDC	0	0	0	1	1
LDC	1	1	1	0	3
Technical Assistant	2	2	3	2	9
Lab. Assistant	0	0	0	1	1
Lab. Attendant	0	0	0	1	1
Peon	1	1	1	1	4
Total	31	51	109	71	262

(Source:Annual Report, Mizoram University, 2013-2014)



Graph-2: No. of library users under the School of Engineering & Technology (SET).

Since the above table is taken from the previous year, the total population of the Teaching, non-teaching staff and students will be different. Confining resources to the academic perspectives, Library plays a very important role in providing resources to the faculty, staff as well as students. Library resources are the main resources aiding the students for their achievements. Academic library plays vital role for the academic development of the users in their education and research. Academic libraries are libraries found in institution of higher learning like colleges of Education, Polytechnics, universities and research institutions. The major aim of establishing them is to serve the academic needs of the institution in terms of research, teaching and learning, and community development/extension services. Users may be of different categories having different demands to standardize their educational pursuits. The library's main objectives are to provide relevant information to the users in diverse field of knowledge.

Resources in Mizoram University Central library such as books, periodicals, reference books, CD, Floppy, thesis, dissertation, e-resources, etc. are being provided to the users of the

library. Apart from them, periodical awareness programs are also being given to the users and in the process, the library incurs a lot of expenditure.

2.11 University Centers, Cell, etc.

Universities of different places have distinct departments, playing a distinctive role for the development of the University. Mizoram University has several departments other than academic departments having separate officers to monitor the specific block. Different staffs of different designations work under the umbrella of the head of the departments. Following are the different Departments within Mizoram University:

1. Dean of Student's Welfare
2. College Development Council
3. Computer Centre
4. Engineering Cell
5. Equal Opportunity Cell
6. Examination Department
7. Health Centre
8. Hindi Cell
9. Internal Audit Cell
10. Internal Complaints Committee
11. Internal Quality Assurance Cell
12. Public Relation Cell
13. Security Cell
14. Sports Department
15. UGC-Academic Staff College

The collaboration of all the above departments results to a great impact for the development of the University. Advancement in every field, development in infrastructure, health, and Information Technology are always the outcome of good collaboration.

2.12 Hostels

For the accommodation of the students, Mizoram University has four girls' hostel and three boys' hostel, altogether there were 7 hostels in the University, namely-

- | | |
|--|---------------|
| 16. Boys Hostel - I (Phawngpui Hostel) | - 100 seaters |
| 17. Boys Hostel - II (Lengteng Hostel) | - 100 seaters |

18. Girls Hostel - I (Dingdi Hostel)	- 100 seaters
19. Girls Hostel - II (Ainawn Hostel)	- 100 seaters
20. P.G Hostel for Girls (Senhri Hostel)	- 35 seaters
21. Boys Hostel for engineering students	- 100 seaters
22. Girls Hostel for engineering students	- 100 seaters

2.13 Important Points and Facilities about Mizoram University

The University had so many valuable things to point out that they are always a remarkable one. The following are some of the important points and facilities that can be seen in Mizoram University. (*University Brochure, 2014*):

- Since 2002 Mizoram University has been a NET (National Eligibility Test) centre, and from 2004 it also became a SLET (State Level Eligibility Test) centre.
- Mizoram University has 28 affiliated Colleges, out of which one is a Constituent College i.e. Pachhunga University College (PUC)
- The academic programme of PG and UG of Mizoram University are in the mode of CBCS (Choice Based Credit System). The programme of this system was mandated by the UGC in 2009.
- To stay advanced and students and faculty with the best of the latest services, the University campus has provide WiFi connectivity for hostels, residences within the campus and some departments. Lots of efforts are being made to make the whole University campus for WiFi accessible.
- The ‘Permanent Geodetic GPS Station’ has been installed to monitor ground motion in the region.
- Several departments had their own activity. In the sense that the Department of Environmental Science has develop a botanical garden in 7 hectares of the University land, comprising a number of green houses, a fruit garden, a herbal garden, Bambusetum and Arboratum. It has also installed an air pollution monitoring devices.
- Mizoram University has two Helipads.
- Within the University campus there is a school named Kendriya Vidyalaya. The school was established since 2010.
- Mizoram University is an eco-friendly institutions of which it has 700KWp Solar photo voltaic power plant for electricity generation. Solar street lights and Solar Water Heater were planted within the campus.

- For water harvesting and storage, a number of 18 RCC Reservoirs have been constructed.
- The University is also equipped with the facilities like Amphitheatre, which is for entertainment and performances. Multipurpose Hall, which is for indoor sports, gym, also for entertainment and performances. Basketball court, Volleyball court etc..
- The Mizoram University Auditorium is also located near to the administrative building. This is also equipped with excellent sound system, Stage Lightning System, Fire Fighting System, Central AC and Exhibition Hall. The auditorium is also equipped with disabled friendly of which ramps and spaces for wheelchairs are present.
- Mizoram University is differently-abled friendly with the following facilities-
 - a) Full exemption of fees as per provisions of MZU Ordinance OF – 1
 - b) Rs. 1000/- per month Escort/Reader Allowance.
 - c) Rs. 300/- is also given for Writer Allowance in each internal test and Rs.500/- for end semester examination per course.
 - d) Digital voice recorder to enable them to comprehend classroom lectures.
 - e) One Basic Braille Embosser, Duxbury Braille Translator, two computer sets equipped with Readit Wand Scanner, Supernova Screen Reader and magnifying facilities has been installed at the Central Library of the University with the help from M/s Sparsh Products, Dehradun in 2011.
- There were also so many ongoing projects, the major works within the University are-
 - a) Underground water storage tanks for rain water harvesting with a capacity of 1,20,00,000litres.
 - b) Construction of building for Civil Engineering and School of Education.

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CHAPTER –3

LIBRARY RESOURCES AND SERVICES TO SCHOOL OF ENGINEERING AND TECHNOLOGY (SET)

3.1 Introduction

The main role of library is to provide right and authentic information to the user communities in the right time irrespective of way whether printed form, electronic form, telephonically or any mode of information as the users calls onto the librarians. In order to fulfill this role the academic library provides several resources and services to its user communities. The sources wherefrom we get information are information sources. This source comprises documents, non-documentary, organizations, and human beings. The two broad categories of source are: documentary and non-documentary sources. For example, a dictionary is a documentary source and an expert or a university is non-documentary source. The Information sources becomes a resources if utilize by anyone. Services within the library are the activities offered to help the users for easy access and easy consultations.

3.2 Resources

Resources had been the only thing that sustained human activity. There can be a lot of resources; it can be anything which benefits others, for example: e-resources, books, journals, hardware as well as human being etc. Resource is stated that “A resource is a source or supply from which benefit is produced. Typically resources are materials, energy, services, staff, knowledge, or other assets that are transformed to produce benefit and in the process may be consumed or made unavailable” (Wikipedia 2015). Resources can be defined as the inputs used in the production of those things that we desire. When resources are productive, they are typically called factors of production. Whenever we talk about the resources it is necessary to have a proper management process. In organizational studies, resource management is the efficient and effective development of an organization's resources when they are needed. Such resources may include financial resources, inventory, human skills, production resources, or information technology (IT). Resource management is crucial for library in order to make the effective development. This will benefit the user community, staff and the University as well.

3.3 Types of Resources:

Broadly analyzing, there are three major resources, such as Natural, Human and Capital Resources. Following are its explanation:

- **Natural resources** are something from nature that people can use, such as trees, land, water, animals, and minerals, etc.
- **Human resources** are the people needed to grow or make and sell a product or service. The people who came to live in Community used their human resources (their labor) along with the natural resources, to build the roads, railroad, and buildings, etc.
- **Capital resources** include money to start a new business, tools, buildings, machinery, and any other goods people make to produce goods and provide services. The items the people in Community produced are called capital resources.

But as a library concern it is necessary to concentrate in pointing out the library resources. Resources can be categorized into different ways, as given follows:

- Resources: Documents and Non-Documents
- E-resources
- Natural Resources
- Human Resources

- Financial Resources

3.4 Library Resources

Library resources are mainly divided into two categories, namely, documentary and non-documentary sources they are:

3.4.1 Documentary sources

All resources in the form of documents are documentary sources. The connotation of the term 'document' has undergone a sea change in recent years and now includes among others books, periodicals, manuscripts, videotapes, computer files and databases. List of documentary sources as well as the resources usually available in the library is given below:

- Books
 - Treatises
 - Monographs
 - Textbooks
 - Reference books
 - Dictionary
 - Encyclopedia
 - Handbooks
 - Manuals
 - Data books
 - Catalogues
 - Bibliographies
 - Directories
 - Yearbooks
 - Almanacs
 - Biographical dictionaries
 - Atlases
 - Gazetteers
 - Guidebooks
 - Historical information sources
 - Manuscripts, Periodicals, Patents, Standards, Theses, Conference documents, Souvenirs, Festschriften, Technical reports, Administrative reports, Trip reports,

Articles (popular, technical, research, preprints, reprints), Diaries, Letters, Office files, CD-ROM recordings, Video recordings, Databases, Computer files, Laboratory notebooks, Maps, Globes, etc

3.4.2 Non Documentary sources

We have two main types of non-documentary sources of information, i.e. humans and organizations. Human and Organization are important library resources, it thus plays a vital role for the development of the library. Following are the different categories within Human and Organization:

a) **Humans** - Under humans there are numerous categories, however, we shall consider only the following categories:

- Consultants
- Experts
- Resource persons
- Extension workers
- Representatives of firms
- Technological gatekeepers
- Invisible college
- Common men

b) **Organizations** - Organizations are also important sources of information. There are different categories of organizations and they provide different types of information. Information provided by an organization is generally considered to be authentic. Here we are going to discuss about the following categories of organizations highlighting the various types of information that these agencies can provide.

- International agencies
- Government ministries and departments
- Research and development organizations
- Academic institutions
- Societies
- Publishing houses
- Press
- Broadcasting houses

- Libraries and information centres
- Museums
- Archives
- Exhibitions
- Trade fairs
- Database vendors
- Information analysis centres
- Referral centres

Dr.S.R.Ranganathan based on the physical characteristics of documents classified documentary sources of information into four categories. These also reflect the chronological order of their development as:

- | | | | |
|------|------------------|---|--|
| i) | Conventional | : | Books, periodicals, Map etc. |
| ii) | Neo Conventional | : | Standards, specification, patent etc. |
| iii) | Non-Conventional | : | Audio visual, microcopy etc. |
| iv) | Meta Document | : | Direct records unmediated by human mind. |

Library resources such as Documents and Non-Documents always have a specific information sources, the sources were separate into three categories such as Primary, secondary and tertiary sources. Following are its explanation:

a) Primary sources:

It is the original source of information that has not been interpreted or analyzed. Primary sources are those in which the author for the first time supplies evidence, describes a discovery, makes or drives a new proposition or brings forward new evidence about previous proposition. It was created at or near the time being studied, often by the people being studied. It is a fundamental, authoritative document related to a subject of inquiry, used in the preparation of a later derivative work. Thus, the primary sources of information are basic sources of new information which are not passed through any filtering mechanism like condensation, interpretation or evaluation and are the original work of the author. Primary sources may include periodicals, patent, standard, report, reprint, trade journal, classic book, letters, diaries, and other personal papers, photographs, interviews and transcripts, government and historical records, newspaper clippings, Statistics, Research articles, Blogs, Websites, etc.

