

**USE OF E-RESOURCES BY FACULTY MEMBERS OF
MIZORAM UNIVERSITY AND BABASAHEB BHIMRAO
AMBEDKAR UNIVERSITY: A COMPARATIVE STUDY**

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY

SUNIL KUMAR YADAV

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**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
SCHOOL OF ECONOMICS, MANAGEMENT AND
INFORMATION SCIENCE
MIZORAM UNIVERSITY
AUGUST 2021**

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BY

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SUBMITTED


IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN LIBRARY AND INFORMATION SCIENCE OF
MIZORAM UNIVERSITY, AIZAWL



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CERTIFICATE

This is to certify that **Sunil Kumar Yadav**, Ph.D. Scholar of the Department of Library and Information Science, Mizoram University has written his thesis entitled **“Use of E-Resources by Faculty Members of Mizoram University and Babasaheb Bhimrao Ambedkar University: A Comparative Study”** under my supervision. To the best of my knowledge and belief, the work embodies his original investigation and findings and has not been published anywhere. I consider it worthy for the Degree of Doctor of Philosophy (Ph.D.) in Library and Information Science of Mizoram University.

(Prof. S. N. Singh)

Supervisor

Aizawl, Mizoram

DECLARATION

Mizoram University

August 2021

I, **Sunil Kumar Yadav**, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form the basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

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

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Aizawl, Mizoram

(SUNIL KUMAR YADAV)

Dated:

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LIST OF ABBREVIATIONS

Term	Description
AACR	Anglo-American Cataloguing Rules
ACMDL	ACM Digital Library
AI	Artificial Intelligence
AICTE	All India Council for Technical Education
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
BBAU	Babasaheb Bhimrao Ambedkr University
CD	Compact Disc
CD-ROM	Compact Disc Read Only Memory
CERC	Columbia Environmental Research Center
COMPENDEX	Computerized Engineering Index
DEL	Digital Engineering Library
DELNET	Developing Library Network
DEVINSA	Development Information Network for South Asia
DIF	Digital Information Fluency
DL	Digital Library
DLI	Digital Library Identifier
DOI	Digital Object Identifier
DVD	Digital Versatile Disc
EIR	Electronic Information Resources
EIS	Electronic Information Services
EMERALD	Electronic Management Research Library Database
ER	Electronic Resource
ETD	Electronic Thesis and Dissertation
GAN	Global Area Network
GMID	Global Market Information Database
HTML	Hyper Text Markup Language
ICOLC	International Coalition of Library Consortia
ICT	Information Communication Technology

IEEE	Institute of Electrical and Electronics Engineers
IFLA	International Federation of Library Associations and Institutions
IIT	Indian Institute of Technology
INDEST	Indian National Digital Library in Engineering Sciences and Technology
INSPEC	Information, Service for Physics Engineering And Computing
IP	Internet Protocol
IR	Institutional Repository
ISBD	International Standard Bibliographic Description
ISID	Institute for Studies in Industrial Development
ISTE	Indian Society for Technical Education
IT	Information Technology
JCCC	J-Gate Custom Content for Consortia
JSTORE	Journal Storage
LAN	Local Area Network
LISA	Library & Information Science Abstracts
LISTA	Library, Information Science & Technology Abstracts
MAN	Metropolitans Area Network
MSM	Microsoft Network
MZU	Mizoram University
NBA	National Board of Accreditation
NEHU	North-Eastern Hill University
NISSAT	National Information System for Science and Technology
NPG	Nature Publishing Group
NPTEL	National Programme on Technology Enhanced Learning
OAI	Open Archive Initiative
OPAC	Online Public Access Catalogue
PDA	Personal Digital Assistant
PDF	Portable Document Format
PPT	Power Point
RTF	Rich Text Format

TEQIP	Technical Education Quality Improvement Programme
UGC	University Grants Commission
URL	Uniform Resource Locator
USB	Universal Serial Bus
WAN	Wide Area Network
WWAN	Wireless Wide Area Network
WWW	World Wide Web