There are certain primary sources of information, which remain unpublished. Very often these may be consulted for historical interest. Such materials include laboratory note book, memoranda, diaries, letters to and from a particular individual, company, etc. The library also tries to procure such type of material if it comes within its scope of area or is relevant to its purpose.

b) Secondary sources:

Secondary sources are the sources which are created from primary material, interpreting original material. A document concerning a particular subject of inquiry which is derived from or based on the study and analysis of the primary source of information is called the secondary source of information. In the secondary source of information the original information is selected, modified and arranged in a suitable format for the purpose of easy location by the user. The secondary sources of information thus provide digested information and also serve as bibliographical key to primary sources of information. Secondary sources include text book, reference book, review of the literature, etc.

c) Tertiary sources:

The tertiary sources of information are to provide information about information and so acts as a guide to the primary and secondary sources of information. The main function of tertiary sources is to aid the user in using primary and secondary sources of information. The tertiary sources of information acts as a tool in understanding and locating information such as bibliography of bibliographies, guides to libraries, other organizations, indexing and abstracting periodicals, Databases, Subject Gateways, list of accession, list of research in progress, directories, etc. Tertiary sources are again differentiate into three types: (1) sources that are purely based on secondary sources e.g. bibliography of bibliographies; (2) sources that are key to primary and secondary sources, e.g. guides to reference sources; and (3) sources like research in progress.

3.5 Library Services

Bua and Yawe (2014) stated that the fact remains that any library is in the business of offering services to its users. For the library to be functional, the services should correspond with the needs of its users because the user is the very reason for the existence of the library and it ensures that the services so provided are exploited to the maximum. Any library that

wants to improve its services to meet with views, opinions and perception of its users must solicit the help of its users to identify areas of weakness in order to improve upon them.

According to Withers (1994) academic library services include:

- a) Circulating materials to eligible patrons under equitable policies,
- b) Providing reference referral services,
- c) Providing indexing and abstracting services covering the professional, periodicals received in the library,
- d) Providing current awareness services,
- e) Providing continuing instruction to patrons in the effective use of the library (user education),
- f) Preparing a library handbook giving details of the rules, resources, services and staff of the library and making it available to patrons free of charge or at minimal cost,
- g) Promoting inter-library cooperation loan,
- h) Providing of computer services and convenient hours of services,
- i) Displaying newly received books in an appropriate place and arranging book exhibitions.

The degree to which these services satisfy the needs of users will show how efficient and effective a particular library is.

Library services are regarded as social services which are bound to stimulate the reading habit of the society, including people in the academic environment. Library services present a picture of remarkable variety and play a vital role in the education, economic, cultural and recreational life of the entire population (Bua and Yawe, 2014). The basic objectives of library services are to provide required information to its users and to save the precious time of the library users.

3.6 MZU Library Resources and Services

There can be so many library resources if we take it globally, but here we will confine only to the Central Library of Mizoram University. The central library has so many collections in the field of books and periodicals. It thus also contains so many e-resources which can be consulted. The proof of the 5th law of Library Science i.e. Library is a growing organism, can be found in the Central Library of Mizoram University. The central library is continuously growing and it continues to have a lot of development in various aspects. Growth may be seen in its holdings, users and application of technology.

The Central Library has different types of resources and collections. The total collection of the library by 31st March, 2015 included with the number of 1,01,726 books, 256 Thesis, 177 M.PhilDissertations, 294 Master Degree Dissertations/Project Work and 11,005 Bound Volumes of Journals. Presently, the Library subscribes 226 Journals, 48 General periodicals and 14 dailies (English-5, Mizo-8, Hindi-1). The total library membership is 2,872 comprising 379 UG, 1405 PG Students, 123M.Phil, 526Ph.D scholars, 233 Teachers, 32 Guest Lecturers, and 171 Non-teaching staff. There are 2 Departmental Libraries also. During 2014-2015, the library had 26,062 visitors and the library user borrowed a number of 26,779 books.

Since 2008, the entire library holdings have been made available in machine readable catalogue. Using WebOPAC, the computerized bibliographic information of the library holdings have also been available for users' searching throughout the campus through Local Area Network (intranet). For easy and prompt service to the users, automated circulation system using barcode technology has been used since 1st December, 2008. The library has been providing and lending reprographic services, Orientation Programmes for newly admitted students of various Academic Departments.

Mizoram University had been pursued the digitization of its own documents and publications for setting up of an 'Institutional Repository' and on the intranet the same had been hosted since May, 2011. The repository thus provides free access to all types of institutional research outputs within the campus network (Intranet). Since December 2011, computerized Braille System for blind students had been successfully installed and operated in the Library. In order to improve the efficiency of library operations, the implementation of 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 had been completed. This system has been in use since 21st March 2012.

In November 2013 a separate room with 15 computers had been created for accessing and downloading of e-resources by the readers. Since 2013, the library has a power backup of 100 KW stand alone PV power plant had been installed for uninterrupted power supply. In November 2013, a number of 4 CCTVs had been installed in different parts of the building. The CCTVs monitored the activity of the users as well as it help the security counter. The

Central Library still holds its reputation. In November 2013, the library earned appreciation from NAAC Peer team as “having good facilities, good maintenance and a beautiful library” as well as “one of the best libraries not only in North-East India, but Eastern India”.

Satisfying users’ needs in the academic libraries has been the primary objective of libraries and librarians. Every year, new students come to the university with different needs and expectations. Furthermore, new technologies, databases, and more innovative systems for accessing information, have made the library more complicated and challenging for librarians and users alike. The abundance of resources available and the difficulty in being able to evaluate these resources also create problems for users. The inability to easily identify the specific use of a library’s services because of the new technologies, and the difficulty to access information sources can all contribute to user dissatisfaction among academic library users.

Since 2005, Mizoram University used to publish an annual report, reporting the events, number of staff, details of the departments, regular worker and contingency, about the staff and students who belong to SC, ST, General and OBC, all the information and events which takes place within a year. Concentrating to Central Library, report of the collection of books with effect from 01/04/2014-31/04/2015 as follows:

Table-8: Subject Wise Collection of Books (01.04.2014 – 31.04.2015)

Sl.No.	Departments	No. of Books
1	Zoology	62
2	Botany	19
3	Biotechnology	41
4	Physics	114
5	Chemistry	127
6	Mathematics	52
7	Forestry	92
8	Environmental Science	43
9	Geology	46
10	H.A.M.P	29

11	Geography	69
12	Ext. Education and Rural Development (EE & RD)	22
13	Electronic Engineering	192
14	Information Technology	141
15	Computer Engineering	270
16	Electrical Engineering	203
17	Economics	31
18	Management	268
19	Commerce	198
20	Lib & Info. Sc	100
21	Mass Communication	40
22	Social Work	39
23	Psychology	30
24	Public Administration	95
25	Political Science	146
26	History	67
27	English	97
28	Mizo	568
29	Education	37
30	Hindi	251
31	Planning & Architecture	79
32	Gen. Reference	91
33	Sociology	131
34	Disaster Management	47
35	Petroleum exploration	9
36	Biodiversity Research Centre	22
37	School of Education	1440
38	Civil Engineering	425
	TOTAL	5,733
39	Gift Books	175
	GRAND TOTAL	5,908

(Source: MZU Annual Report 2014-2015)

3.6.1 Services

The Central Library of Mizoram University is disabled friendly library; it is surrounded by a good environment where noise pollution cannot be disturbed. It is one of the best libraries in eastern India. Students are provided good reading materials which have been made available in Machine Readable Catalogue since 2008. From INFLIBNET the Central Library also received several e-resources at free of cost. Services provided to SET in Mizoram University Central library is listed as follows:

- Lending service: Automated Circulation system using dual technologies of RFID and Electro Magnetic (EM) since 21st March 2012.
- Reference service: Reference books are provided to users to consult within the Library.
- Current Awareness Service (CAS): CAS like different kinds of periodicals such as newspapers, journals, magazines are provided to consult by the users.
- Inter Library Loan: Borrowing MZU Central Library books by other library are made possible in applying with a correct procedure.
- User Orientation Programme: Library Orientation programme is being conducted for newly admitted students, where they are introduced and taught how to access the various types of facilities and resources in the Library.
- Audio/Video Facility: Audio and video cassette, CD, DVD, microfilm, floppy disc, microfiche etc are made available to consult by the users.
- Reprographic service: The services help the user to make duplication on the insufficient books of which every user can get the material at a time. But it is not allowed to make photocopy of the whole book and the theses, a few selected page of the book can only be photocopied.
- OPAC/WebOPAC: Computerized Bibliographic Catalogue search facility is provided in the Library with OPAC and throughout the campus using WebOPAC.
- RFID Patron (library user) self check facility(self service)
- Access to Institutional Repository of electronic theses.
- Computerized Braille system for Blind students
- New arrival: Latest arrivals regarding any subject are used to keep in new arrival rack for the users to access.
- Special Collection: Special types of books were provided to patrons to access and read within the library. The collections are not allowed to borrow.
- Internet service: Library provides access to e-resources.

The above points which we have mentioned are the major resources and services usually available in the academic library which are also provided to satisfy the user community. A lot of effort was taken by the Librarian and staff in collecting the resources and maintaining different services within the library to fulfill the user requirements.

3.6.2 Books

Books are definitely one of the biggest sources of knowledge and intelligence. There are wide varieties of books written by different authors covering different areas. Books can be read out of passion as a hobby, or books can also be read to gain knowledge. In any case, books always serve the same purpose and that is helping in enriching valuable knowledge.

A book is a set of written, printed, illustrated, or blank sheets, made of ink, paper, parchment, or other materials, fastened together to hinge at one side. A single sheet within a book is a leaf, and each side of a leaf is a page. A set of text-filled or illustrated pages produced in electronic format is known as an electronic book, or e-book.

Books may also refer to works of literature, or a main division of such a work. In library and information science, a book is called a monograph, to distinguish it from serial periodicals such as magazines, journals or newspapers. The body of all written works including books is literature. In novels and sometimes other types of books (for example, biographies), a book may be divided into several large sections, also called books (Book 1, Book 2, Book 3, and so on). An avid reader of books is a bibliophile or colloquially, bookworm (Wikipedia 2015).

a) Types of Books:

Generally there were two types of books there were Fiction and Non-Fiction. All books are either fiction or non-fiction. Fiction books contain a story which was made up by the author. Non-fiction books contain factual information, such as biographies and history books.

b) Systems for Classification of Books:

Library always have a vast collection of books, in order to manage and arrange for easy access it is necessary to implement a systematic classification scheme. Library Classification scheme aimed to provide a useful ordering of documents for easy access and reduced time

consumption in the library by the users. Following are different types of Classification Systems:

- Bliss bibliographic classification (BC)
- Chinese Library Classification (CLC)
- Colon Classification
- Dewey Decimal Classification (DDC)
- Harvard-Yenching Classification
- Library of Congress Classification (LCC)
- New Classification Scheme for Chinese Libraries
- Universal Decimal Classification (UDC)

c) Uses of Books:

Books are primarily used for reading purposes, besides that books can be used for different purposes, they are given as follows:

- A book can be an artistic artifact, a piece of art; this is sometimes known as an artists' book.
- A book may be evaluated by a reader or professional writer to create a book review.
- A book may be read by a group of people to use as a spark for social or academic discussion, as in a book club.
- A book may be studied by students as the subject of a writing and analysis exercise in the form of a book report.
- Books are sometimes used for their exterior appearance to decorate a room, such as a study.

3.6.3 Reference Books

The Reference Books of the library are those that are meant to provide quick and easy accessible of information by any users choosing on any particular topic. Reference books are intended to guide teachers, researchers, students and any users in their studies. The reference collection contains information on a wealth of topics, but that information does not typically go into great depth. Reference books are meant to be accessible to as many people as possible. Most library usually allowed the material to be Xerox but they are not allowed to issue and takeout from the library for any purpose.

a) **Reference collection:** There are a number of 11512 reference collections in the Central library of Mizoram University. They are kept on the stack for consultations by any kind of users. The reference collection may include-

- 1) Encyclopedia—Among the encyclopedias, some of the useful ones are:
 - Americana Encyclopedia
 - British Encyclopedia
 - Encyclopedia Britannica
 - Encyclopedia of different subject such as encyclopedia of Botany, Library and Information Science etc
- 2) Dictionaries
- 3) Year Books
- 4) Hand Books
- 5) Geographical Sources
- 6) Statistical Sources
- 7) Bibliographical Sources
- 8) Directories
- 9) Gazetteers, Almanacs, etc
- 10) Rare books are also often collect within the reference section.

b) **Theses and Dissertations:** Reference collection also includes theses and dissertation submitted by M.A, M.Phil and Ph.D scholar. There are 200 theses, 390 dissertation submitted by M.A and M.Phil, and 110 soft copy of PhD theses. The theses and dissertations are first submitted to the exam department, after examining the theses and dissertations they are send back to the library for reference purpose and accessing by the users.