CHAPTER 1

INTRODUCTION

1. INTRODUCTION

The advent of information and communication technology (ICT) has enhanced the availability and usage of e-resources among the academic community in recent years globally. There has been a rapid demand of the user community to get more and more information online. The development of Information and Communication Technology (ICT) changed the relevant philosophy for collection development in the context of the fourth law of library science “save the time of the reader/ staff” in which S. R. Ranganathan recognized an objective relating to the internal efficiency of the libraries. When a resource is available on the desktop it can save a trip to the library, and therefore, be perceived as saving time (Epps, 2005, p. 287). The development of ICT devices, the rapid rise of electronic databases, and modern e-book technologies have altogether changed the entire scenario of informatics. The users’ attitude to information is gradually shifting from printed documents to electronic resources and thus it has been a convenience to know the details of the availability and organization of e-resources like online journals and databases, electronic theses and dissertations (ETDs), government publications, online newspapers, etc. in the information centers. Therefore it is time for the information professionals in India to study the different key dimensions of electronic resources and successfully channel them into the inquisitive minds of users by identifying and addressing some of the issues relating to the use of e-resources.

In recent years important components of e-resources and online e-journals, have become widely popular among library users. One can access e-journals round the clock across geographical barriers, which makes e-journals universal. The e-journals get published or reach subscribers well before their print counterparts, besides their ability to reach all its subscribers simultaneously. Another important advantage of e-journals is that more than one person can access them at a time. Articles can be downloaded and printed simultaneously by more than one reader depending upon access rights and permission. Electronic journals counterbalance the missing issue problem. This is a boon for huge campuses, particularly where there are hundreds of readers with many departments (Halijwale et al., 2004, p. 82). Moreover, e-journals, CD-ROM databases, online databases, e-books, web-based resources, and a variety of other electronic resources are fast replacing the traditional resources of modern libraries (Mohamed, 2007, p. 23). The development of online materials during the last decade compelled

the discussion of why people would use an electronic version that appears to take longer to access than the print, and may not be as easy to use. The challenge, the present society faces in the 21st century is keeping pace with the rapid developments in information and communication technology, one needs to continuously upgrade their knowledge and skills. It is understood that we live in an information-rich society where the amount of information and knowledge in the present world is increasing at a tremendous pace. Information literacy is the ability to evaluate information across the range of information needed, locate, synthesize, and use the information effectively, using technology, communication networks, and electronic resources.

People who are not fond of reading will agree with the fact that a library is the most peaceful place on the earth. The library is like bodies of knowledge. One could find books in a library on almost all topics, like history, geography, or even science fiction. Libraries are considered as the shrine where all the relics of the ancient saints, full of true virtue, and that without delusion or imposture, are preserved. A library is like the whole world encompassed in one room. Without a library, an institution will not be complete. It is very essential to education and any problem, any query unanswered one can find it in one of the books stored in the library. Libraries are an integral part of the education system and one is incomplete without the other. A well-stocked library is an asset to any institution.

A library is a place where not only books but also magazines, journals, and newspapers are well-stocked for the benefit of the readers. Besides this one can also get the entire charts, Encyclopaedia, government gazette, etc. A reader can either read in the library or borrow the book/journal of his choice and take it home. A library is a popular place in the academic curriculum. With the growing popularity of the internet, the retrieval of information becomes faster. Because of the above facts, it is apparent that a library is a very important place in society.

Libraries are the repositories of knowledge that form an integral part of education. The primary objective of the library is to organize and provide access to information. This objective will never change but the format and methods that are used will change dramatically, providing new opportunities and challenges.

Libraries have witnessed a great metamorphosis in recent years. The print medium is increasingly giving way to the electronic form of materials. The library is an extremely important entity in an ever-changing society and it must be responsive to the needs of society. Information Technology (IT) has changed the complexion of today's libraries.

Libraries have evolved to become information providers rather than mere document providers. The shift from the traditional libraries to the digital is not merely a technological evolution but requires a change in the paradigm by which the users access and interact with information. This move from traditional to electronic libraries also alters the fundamental role of the library.

1.1 OPERATIONAL DEFINITIONS OF TERMS USED IN THE STUDY

1.1.1 USE

For this study, the term ‘use’ refers to searching, browsing, examining, and obtaining information from e-resources available in the library and on the Internet by the user.

1.1.2 E-RESOURCES

Refers to a material consisting of data or computer programs encoded for reading and manipulated by computer using the peripheral device are directly connected to the computer or remotely via a network such as the Internet. E-resources is a broad term of digital information that comprises resources such as databases, e-journals, e-books, websites, full-text articles, and other information that is available digitally.

1.1.3 FACULTY MEMBERS

Faculty members for the study are the teaching staff in the selected universities for the study i.e. Mizoram University, Aizawl and Babasaheb Bhimraro Ambedkar University, Lucknow.

1.2 CONCEPT OF E-RESOURCES

E-resource is an electronic information resource that we can share on the web or the campus. This requires computer access or any electronic product that delivers a collection of data full-text bases, E-Journals, E-Books, image collections, other multimedia products which are numerical, graphical, or time-based and is commercially available titles that have been published to be marketed as an e-resource. These may be delivered on CD ROM, on tape, via the internet, and in many other ways. The e-resources may be E-journals, E-books, databases, websites, CD-ROM, and other portable computer databases. The e-resources on magnetic and optical media have a vast impact on the collections of university libraries. These are more useful due to tacit capabilities for manipulation and searching providing information access is cheaper to acquiring information resources, savings in storage and maintenance, etc. and sometimes the electronic form is the only alternative.

1.3 MEANING OF E-RESOURCES

An electronic resource is any information source that the library provides access to in an electronic format. The library has purchased subscriptions to many electronic information resources to provide access free of charge.

‘E-resource’ is a broad term that includes a variety of publishing models including OPAC, online databases, e-journals, e-books, internet resources, print-on-demand (POD), e-mail publishing, wireless publishing, electronic link, and web publishing, etc. in this context, the term primarily denotes “any electronic product that delivers a collection of data in text, numerical, graphical, or time based, as a commercially available resource.”

1.4 DEFINITIONS OF E-RESOURCES

The term "electronic resources" does not appear to be used consistently. There may be a reference to electronic information services (EIS), electronic information resources, or electronic library resources, to mention just some of the available terminology. Therefore, "electronic resources has broadly been defined as, information accessed by a computer that may be useful as bibliographic guides to potential sources but which may also appear as cited references in their own right” (Graham, 2003; pp.18-23)

“**Electronic resource**” is defined as “a bibliographic resource that is added to or changed through updates that do not remain discrete and are integrated into the whole.” (AACR2) (<http://www.loc.gov/aba/pcc/bibco/documents/irman.pdf>)

"**Electronic resource**" is defined as any work encoded and made available for access through the use of a computer. It includes data available by remote access and direct access (fixed media). In other words, remote access (electronic resources) refers to the use of electronic resources via computer networks. (AACR2, 2002 edition; glossary). Direct access (electronic resources) refers to the use of electronic resources via physical carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

1.5 TYPES OF E-RESOURCES

Types of e-resources are given below:

E-Journals	E-Books
Online Databases	Electronic Theses and Dissertations
E-Magazines	E-Clipping
E-Patents	E-Standards
Multimedia products	Image collection
E-Reports	Online newspapers
Electronic Reference Sources	