3.6.4 Periodicals

Periodicals are simply we can say the magazine, journals or newspaper which are published and issued in a regular interval. Periodical help the subscriber to acquire latest information, factual information, fiction and non-fiction etc. Periodicals are not limited to the print format. Some periodicals are published as online, digitized information residing in a remote database or in CD-ROM or other optical disc format. Periodical articles are often the best sources of

research for papers as they contain recent information.(Source: *Library and Information Resource*)

a) Popular vs. News

The term "magazine" is usually used to refer to general periodicals, popular periodicals that appeal to broad groups of readers. Articles in popular periodicals tend to be shorter in length and do not usually contain highly specialized or technical language. News can refer to some periodicals and newspapers. Newspapers consist of short articles and are also non-technical in nature. They tend to cover current events and issues. They are excellent "primary information" resources because they provide firsthand reports or accounts of events. News periodicals such as "Time" and "Newsweek" are current event oriented literature in magazine format.

b) Trade vs. Scholarly

Trade periodicals refer to magazines that are targeted at specific occupational groups and businesses. They contain shorter articles but tend to be aimed at those who share an occupation or business goal in common, and offer insights into trends and thought on particular aspects of commerce and service industries. Scholarly periodicals are more highly specialized, contain a higher level of technical terms and tend to follow a more complex conversational pattern that recalls earlier treatments of a topic or research area. The intended audience for the scholarly periodical article is usually a more specific and limited segment of the population. Scholarly articles frequently contain many references and a lengthy bibliography. Scholarly journals frequently have rigorous submission standards. Articles are usually either peer-reviewed (also known as refereed) and can also be "blind-refereed." Scholarly periodicals can be divided into three general areas: humanities (such as art, literature or journalism), sciences (medicine, CIS, agriculture) and social sciences (sociology, anthropology, business).

3.6.5 Types of Periodicals:

There are different types of periodicals such as Scholarly Journals, Trade periodicals, Magazines, Newspaper, etc. which are published periodically such as daily, weekly, monthly, quarterly as well as annually and so on. Types of periodicals along with its details are given in the below table:

Table-9: Types of Periodicals

	Scholarly & Research Journals	Professional, Trade & Industry Journals	Journals of Commentary & Opinion	Newspapers	Popular Magazines
Examples	American Historical Review Bioscience New England Journal of Medicine Social Psychology Quarterly	RN Library Journal Science Teacher Restaurants and Institutions	Mother Jones National Review Atlantic New Republic	New York Times Washington Post Christian Science Monitor Wall Street Journal	Time Newsweek Sports Illustrated Reader's Digest
Values & Uses	Reports of original research; In depth analysis of issues related to the discipline; Lengthy articles. Academic level book reviews; Refereed or peer-reviewed	Current trends, news & products in a field; Company, organization, & biographical information; Statistics, forecasts; Employment & career information; Book and product reviews	Commentaries on social & political issues; Some in-depth analysis; Political viewpoints, liberal, conservative & other; Sometimes acts as voice of activist organization; Speeches & interviews; Book reviews	Current information; News stories; Local and regional focus; Classified ads; Editorials; Speeches; some book reviews; Primary source for information on events	Current events; Hot topics; Primary source for analysis of popular culture; Short articles; Generally not much depth; Interviews; some book reviews

Language	Academic; Can be very technical; Uses the language of the discipline	Written for practitioners; Can use jargon extensively	Written for a general educated audience	Written for a general educated audience	Non-technical, often simple language
Authors	Researchers, academics, scholars, etc.	Practitioners in the field or journalists with subject expertise	Extremely variable; Can be academics, journalists, representatives of various “groups”	Journalists	Generally, journalists and freelance writers
Sources	Footnotes and bibliographies, Often very extensive documentation	Occasional brief bibliographies; Sources sometimes cited in text	Occasionally cite sources in text or provide short bibliographies	Rarely cite any sources in full	Rarely cite any sources
Publisher	Universities, scholarly presses or academic and research or professional organizations	Commercial publishers or professional and trade associations	Commercial publishers or non-profit organizations	Commercial publishers	Commercial publishers
Graphics	Graphs, charts, formulas, depending on the discipline; Do not contain glossy	Photographs, charts, tables, illustrations of all sorts; ads related to the profession	Varies a lot; Some very plain, some have graphics, colors and ads	Pictures, charts, ads of all sorts	Glitzy, many graphics and pictures; full of color ads

	ads				
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(Source: <http://libguides.southernct.edu/c.php?g=7347&p=35344>)

3.7 Mizoram University Central Library Periodical Section:

This section is for procuring, maintain and manage periodicals services to the library members and the users as well. Periodicals include all publications issued at regular intervals such as magazines, journals and newspapers, and are an essential component of a library collection. Every library needs a healthy, colourful and knowledgeable periodicals, it is not always clear that, which titles are essential and which are not. Librarians are in an ideal position to make this assessment. There is two staff in this section, namely, Professional Assistant (PA) and Semi Professional Assistant (SPA)

3.7.1 Journals: There are 196 journals subscribe from Central News Agency (CNA) and 29 journals from Panima. Total journals subscribed are 225 during 2014-2015. Online journals were not subscribes due to lack of funds from UGC.

3.7.2 Magazines: Popular magazines subscribe from CNA are 12 magazines, they are, India Today, University News, Reader Digest, Frontline, Overdrive, etc., There are 32 Magazines from M.S.Agency, like Mizoram Science Journal, Real Life, Lunglen, Meichher, etc., and from the local firm 4 magazines are being subscribe. The overall total subscriptions of magazines are 48.

3.7.3 Newspaper – subscription and recording: Mizoram University Central Library is subscribing 8 local newspapers and 5 national newspapers. The local newspapers are- The Mizoram Post, Vanglaini, News Letter, Newslink, The Zozam Times, Chhawrpial, The Aizawl Post, Lunglei Times national papers are- The Telegraph, The Statesman, The Times of India, The Indian Express (The Sunday Express), The Hindu.

3.8 Electronic

Information Technology had made drastic change in every field of life. After the advent of electronic material since 1990s libraries also develop rapidly. Different systems and services have evolves, meanwhile many new devices have been emerged to operate the information resources. Hawthorne (2008) Each technological development in library electronic resources

during the 20th century was intended to make access to resources more direct, convenient, and timely for the user. The implementation of electronic resources made the library a growing organism as libraries adapted processes and reorganized staff repeatedly to accommodate the changes inherent in the use of constantly changing technology. Before the introduction of World Wide Web electronic resources had been used in the library. The use of electronic resources in libraries began with the development of the machine-readable cataloging (MARC) format in the mid-1960's. introduction of the World Wide Web and its subsequent ubiquity.

3.8.1 Electronic Resources

Electronic resources are the resources of electronic form rather than conventional. Johnson (2012) Electronic stated that resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are:

- E-journals
- E-books
- Full-text (aggregated) databases
- Indexing and abstracting databases
- Reference databases (biographies, dictionaries, directories, encyclopedias, etc.)
- Numeric and statistical databases
- E-images
- E-audio/visual resources

An electronic resource is defined in the article Library of Congress Collections Policy Statements Supplementary Guidelines as any work encoded and made available for access through the use of a computer. It includes electronic data available by (1) remote access and (2) direct access (fixed media). In other words: Remote access (electronic resources) refers to the use of electronic resources via computer networks. Direct Access (electronic resources) refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

3.8.2 E-resources subscribe by Mizoram University

Mizoram University had subscribed 22 e-resources from UGC InfoNet Digital Library Consortium, which is under InFLIBnet Centre - an Inter University Centre of UGC as given in the following table format:

Table-10: E-resources subscribe by Mizoram University

Sl. No.	E-resources	Subscription Period	Users/ Journals
1	American Chemical Society	January 2015 to December 2015	Multiple
2	American Institute of Physics	January 2015 to December 2015	Multiple
3	American Physical Society	January 2015 to December 2015	Multiple
4	Annual Reviews	April 2015 to March 2016	Multiple
5	Cambridge University Press	January 2015 to December 2015	Multiple
6	Economic & Political Weekly	April 2015 to March 2016	Multiple
7	Emerald	April 2015 to March 2016	Multiple
8	Institute of Physics	January 2015 to December 2015	Multiple
9	ISID	April 2015 to March 2016	Multiple
10	JCCC	January 2015 to December 2015	Multiple
11	JSTOR	January 2015 to December 2015	Multiple
12	MathSciNet	January 2015 to December 2015	Multiple
13	Nature	January 2015 to December 2015	Multiple
14	Oxford University Press	April 2015 to March	Multiple

		2016	
15	Portland Press	January 2015 to December 2015	Multiple
16	Project Euclid	January 2015 to December 2015	Multiple
17	Project Muse	January 2015 to December 2015	Multiple
18	Royal Society of Chemistry	January 2015 to December 2015	Multiple
19	Springer Link	April 2015 to March 2016	Multiple
20	Taylor & Francis	January 2015 to December 2015	Multiple
21	Web of Science	January 2015 to December 2015	Multiple
22	Wiley-Blackwell	January 2015 to December 2015	Multiple

(Source: <http://www.inflibnet.ac.in/econ/eres.php?memID=126>)

3.8.3 Technical Requirements in Selection of Electronic Resources

Electronic resources required a technical system to ensure the resources are authenticated and reliable for research work and referencing. It is necessary to ensure that the resources are compatible with the library hardware and software. Electronic resources have had so many specifications and requirements in order to utilize accurately. It is necessary to acquire materials by the library to solve such oblique in accessing the electronic resources. Following are the technical requirements stated by Johnson (2012):

- **Method of Access-** What methods of access are available (e.g., stand-alone, remote via Web, local Web mount or hosting)? Access to remote hosts via Web is often preferable because it provides additional benefits such as faster updating, optimum access, reduced burden in terms of storage, preservation and maintenance.
- **Authentication-** What methods of authentication are available (e.g., IP filtering, login and password)? Access via IP filtering is usually preferable because it typically provides

simultaneous access for multiple users. IP-address recognition also provides access to users via a proxy server allowing authorized library users to access content from outside the physical confines of the library. In such circumstances a commercial database “sees” and recognizes the library IP address, not the user’s home or any other IP addresses, and grants this user access. It should however be noted that access via proxy server must be predetermined in the license agreement. Access via login and a password is less preferred as it presents a number of challenges around dissemination and control of passwords, particularly when a library serves a large user base. If a vendor insists on password-based access, a disclaimer in the license agreement must be made about the library’s inability to control distribution of this password to non-affiliates.

- **Compatibility-** The resource should be compatible across a range of platforms and where local installation and maintenance are required, should be compatible with existing hardware and software supported by the library. The selector should also determine if the electronic resource requires any special hardware, software, multimedia and/or audio capabilities. Where this is the case consideration needs to be given to the additional cost of acquiring, installing and supporting the appropriate software or multimedia components. Consultation with staff responsible for reference services may be needed to determine if software or add-on components are required for all or only some of the public PCs before making a selection decision. Examples of where compatibility issues might be presented include where web browsers are required or where the database file format varies from the norms.
- **Browsers-** The issue of web browsers is very important. Occasionally, libraries might have older versions of browsers installed on public PCs, while the databases are designed for the newer versions. Once more, the selector has to negotiate with the technical systems/IT people. Some of the databases (particularly those with text in non-Roman script) are designed to work only with the latest browser version. UNICODE compliance by browsers and local systems is crucial for adding electronic materials in non-Roman script to the library collection. However, if a selector’s institution does not support this particular browser, and is not UNICODE compliant and the selector makes the decision to acquire it, the product will be useless. The selector has to make sure that all the requirements are met before making the acquisition decision. The required browser

version, and additional keyboard drivers (if necessary) must be installed on terminals in the public service areas. The library must inform its users about browser requirements, all other requirements, and location of access points.

- **Content format-** Determination of which formats database files use is important: HTML, SGML, XML, PDF, etc and media formats such as JPEG, MPEG etc. Each of these formats has positive and negative features. HTML is fine for shorter documents, but if one has to deal with a long document (over 1,000 K), SGML is better for managing large and complex documents giving greater consistency and information integrity, improved precision around information retrieval, flexibility for information reuse, and increased longevity of information. SGML files, however, require Panorama or Multidoc Pro reader installations on every public terminal or every PC from which SGML files are accessed. XML is the most desirable format as it is capable of dealing with large documents and does not require a reader to be installed on a PC. If a serial, for example, has a lot of pictorial material or if it is an art publication, you want these pictures to be preserved. Some of these types of publications are in PDF format. With this format however, one loses global searching capabilities, it takes a long time to download large files, and a different method of navigation is required. In addition, users must have the Adobe Acrobat reader installed on their PCs. Databases of AV contents require different players or programs installed and should allow plug-ins and active controls as well.

3.9 Computer Section of Mizoram University Central Library

The computer section of the library provides 15 computers for accessing e-resources by the users and the computers are equipped with internet connections. Computers are located in a separate room with a vast and comfortable accessing. They are free for use by any visitors of the library. This section is looked after by two library staff, namely- Information Scientist and Semi Professional Assistant (SPA)

3.9.1 Server: The server is ILMS (Integrated Library Management System) and having a tool known as TLSS (Total Library Software System). It has several module, like:

- Accession module
- Circulation module
- Acquisition module

- Member management module
- ILL facility

It also supports RFID devices for library security and automation system. The other server is Storage server of which every document in the library is recorded in this server and it is accessible only within the library itself. Thus, the section maintains all the data recorded in the library. It is very important to have this section in the library. It thus managed the server and provides a digitized form of document to the users.

3.9.2 Back Volume

Back volume referred to as the old volume of periodicals which are bind together for future references. Mizoram University Central Library has a separate section of Back Volume where users can consult during office hours. Different back volume Journals are bind in this section, and kept in the stack for reference. They also bind magazine and newspaper, but no finished binding are available, it is still under processing. There are two staff to look after the books in Back Volume Section of Mizoram University Central Library. Following are the types of binding in Library:

Journal Binding: When loose Journals are bind it is called bounded Journals or bound journals. Binding is done with leather and cloth or half cloth and half leather. All the bounded journals are back volume i.e. outdated journals, on one bounded journal there can be three or more volume.

Journal Reference: The bounded journals of back volume are kept on the stack for reference, they are well maintained and are not allowed to issue and borrowed, they are mainly kept for reference purpose especially by the users. They are allowed for Xerox, i.e. Xerox within the library itself, they are not allowed to take outside for any purpose.

Thus, this section has preserved all the back volume of periodicals in binding. The section provides the back volume to consult by the users and the researchers. It has a good and comfortable place to sit and read the material. The section has a good functioning body and has a huge amount of collection.

3.9.3 Others

1) **Circulation Section of Mizoram University Central Library**

Circulation section is the gateway between users and documents which plays a major role in any kinds of library and information system. The section is located at the ground floor of the library, close to the main entrance. Several works have been done under this section. Various functions undertaken by the circulation are- registration of new members, faculties, students and staff, issue of library card, issue and return of books, shelving, sorting of books, providing shelf check unit, fines, gate pass, issuing clearance certificate.

2) **Registration of new members Faculties, Students and Staff:** The registration of new member is done by the circulation section. There is a separate form to be filled by the Guest Lecturer, regular employee and students where the pledge signature and the details of the applicant should be entered. The details include, name, fathers name, designation, permanent address, department, date of birth, identification mark, etc. After taking out and filling up the form, the form is again submitted to the circulation section for the registration. After the registration is done the applicant become the member of library.

3) **Issue of Library Card:** The circulation section has issued the library card to the applicant soon after the membership form is submitted; the card itself is the Identity Card for the university fraternity. After filling up the application form for membership, the card as well as the Identity Card is made prepared for issue to the applicant. The photo also has to be attached, which is usually shot in the computer center. The card contains the detailed information and a past port size photo of the card holder, and a barcode which is important for borrowing the books and for the University activities.

4) **Issue and Return of Books:** The circulation section has done the issue and return of books. The number of books and the due date for issuing the books according to the member are given below-

4 books for MA	-	15days
6 books for M.Phil	-	15days
6 books for Ph.D	-	15days
10books for Faculty	-	15days/whole semester

5) **Shelving:** The returned books are shelved in the stack of a library according to its classification number. This is done by the staff of the circulation section.

- 6) **Sorting room:** Within the circulation section there is a sorting room where the returned books are kept before putting to its final location. They are placed according to their class number for a short period of time. It has a separate room and is maintained by the staff of the circulation section.
- 7) **Clearance Certificate:** This is a certificate given to the member of the library at the end of the academic session. The certificate is given after returning all the books they have borrowed and after clearing the fines in the library at the end of academic session. The Certificate gives information about the clearance.
- 8) **Self Check Unit:** It is the unit where books were issued by our self without any interference of the staff. Only issuing is done in the self check unit. For having the self check it requires the Identity Card / the library card to scan the barcode and after that we need to place the book on to the scanner. After the scanner reads we need to push the touch screen button of the monitor to print the slip of the issue books then we issue the books by ourselves in the self check unit. The issue slip is the print slip of information about the Trans. Id, Member Id, Name, Issue Date, Due Date and Issued by.
- 9) **Fine:**The duration for borrowing the books are usually 15 days. Library fine is imposed to a sum of Rs.1 per day for one book to the defaulters after due state.
- 10) **Gate Pass:**At the main entrance, there is a register for the visitor and a property counter for keeping the visitors belongings. Then after issuing the books, RFID security scanned all the books which are properly issued or not, if books are not issued properly the RFID will beeps instantly while passing the gate. Gate keepers will check all the books issued to the users matching the cards and issue slip/gate pass.
- 11) **OPAC:**OPAC stands for Online Public Access Catalogue by which library user can know availability of documents in the library. The OPAC has the main menu, viz. Basic Search, Advance Search, Expert Search, Sound Search, Web Search, Patron Area, Current Journals, Reports, Feedback, and About Library.The OPAC is accessible through web, and is called web-OPAC.

12) Special Collection: It is a collection of about the history of various world most prominent leaders, North East Collection, Gandhian Collection, Human Rights, etc. The special collections are not allowed for issue and are made for a reference purpose. The special collections are placed at the ground floor, near to the self check unit.

Thus, circulation section maintains all the incoming and outgoing operations in the library. All members of the library visit this section to get the library books borrowed and return. Of all the library activities, the circulation of books for home use is a major public service provided by the library.

13) Technical Section: Technical section is one of the most important sections in the library, without this section there cannot be proper function of the library. The proper arrangement of books on the shelf is mainly due to the works of technical section staff because they have made prepared all the accession number, barcode, tagging, spine label, strip and has made the 3M conversion. Technical section has done the basic work for the circulation of books. They have done tremendous work as given below:

a) Classification: There are several schemes of classification meanwhile DDC(Dewey Decimal Classification) has also its 23rd edition but Mizoram University Central Library is following DDC 22nd edition for classification. Every book in the library has a class number of DDC.

b) Cataloguing: For cataloguing of documents, library uses Anglo American Cataloguing Rules II (AACR2).

c) Assigning of Subject Heading: All the books in the library are assigned with a specific subject heading called LCSH (Library of Congress Subject Heading).

14) Importing of Data (LibSys - TLSS): This is about transferring of data from LibSys to TLSS. As the library is using the new software replacing LibSys, all data,details of books within the LibSys are transferred to TLSS (Total Library Software System). This is done because of the implementation of new technology of the RFID, as LibSys do not support the RFID it is necessary to transfer data to TLSS which support the RFID.

15) Editing of Data: The data entry which has already done in the acquisition section is re-edited in the technical section. This is done by the technical staff.

16) Transcribing: In transcribing the books, several steps have been taken, such as-

a) **Tagging:** It has its square shaped which are usually paste at the back cover of the book

b) **Strip:** It has a long thin slide structure, which are used to paste at the center page closed to the spine of the book. It is paste where one can't find easily and is for security purpose. Strip makes the RFID beeps if it is not issued properly.

c) **Entering Accession Number (Barcode and Spine):** Accession numbers were entered on the book along with barcode and the spine. In the accession seal we can find accession number, accession by, classification by, catalogue by, subject heading by and transcribe by, they are sealed at the back of the title page.

Barcode are paste at the front cover of a book and spine label are paste at the spine of a book. The spine is about the class number of a book. Different colors are used for spine label, black for general books, red for reference book

d) **Paste:** It deals with pasting of the tagging, strip, spine label and barcode. After pasting spine label and barcode, they are again laminated with a thin solid plastic which is the final in pasting.

e) **3M Conversion Station:** It is about scanning of tagging, strip, spine and barcode in order to activate and read by the RFID. After the 3M conversion is done the book is ready to issue. The conversion material is a black color flat square shaped of 1ft.

3.10 Users of Library Resources

Libraries of different parts of the world are access by different kinds of people. People of different kinds access information depending on the library holdings and the content. For example, if a periodical section of a library subscribes only Journals Researchers will visit more than other kinds of user.

According to Kwatra (1992),Users of Library Resources are a person, student, researcher, planner, manager, technologist, policy maker, R&D personnel etc. who visit a library for one or more of the following purposes:

- to browse through a collection of the latest arrivals in the library, current journals and similar others;

- to seek a particular document for consultation or study in the library or borrow the same;
- to obtain current references on a specific topic or bibliography of references over a period;
- to obtain factual information on a topic, event, activity, etc., through reference sources;
- to obtain a photocopy of a journal article, a conference paper or a technical report;
- to get an English translation of a research paper from any non-English language.

Individual and group of persons visiting a library for any of the above purposes are generally known as the community of users of the library.

3.10.1 Users of the Central Library, Mizoram University

The Central Library of Mizoram University is used by all the faculty, students, and staff of Mizoram University. It includes faculty from different departments, research scholars, students pursuing Master Degree, Bachelor students and staff of the University. They can borrow different kinds of book available in the library through their ID card. Outsiders can also use the library during the office hours but they are not allowed to borrow books, but can utilize any kinds of library services within the library.

3.10.2 Concept of User Satisfaction

An academic library satisfying the requests of users implies providing the actual information or services that will meet the needs of an information seeker or user. In the word of Solola (1983) the quality of services rendered to users or readers in any library reflect the quality of the staff. If a library is managed by well qualified, experienced and cultured staff, users will always be encouraged to make use of the library. Sowole (1995) stated that users are described as the *raison-datre* (reason of existence) of the library. It is typically and entirely on their behalf that the organization and administration exists. "User satisfaction is considered as a reliable criterion for determining library effectiveness," (Thong and Yap, 1996). It is therefore very important for the library to keep their users satisfied. It is not only a reliable criterion; it is also perhaps the most vital one.

Lamenting on user-satisfaction and the need for libraries to be well equipped to satisfy its user, Abagai (1998) observes that the use of the library include how to locate information including the technicalities of using the catalogue, the classification system in use, getting assistance from the library staff and having knowledge of library approach to reference

services, borrowing pattern, knowledge of opening and closing time in the library and others. In other words availability of library materials, knowledge of their existence and acquisition of some basic skills on how to locate such materials and information depend on the objectives, policies and pursuance of same by the institutions for user-satisfaction.