1.6 MIZORAM UNIVERSITY, AIZAWL

Mizoram University was established as a Central University by an act of parliament in the fifty-first year of the Republic of India on 25th April 2000 this act is called the Mizoram University act 2000 and started functioning from 2nd July 2001. The main objective of the University is to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may seem fit, to make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry, and other allied disciplines in the educational programs in the University; to promoting innovations in teaching-learning process, interdisciplinary studies and research. Before this; the University inherited from North-Eastern Hill University (NEHU) had functioned as Mizoram Campus for 24 years since 1979. At present Mizoram University comprises 8 Schools of studies and 33 academic departments. There are 230 teaching faculties (58 Professors, 20 Associate Professors, and 152 Assistant Professors) in Mizoram University as of 10th April 2021. (Source: <http://mzu.edu.in/index.php/downloads/forms/finish/10-office-orders-notifications/10079-university-act-2000>)

Central Library is the focal point of all user communities of Mizoram University. The Library caters to the educational and research needs of the academic community and its resources are consulted by scholars from all over the country. Empowering the academic community of Mizoram University with enriching collections, innovative services. “In the year 2008, the whole library impacts have been made open in the machine-readable record. The mechanized bibliographic information of the 16 library properties has likewise been accessible for users' looking all through the grounds

through the Local Area Network (LAN) intranet, utilizing Web-OPAC. Robotized dispersal framework utilizing scanner mark headway has been utilized since first December 2008 which gives necessary and affects association to the users. The library has been giving crediting and reprographic associations, Orientation Programs for starting late surrendered understudies of all the Academic Departments. Digitization of Mizoram University's particular archives and dispersals had been searched for after setting up an 'Institutional Repository' and the same had been energized on the intranet in May 2011. The storeroom gives free gets to a broad assortment of institutional research yields inside the grounds arrange.” (Chanchinmawia, 2018)

1.7 BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY, LUCKNOW

Babasaheb Bhimrao Ambedkar University was established as a Central University by an act of parliament of India in 1994 this act is called the Babasaheb Bhimrao Ambedkar University act 1994. But University was established in 1996 and started functioning in February 1997. The objective of the University is to promote advanced knowledge by providing instructional and research facilities in branches of learning as it may deem fit, to make provisions for integrated courses in Science and key frontier areas of Technology and other allied disciplines in the educational programs of the University, to promote the study of the principle of Babasaheb Bhimrao Ambedkar worked during his life. At present University comprises 9 schools of studies and 27 academic departments. There are 159 teaching faculties (42 Professors, 14 Associate Professors, and 103 Assistant Professors) in Babasaheb Bhimrao Ambedkar University on 18th April 2021.

Dr. B. R. Ambedkar University Initiative was the first project of the Uttar Pradesh government in 1989, and it was Babasaheb Bhimrao Ambedkar University in Lucknow. Shri Rajiv Gandhi, the then (late) Prime Minister of India, opened it on April 14, 1989. Later, in 1996, it was renamed Central University (in accordance with a 1994 bill), with the mission of promoting research facilities in the fields of science, critical and cutting-edge technologies, and related disciplines such as agricultural technology and rural handicrafts, as well as social and economic development. It is concerned with population development and encourages the study of Babasaheb Bhimrao's concepts. This university encourages multidisciplinary research and development, with a focus

on improving education and the economic fellow human of ordinary people, particularly SC/ST persons.

1.8 SIGNIFICANCE OF THE STUDY

The significance of electronic resources is for general communication, information retrieval, and instructional delivery to support teaching and research activities in higher learning institutions. Users' attitudes regarding information are slowly shifting away from printed materials towards electronic resources. We normally refer to electronic resources as those that can be accessed by computer, such as via email, CD-ROM, or, more popularly, the World Wide Web (WWW). Electronic resources have a bright future and a lot of possibilities for attracting users. It incorporates all of the advantages of multimedia, digital coding, and the Internet. Libraries are progressively making this type of resource available to their patrons, either by purchase, subscription, or by educating them about the many free electronic resources available. It allows the user to take it with them wherever they go and can be viewed on any computer, including a handheld device. It can also be downloaded immediately.