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CHAPTER –4

DATA ANALYSIS AND FINDINGS

4.1 Introduction

The data analysis is an important part in the research process so as to find out the result. After collection of the data on the given field of research problem, the data are processed and analyzed in accordance with the outline laid down research plan. Analysis, particularly in case of survey or experimental data, involves estimating the values of unknown parameter and testing of hypothesis for drawing inferences. Since the School of Engineering and Technology have no Professor, and a research scholar omit in analyzing of data. The scholar have distributed a number of 240 questionnaires to faculty and students, and received as much as 211 duly filled in questionnaire from them which comes to 87.91%.

Analysis refers to a systematic examination and evaluation of data or information, in order to determine its essential features and their relation or by breaking into its component parts to uncover their interrelationships. The analysis of data in a general way involves a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing them in such a manner that they answer the research question. Analysis is the product of insight into the total situation, paying upon the assembled facts and giving them a general significance. Data analysis should be stressed that the researcher throughout the exploratory process of his study to some extent organizes and analyses his data. It is the creative aspects of the total study. Data analysis validity depends more upon common sense,

experience, background knowledge and intellectual honesty of the interpreter than upon conformity to any set rules that might be formulated. The data obtained through the questionnaire have been analyzed below to draw inferences.

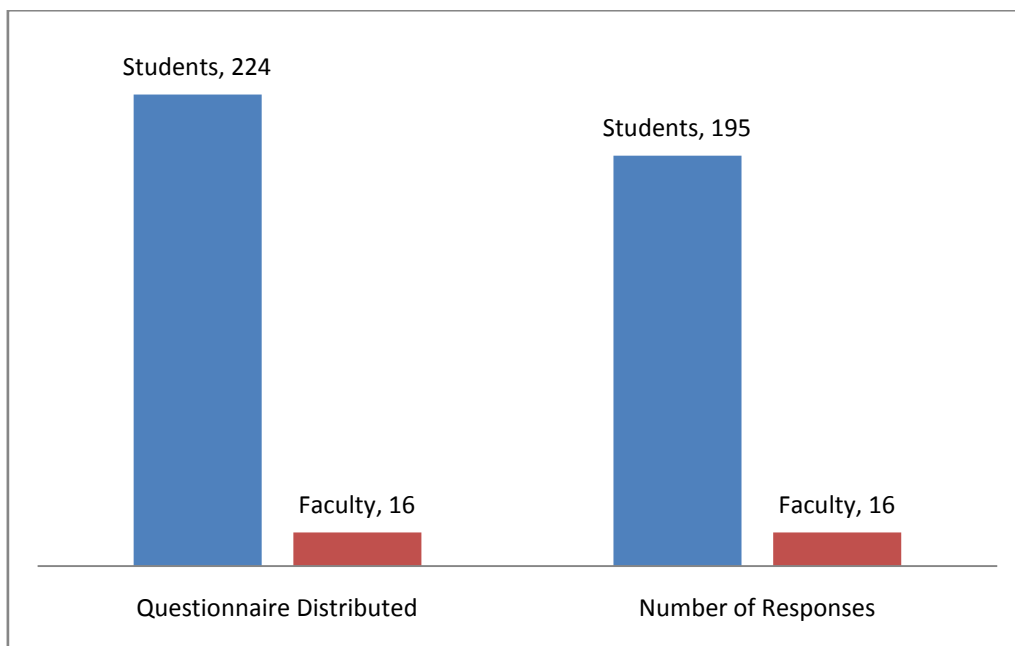
4.2 Number of Respondents

Data relating to the respondents obtained through the questionnaire for the present study has been placed below in Table-11 supplemented with Graph-1 for analysis.

Table-11: Analysis by Responses

Sl. No.	Designation	Questionnaire Distributed	Number of Responses	Not Responded	% of Response
1	Students	224	195	29	81.25
2	Faculty	16	16	0	6.66
	Total	240	211	29 (12.08%)	87.91%

n= 211



Graph-3 Analysis by Response

The data placed in table-11 reflects the total responses of the questionnaire distributed to the faculty and students of the School of Engineering and Technology where out of a total

number of 240 distributed questionnaires, 211 were received which comes to 87.91% response rate leaving behind an unresponsive rate 29 (12.08%). Further, 16 (6.66%) were response rate of the faculty while, 195 (81.25%) were from the students out of 240 questionnaires. The above table and graph shows that, the faculty and students of all the departments within the School of Engineering and Technology express their eagerness to respond the questionnaire which is a healthy sign for both the researcher and the respondents. Meanwhile, in the process they could be acquainted with the information requirements and knowledge about the library.

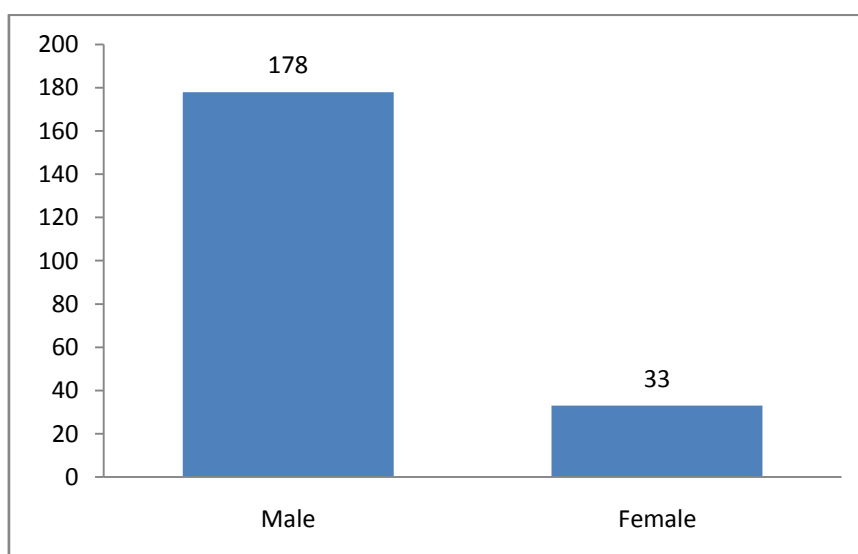
4.3 Number of Respondents by Gender

Data relating to the gender of the total population of 211 obtained through the questionnaire under the study has been placed in Table-12, supported with Graph-2 for analysis. The gender has been classified into Male and Female.

Table-12: Number of Respondents by Gender

Sl. No.	Gender	Number of Respondents	% of Response
1	Male	178	84.36
2	Female	33	15.63
	Total	211	100

n=211



Graph-4 Number of Respondents by Gender

The analysis finds that, out of 211, male constitute highest number i.e., 178 which is 84.36% while female constitute a number of 33 which comes to 15.63%. This shows the awareness of the male respondents compared to the female respondents. The analysis depicts that the male respondents more prone to submit the filled in questionnaire than female. This also shows their eagerness. This also shows the sign of activeness in their studies as well as sincerity.

4.4 Background education

The scholar intended to ascertain the background of the students and faculties to which they belong because it reflects the use of library. Invariably the urban students are most facilitated with library resources including ICT use compared to rural background students. The data relating to this is shown in Table-13 for analysis.

Table-13: Background education

Sl.No.	Background Education	Faculties	Students	Total	%
1	Urban	7	132	139	65
2	Rural	9	63	72	35
	Total	16	195	211	100

n=211

Analysis of the Table-13 reflects that, 139 respondents i.e. 65% constituting both faculties and students belongs to urban area followed by 72 (35%) who belongs to rural area. This is due to the fact that the urban group are better facilitated with library resources including ICT which they used mostly for their learning and research purpose, compare to the rural area enhance the rural area needs attention for better facilities.

4.5 Visit of the Library

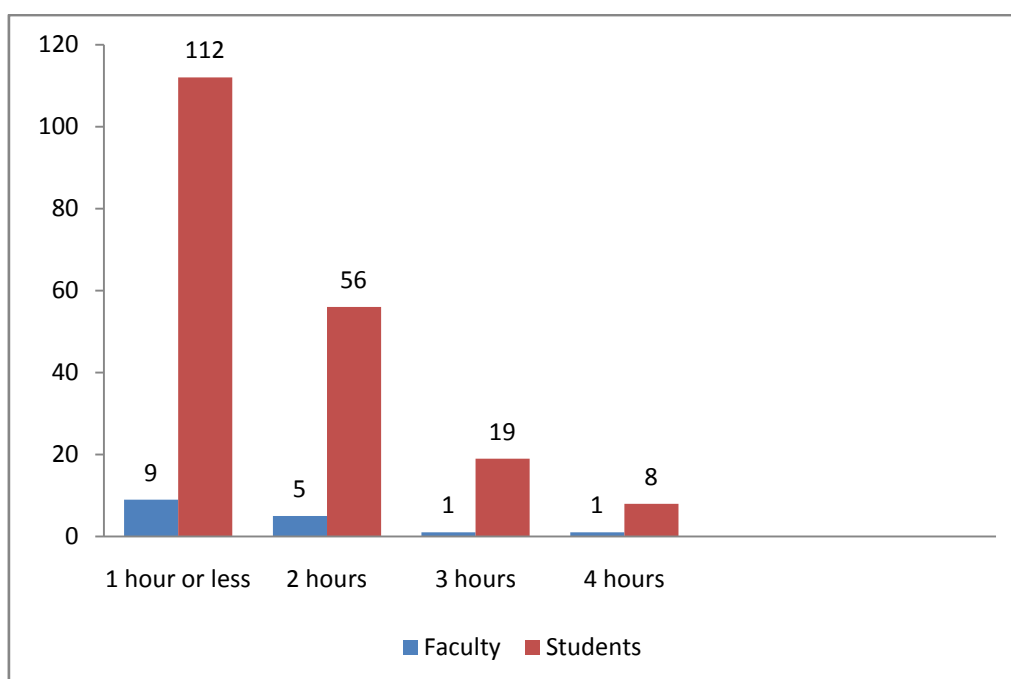
The frequency of visit the University Central library helps us to know about regularity of the library patron for consulting of library resources. The data to the component obtained through the questionnaire was placed below supplemented with Graph-3 for analysis. Altogether this

component has been segregated in to six divisions such as, Everyday, Twice a week, Weekly, Twice a month, Monthly, Neverwhere data of total number of 16 teaching faculties of different categories and the students has been shown.

Table-14: Visit of the Library

Sl.No.	Periodicity	Faculty	Students
1	Everyday	0	7(3.31%)
2	Twice a week	4(1.89%)	36(17.06%)
3	Weekly	3(1.42%)	62(29.38%)
4	Twice a month	3(1.42%)	60(28.43%)
5	Monthly	5(2.36%)	27(12.79%)
6	Never	1(0.47%)	3(1.42%)
	Total	16	195

Source: Research Questionnaire, n= 211



Graph-5: Visit of the library

On analysis of the table with regard to visit the library, the weekly visitors of the students are 62 (29.38%) which is highest followed by 60 (28.43%) and 36(17.06%) from the students community. But from the faculty community 5 numbers which are (2.36%) constitute the

highest that used to visit the library monthly. Followed by 4 faculties (1.89%) who visit the library twice in a week and 3 faculties each constitutes (1.42%) who viewed that they prefer to visit the library weekly and twice a month. This is due to the fact that the faculties are engaged for different academic activities and hence they are unable to visit the library regularly. But the students community visit to the library are more because of procurement of books, consulting of journals and other facilities provided by the library.

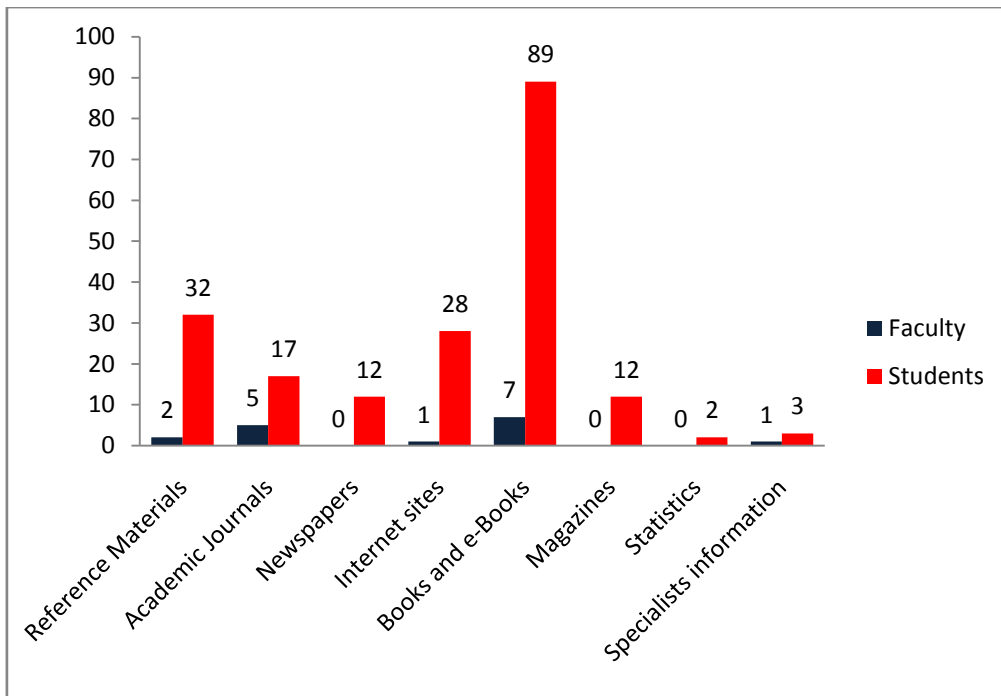
4.6 Types of Information Sources

There are different types of information sources available in the library. The faculty and students require plethora of information to complete their assignment, reading, consultations and other academic works. The scholar obtained the information from the faculty and students regarding the consultations of different sources available in the library and the data relating to the component are placed below in Table-15 supplemented with Graph-4 for clear understanding. The information sources have been divided into 8 types as shown in the table.

Table-15: Types of Information Sources

Sl.No.	Information Sources	Faculties	Students	Total	%
1	Reference Materials	2	32	34	16.11
2	Academic Journals	5	17	22	10.42
3	Newspapers	0	12	12	5.68
4	Internet sites	1	28	29	13.74
5	Books and e-Books	7	89	96	45.49
6	Magazines	0	12	12	5.68
7	Statistics	0	2	2	0.94
8	Specialists information	1	3	4	1.89
	Total	16	195	211	100

n= 211



Graph-6: Types of Information Sources

Analysis of the data from the above table reveals regularity of the type of use of various information resources by the faculty and students of SET. Analysis reveals that faculty and students are more prone to use the Books and e-Books which comes to 96 users which is 45.49% followed by the Reference material with 34 users which is 16.11%, 29 respondents used to consult Internet sites which is 13.74% from the overall total i.e. 211 respondents. We can also find that Academic journals have 22(10.42%) consultant, Newspapers and Magazines have the same total which is 12(5.68%), Specialists Information have 4(1.89%) and Statistics with 2(0.94%) which is the least in number of consultant. Overall, the faculty and the students of school under the study required a proper guide to use the various information resources such as Statistics, Specialist information, Newspaper, magazines etc. to facilitate them with a great potential of information for study and research.

4.7 Purpose of Library Visit

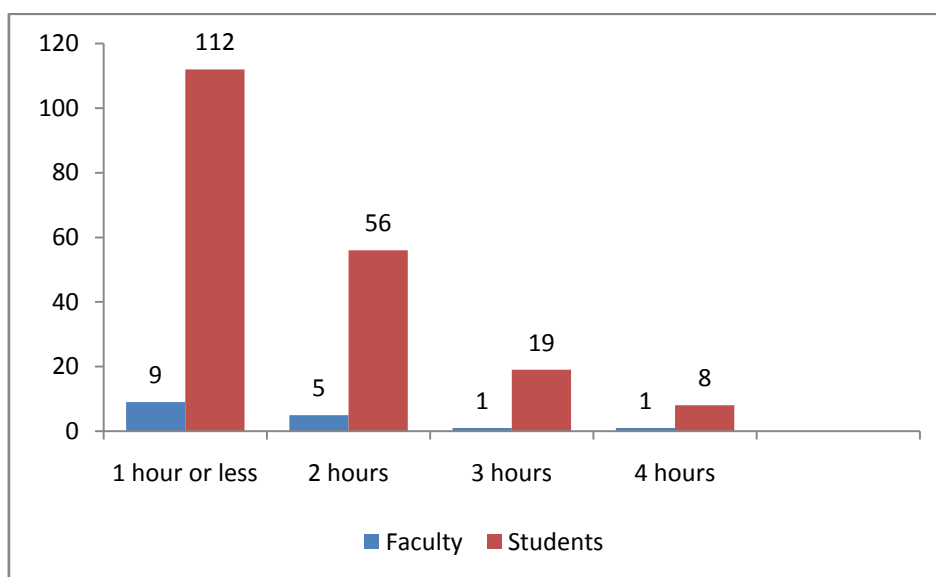
Data received under the questionnaire of about the purpose of visiting the Central library gives a clear view of the user attitude towards the library. Purpose of library visits gives essential information about the library resources and information services that are required for the users. This helps the librarian to develop the library collection as well as improve the

library services. Data relating to the purpose of visit to the library has been indicated in Table-16 supplemented with Graph-5

Table-16: Purpose of Library Visit

Sl.No.	Purpose	Faculties	Students	Total	%
1	Reading	5	38	43	20
2	Borrowing	9	110	119	56
3	Relaxing	0	8	8	3
4	Studying	0	26	26	13
5	Consult Reference Materials	2	13	15	8
	Total	16	195	211	100

n=211



Graph-7: Purpose of Library Visit

The above table on analysis reflects that, the students and faculties constituting 119 (56%) visit the library mostly for borrowing of resources followed by 43(20%) for reading purpose and 26 (13%) for studying different information resources including electronic resources to update themselves. It seems to be a good practice that reflects the use of library documents.

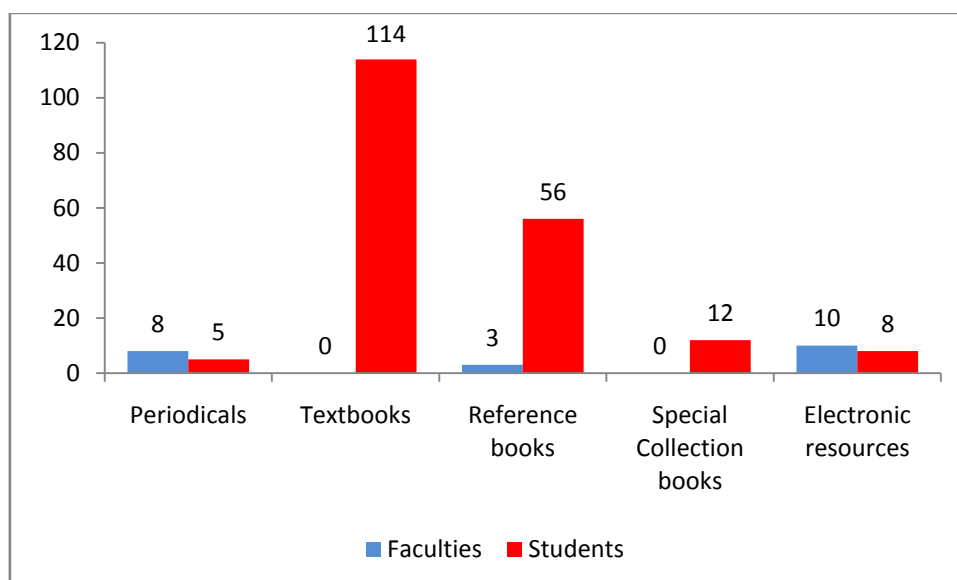
4.8 Types of Resources Consulted

Availability of proper resources is supposed to satisfy the users. Faculty and students require a lot of resources for their teaching and preparation in assignments respectively. It is necessary to identify the resources they consult most in order to make future preferences and suggestion to the library. Table-17 shows the mostly consulted resources and the table is supplemented by Graph-6 for easy understanding. The resources for the study has been categorized into 5 types as reflected in the table. Further, as the respondents have given multiple choices the *n* value is not restricted to 211 rather have gone up to 216.

Table-17: Types of Resources Consulted

Sl.No.	Type of Resources	Faculties	Students	Total	Total % of respondents
1	Periodicals	8	5	13	6
2	Textbooks	0	114	114	53
3	Reference books	3	56	59	27
4	Special Collection books	0	12	12	6
5	Electronic resources	10	8	18	8
	Total	21	195	216	100

N=211, n= 216



Graph-8 Types of Resources Consulted

Analysis of the Table-17 shows that the most preferred type of resources i.e. textbook, which are most demanding among the students that constitutes 114 (53%) followed by 59 (27%) and 18 (8%). Likewise the faculties gave a multiple option which comes to 21 in total out of which 10 faculties prefer to consult electronic resources while 8 faculties consult the periodical. Therefore it maintains a balance that the students use the books but the faculties use the electronic resources and periodicals.

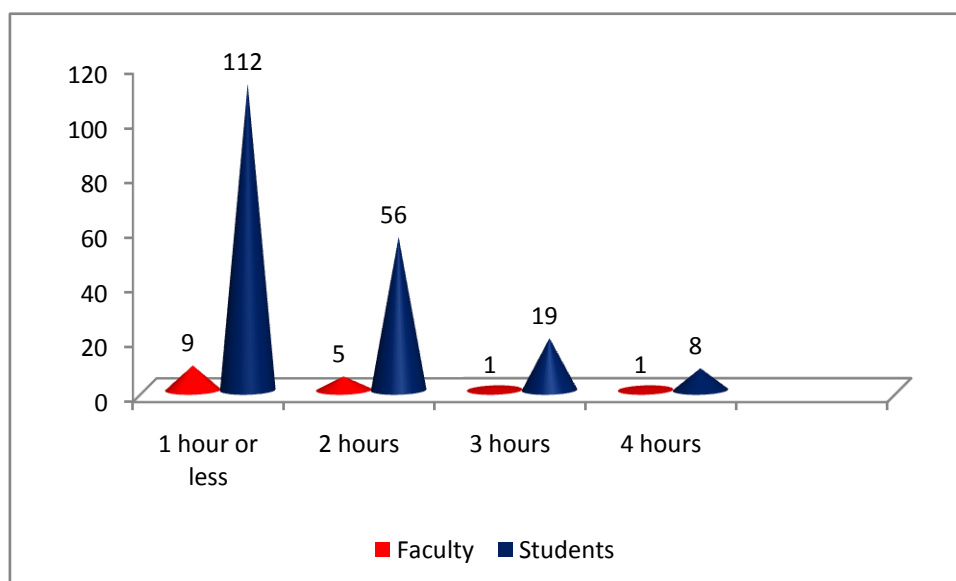
4.9 Convenient Time to Access Library

Since the Library opens only within the office hours i.e., 9.30am to 5 pm on week days including Saturday, and holidays during 10.30 am to 3.30 pm, students and faculties take the benefits of the library resources. Time happen to be the major criteria for both the students and the faculties. The data collected from the questionnaire is tabulated in Table-18 supplemented with Graph for analysis.

Table-18: Convenient Time to Access Library

Sl.No.	Time	Faculties	Students	Total	%
1	Before 10 am	0	10	10	4
2	10-12 noon	0	10	10	4
3	12-3 pm	5	89	94	45
4	3-5 pm	9	78	87	42
5	Holidays	2	8	10	4
	Total	16	195	211	100

n=211



Graph-9: Convenient Time to Access Library

The above table on analysis visualized that, out of a total number of respondents i.e. 211, 94 respondents (45%) prefer to access the library for multiple purpose during 12 noon to 3pm followed by 87 (42%) who prefer to use it between 3-5pm and 10 each (4% each) who prefer to visit the library during other time including holidays. This reflects that during noon time the users are generally free to use the library.

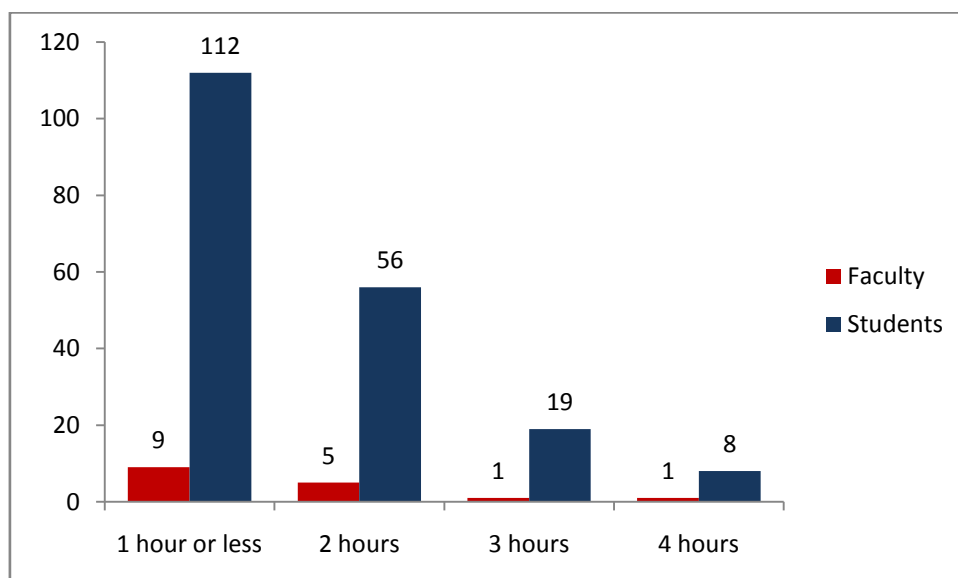
4.10 Time Spent in the Library

The duration of time spend in the library depicts use of library in many ways such as, borrowing of books, consultation of journals, use of electronic resources, exchange of ideas etc. Data relating to this obtained through the questionnaire is placed below in Table-19 supported with Graph-8for analysis.

Table-19: Time Spent in the Library

Sl.No.	Time Spent	Faculties	Students	Total	%
1	1 hour or less	9	112	121	57
2	2 hours	5	56	61	28
3	3 hours	1	19	20	10
4	4 hours	1	8	9	5
	Total	16	195	211	100

n=211



Graph-10:Time Spent in the Library

On analysis of the Table-19 it reflects that, 121(57%) users prefer to spent 1 hour or less in the library followed by 61(28%) who prefer to spent 2 hours and 20 users (10%) who viewed for spending 3 hours in the library. This is a healthy sign that the users prefer to spend more and more time for various purposes.

4.11 Satisfaction /Dissatisfaction

The scholar tried to explore the satisfaction and dissatisfaction of the resources and services being provided by Central Library, Mizoram University for School of Engineering and Technology. This is one of the major components to know the services of the library. It is necessary to identify whether they are satisfied with the library services or not. The component has been divided into 9 facets and calculation of each facet has been made for the entire faculty and students i.e. 15 and 253 respectively including percentage. The table has been supplemented with Graph No.

Table-20: Satisfaction /Dissatisfaction

Sl. No.	Parameter	Status	Faculty	Students	Total	%
1	Availability of Resources	Yes	11	125	136	65
		No	5	70	75	35
		Total	16	195	211	100%
2	Resources in Periodical Section	Yes	7	137	144	69
		No	9	58	67	31
		Total	16	195	211	100%
3	Resources in Reference Section	Yes	7	121	128	60
		No	9	74	83	40
		Total	16	195	211	100%
4	Resources in Bound Volume Section	Yes	9	119	128	60
		No	7	76	83	40
		Total	16	195	211	100%
5	OPAC	Yes	13	124	137	64

		No	3	71	74	36
		Total	16	195	211	100%
6	Circulation Services	Yes	12	132	144	69
		No	4	63	67	31
		Total	16	195	211	100%
7	Reprographic Services	Yes	9	129	138	66
		No	7	66	73	34
		Total	16	195	211	100%
8	Electronic Service	Yes	9	131	140	67
		No	7	64	71	33
		Total	16	195	211	100%
9	Information Service	Yes	10	124	134	63
		No	6	71	77	37
		Total	16	195	211	100%

Total 'Yes'=64 %

Total 'No'= 36%

Standard Deviation for Availability of Resources, Yes= 80.61017, No= 45.96194

Standard Deviation for Resources in Periodical Section, Yes= 91.92388, No= 34.64823

Standard Deviation for Resources in Reference Section, Yes= 80.61017, No= 45.96194

Standard Deviation for Resources in Bound Volume Section, Yes= 77.78175, No= 48.79037

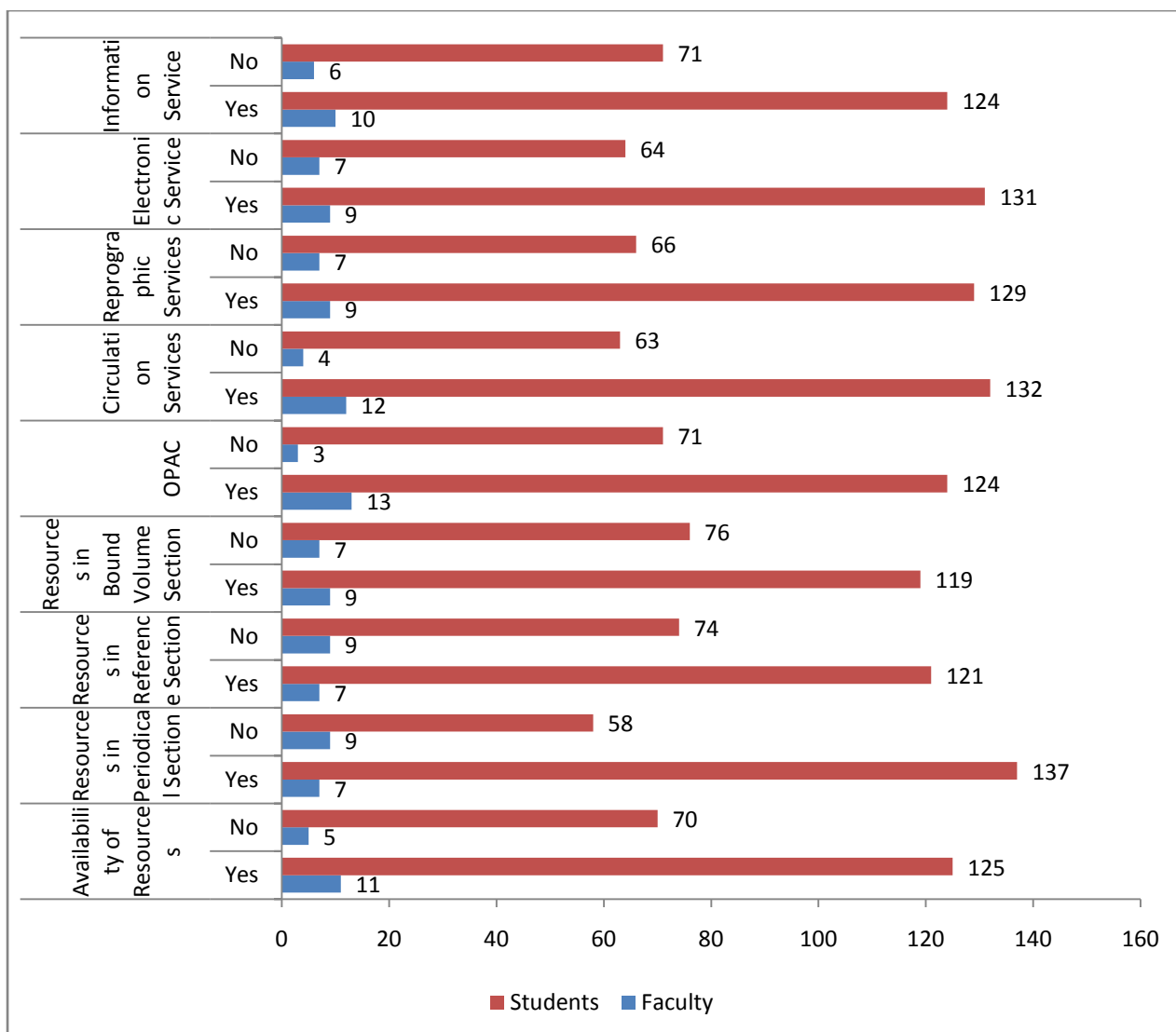
Standard Deviation for OPAC, Yes= 78.48885, No= 48.08326

Standard Deviation for Circulation Services, Yes= 84.85281, No= 41.7193

Standard Deviation for Reprographic Services, Yes= 84.85281, No= 41.7193

Standard Deviation for Electronic Service, Yes= 86.26703, No= 40.30509

Standard Deviation for Information Service, Yes= 80.61017, No= 45.96194



Graph-11: Satisfaction /Dissatisfaction

While analyzing the satisfaction and dissatisfaction of the resources and services being provided by the Central Library to SET placed in the Table-20, it visualized that 136 users about the availability of resources viewed positive which constitute 65% followed by 75 (35%) who viewed negative. Further 144 (69%) users expressed positive for availability of resources in periodical section followed by 67 (31%) who expressed negative. Likewise with regard to availability of resources in reference section 128(60%) opined ‘Yes’ followed by 83(40%) who viewed ‘No’. with regard to resources available in bound volume section 128 (60%) who expressed positive while 83 (40%) viewed negative. The details are available in the above table which gives a clear clarification about the rate of satisfaction and dissatisfaction which could be observed with regard to availability of resources and services. The Standard Deviation for each facet has been explained. Further while calculating the percentage of all facets combinely it could be observed that 64% of users viewed ‘Yes’, which

otherwise means that they are satisfied. 36% in total viewed negative which otherwise means that they are dissatisfied.

4.12 FINDINGS

The study was sought to examine the “Use and Users Satisfaction on Library Resources and Services by School of Engineering and Technology, Mizoram University”. The result of this study shows the state of their satisfaction among the students and faculty of SET. The study was based on the field of services, availability of resources, satisfactions in consulting the resources. Basically the findings of the study are presented under the following:

- The resources available in the central library comprised traditional and electronics, online and offline resources which may provide the minimum requirements of the stakeholders within the school.
- Out of the distributed questionnaires, the response rate is 87.91% which states that the faculties and students are very cooperative in the research work and the study is fairly representing the population.
- Out of 211 respondents, male constitute higher number i.e., 178 which is 84.36% while female constitute a number of 33 which comes to 15.63%. This shows the awareness of the male respondents compared to the female respondents. The analysis depicts that the male respondents more prone to submit the filled in questionnaire than female which shows the sign of activeness in cooperation.
- Out of the total respondents, 65% constituting both faculties and students belongs to urban area and 35% belongs to rural area. This is due to the fact that the urban group are more interest for higher education compare to rural areas.
- Library visit for seeking information is one of the major criteria for students and faculty of MZU. Regularity in visiting the Library makes sense in gaining the authenticated information. The weekly visitors of the students constitutes the highest with 62 students which comes to 29.38% followed by 60 (28.43%) and 36(17.06%) from the students community. But from the faculty community 5 numbers which are (2.36%) constitute the highest that used to visit the library monthly followed by 4

faculties (1.89%) who visit the library twice in a week and 3 faculties each constitutes (1.42%) who viewed that they prefer to visit the library weekly and twice a month. This is due to the fact that the faculties are engaged for different academic activities and hence they are unable to visit the library regularly. But the students community visit to the library are more because of procurement of books, consulting of journals and other facilities provided by the library.

- The Central Library provides a variety of information resources which can assist the faculty and students in their study. Regularity of the type of use of various information resources by the faculty and students of SET can be found that they are more prone to use the Books and e-Books which comes to 96 users which is 45.49% followed by the reference material with 34 users which is 16.11%, and 29 respondents used to consult Internet sites which is 13.74% from the overall total i.e. 211 respondents. We can also find that Academic journals have 22(10.42%) consultant, Newspapers and Magazines have the same total which is 12(5.68%), Specialists Information have 4(1.89%) and Statistics with 2(0.94%) which is the least in number of consultant. Overall, the faculty and the students of school under the study required a proper guide to use the various information resources such as Statistics, Specialist information, Newspaper, magazines etc. to facilitate them with a great potential of information for study and research.
- Information seeking is the major component for the faculty and students in the academic activity. It is necessary to identify for what purpose the users visited the library. As a result, the students and faculties constituting 119 (56%) visit the library mostly for borrowing of resources followed by 43(20%) for reading purpose and 26 (13%) for studying different information resources including electronic resources to update themselves. It seems to be a good practice that reflects the use of library documents.
- The most preferred type of resources i.e. textbook, which are most demanding among the students that constitutes 114 (53%) followed by 59 (27%) and 18 (8%). Likewise the faculties gave a multiple option which comes to 21 in total out of which 10 faculties prefer to consult electronic resources while 8 faculties consult the periodical.

Therefore it maintains a balance that the students use the books but the faculties use the electronic resources and periodicals.

- Timing is the major factor for the faculty and students to access the library. Out of a total number of respondents i.e. 211, 94 respondents (45%) prefer to access the library for multiple purpose during 12 noon to 3pm followed by 87 (42%) who prefer to use it between 3-5pm and 10 each (4% each) who prefer to visit the library during other time including holidays. This reflects that during noon time the users are generally free to use the library.
- The duration of time spend in the library depicts use of library in many ways such as, borrowing of books, consultation of journals, use of electronic resources, exchange of ideas etc. The study reflects that, 121(57%) users prefer to spent 1 hour or less in the library followed by 61(28%) who prefer to spent 2 hours and 20 users (10%) who viewed for spending 3 hours in the library. This is a healthy sign that the users prefer to spend more and more time for various purposes.
- Satisfying the users is the major aim of the Central Library of Mizoram University. While analyzing the satisfaction and dissatisfaction of the resources and services being provided by the Central Library to SET, it reveals that 136 users viewed positive about the availability of resources which constitute 65% followed by 75 (35%) who viewed negative. Further 144 (69%) users expressed positive for availability of resources in periodical section followed by 67 (31%) who expressed negative. Likewise with regard to availability of resources in reference section 128 (60%) opined 'Yes' followed by 83 (40%) who viewed 'No'. with regard to resources available in bound volume section 128 (60%) who expressed positive while 83 (40%) viewed negative. The details are available in the above table which gives a clear clarification about the rate of satisfaction and dissatisfaction which could be observed with regard to availability of resources and services. The Standard Deviation for each facet has been explained. Further while calculating the percentage of all facets combinely it could be observed that 64% of users viewed 'Yes', which otherwise means that they are satisfied. 36% in total viewed negative which otherwise means that they are dissatisfied.

CHAPTER – 5

CONCLUSION AND SUGGESTIONS

5.1 Conclusion

University library invest a huge amount of money every year on the collection development and maintenance of its resources in order to meet the information need of users. Satisfying the patron of library is the major aim of every library system. To maximize the use of library resources and services, every library should build up their working strategy and collection keeping in view of the need of users and should design library with changing information environment. The advents of e-resources and increasing use of electronic material have reduced the library scenario from physical to virtual. Due to the advent of electronic gadgets, most of the users prefer e-resources than the conventional type. To solve the present circumstances that we are facing today's, the library should adopt itself to satisfy the users.

According to Pooja, “to know user’s expectations, it is necessary to establish a communication channel and to have a regular discussion with the users. Involvement of users in the development plan of library resources and services would certainly improve the utilization of the library resources. The librarians are concerned with evaluating the effectiveness of the service quality in the competitive world and society’s investment in them. For the effective service delivery, it is important to know the expectations of the users from the library. For last few decades technological advancements have provided the libraries capacity not only to meet but also to exceed the user’s expectations. The technological applications in library, automation of the library functions, and invention of new technology based services offer some benefits to library users.”

Library is an integral part of an education by which students can access his/her information needs. The university central library of Mizoram University is acquiring a number of resources, traditional and electronics, to provide and disseminate information to the users through its various services. It is learnt that its collections are more or less sufficient for user under SET to access their academic requirements, at the same time research and development is increasing and as such collection of reading materials still needs to be expanded.

As of now SET comprises four academic departments in the same complex but isolated from other departments, it is very much essential to give special care by the university authority in regards to transportation, information resources, canteen, etc. Due to their isolated location, it is difficult for them to access library resources during day time as they are busy for their classes and assignments. It is very essential for them to organize library orientation programme so as to help them in accessing their information needs from the library and other sources as well.

5.2 Suggestions

Providing user satisfaction is the main aim of every library system. The user community is the most important constituent of library. Every information service exists for the sole aim of satisfying its users. In order to satisfy the users it is necessary to provide the effective services, good infrastructure and the resources. The current study investigates the use and users satisfaction on library resources and services by School of Engineering and Technology, Mizoram University. The findings provided data on the extent to Mizoram University student satisfaction on the basis of library resources and services.

After obtaining various suggestions from the respondents, the lists of important suggestions are given as under:

1. It is suggested that library should be opened 24x7 to the library users to access their information needs from the library resources.
2. Library should provide orientation programme for the library users in compliance with the fourth law of library science 'save the time of the readers', which will help the users to locate their needs from the resources within a few minute.
3. Since the Central Library of Mizoram University is quite far from the School of Engineering and Technology, school library for SET may be established within the school in order to have easy access, retrieved information and for solving wastage of time to access.
4. Departmental Library may be started in each departments of SET, so that faculty and students can easily retrieved information from their own library. This can also solve various problems that arise in regards to transportation cost, return of books, etc.
5. Library staff should be professionally trained in order to help the user community and to have the knowledge of how to operate the electronic resources within the library.
6. Subscription of online journals may be increased to meet the information needs of the users for their academic and research works.
7. Students may have voice in the case of book selection so as to meet their needs since they are the most regular users of the library resources.
8. Library should procure books based on electronic like GATE, CAT etc.
9. Duration for borrowing the books should be extended for the students. So that students can be able to cover their required topic within the borrowing time.

10. Library timing may be provided in the daily routine and transportation may be provided to the students for their library timing by the university so that they may have more time in the library.
11. Library should be organize book exhibition to show and awareits holdings to the library users which may attract more readers in the library.
12. Library should be open on holidays.
13. It is suggested that more self-check unit may be provided, so that users can issue several books at a time and that will save the time of the users as well.
14. For improving communication skills library should procure more novels and other related literature for leisure reading.
15. Library may be made homely to attract more readers to spend more time in the library by providing comfortable seating chair, feasible reading tables, computers with internet connectivity, etc.

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PHOTOGRAPH

Mizoram University Central Library



Pic:1 Central Library Building



Pic:2 Property Counter



Pic:3 Circulation Counter



Pic:4 Reference Section



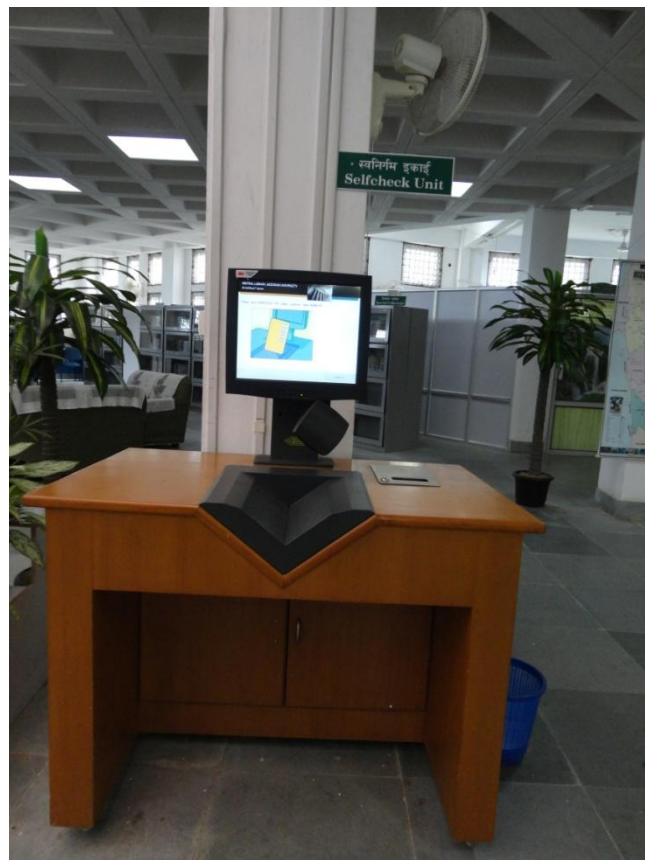
Pic:5 Periodical Section



Pic:6 Bound Volume Section



Pic:7 Reprographic Section



Pic:8 Selfcheck Unit



Pic:9 OPAC



Pic:10 Computer Room



Pic:11 Stack Area



Pic:12 Stack Area

SCHOOL OF ENGINEERING AND TECHNOLOGY (SET)



Pic:13 Department of Information Technology



Pic:14 Department of Electronics & Communication Technology



Pic:15 Department of Computer Engineering



Pic:16 Department of Electrical Engineering

APPENDICES

APPENDIX-1

USE AND USER'S SATISFACTION ON LIBRARY RESOURCES AND SERVICES BY SCHOOL OF ENGINEERING AND TECHNOLOGY, MIZORAM UNIVERSITY

QUESTIONNAIRE

1. Your Department : _____
2. Particular : Professor Associate Professor Asst. Professor
 Guest Faculty PhD Scholar MPhil Scholar
 Students
3. Semester (only for students): _____
4. Sex : Male Female
5. Highest Educational Qualification: Class XII Graduate
 MPhil Post Graduate Doctorate
6. Background Education : Urban Rural
7. How often do you go to Library
Everyday
Twice a week
Weekly
Twice a month
Monthly
Never
8. Which type of information sources you need most?
 Reference materials Books and eBooks
 Academic Journals Magazines
 Newspapers Statistics
 Internet sites Specialists information
9. For what purpose you visit Library
Reading
Borrowing
Relaxing
Studying
Consult reference material
10. Which resources you consult most in the library?
 Periodicals
 Textbooks

- Reference books
- Special collection books
- Electronic resources

11. What is your most convenient time to access information in the library?

- Before 10 am
- 10-12 noon
- 12-3pm
- 3-6pm
- After 6pm
- Holidays

12. On average how often do you spend time in the Library

- 1 hour or less
- 2 hour
- 3 hour
- 4 hour
- 5 hour
- More than 5 hrs.

13. Are you satisfied with the reading books/textbooks available in the library?

Yes No

14. Are you satisfied with the resources available in the periodical section?

Yes No

15. Are you satisfied with the resources available in the reference section?

Yes No

16. Are you satisfied with the resources available in bound volume section?

Yes No

17. Are you comfortable with OPAC in the library?

Yes No

18. Are you satisfied with the circulation services provided in library?

Yes No

19. Are you satisfied with the reprographic service?

Yes No

20. Are you satisfied with the electronic service of the library?

Yes No

21. Have you ever consult CDROM, Floppy or other digital devices?

Yes No

22. Are you satisfied with the information services of the library

Yes No

23. What is your suggestion for the improvement of library services?

- Organization of orientation programme
 - Opening of library for 24x7
 - Training of the library staff
 - Functioning of departmental library
 - Others, specify please.
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