The library happens to be the nucleus of information centers that supports and facilitate learning, teaching, and research needs to the user communities by providing access to scholarly literature through various e-resources. Growth and change have always been predominant characteristics of libraries. These generate collections and services within the library system. The library needs to be adapted as it responds both to the changes of the need of the user's communities and to changes within the field of information technology. Hence the collection of information must remain flexible enough to support the causes of the information requirements of the users in the Central Library of Mizoram University and Babasaheb Bhimrao Ambedkar University in a changing technological scenario. Over and above access to electronic resources principally occupy a prevalent position and the users get to benefit from a good array of literature with a cost-effective and affordable price. But without conducting a study, there is no way of knowing whether the e-resources are reliable or useful. Keeping these in view, the present study has been taken up to ascertain the current use of e-resources by the faculty members and its impact on the academic and research work and the problems encountered while accessing these e-resources. To the extent of the knowledge of the scholar, no study has been undertaken so far to compare the use of electronic resources

for teaching and research by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University.

The main intention of this study is to analyse the awareness of Web browsers, satisfaction with the e-resources provided by the library, ranking of e-resources, the performance of the library, and barriers to access e-resources. The research scholars are posed to an array of electronic resources through the internet for research. They should be able to differentiate between relevant and irrelevant information and should be able to access the needed information effectively and efficiently.

1.9 SCOPE OF THE STUDY

The scope of the present study is limited to faculty members of Mizoram University, Aizawl, and Babasaheb Bhimrao Ambedkar University, Lucknow. These two selected universities are central universities situated in two states capital (Mizoram and Uttar Pradesh) and have a common goal in their act i.e. uplift the marginalised community of society, particular of the Scheduled Castes and the Scheduled Tribes in their respected state with special provisions in their act, passed by Parliament of India. Further, both universities are functioning for more than 20 years and the growth and development of these two universities are also similar in many ways like a number of schools, academic departments, faculties' positions, etc. Thus it is very significant to make a comparative study between a well-established central part of India University with North East India University which has some common goals and objectives. At present, there are 389 faculty members in both universities. The study will cover the total population of faculty members from Mizoram University and Babasaheb Bhimrao Ambedkar University.

1.10 STATEMENT OF THE PROBLEM

The University library is an important organ of the University to support and promote its teaching, research, and extension education programmes by providing literature. To achieve this, the library should have a large number of qualitative collections to serve as a source of information and be organized in such a way that they can be exploited fully, conveniently, and expeditiously by the faculty members. Simultaneously, all efforts are made to promote the use of library resources and to disseminate information from books, periodicals, reference sources, and bibliographical tools to achieve the objectives of the library effectively.

Since Mizoram University and Babasaheb Bhimrao Ambedkar University libraries are fully computerized, it is necessary to educate the faculty members for optimum use of electronic resources provided through the central library. Besides, Internet access had been provided to each teacher and research scholars in their respective departments. In this context, a scholar has been motivated to undertake this study to compare the use of electronic resources for faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University.

1.11 OBJECTIVES OF THE STUDY

The objectives of this study are:

1. To compare the awareness and use of e-resources among faculty members in both universities.
2. To study the frequency, time spent, and purpose of use of e-resources among faculty members.
3. To find out the extent of use of e-resources among faculty members.
4. To find out the level of satisfaction towards the use of e-resources among faculty members.
5. To identify the problems and prospects for improving the use of e-resources among faculty members.

1.12 RESEARCH METHODOLOGY

The present study is designed to compare the use of e-resources by faculty members of Mizoram University, Aizawl, and Babasaheb Bhimrao Ambedkar University, Lucknow. Therefore, the survey method of research is being found suitable to undertake the present study. The study covered the total population of faculty members from Mizoram University and Babasaheb Bhimrao Ambedkar University. The population for this study consists of permanent teachers such as Professor, Associate Professor, and Assistant Professor. The population of the study was all 389 faculty members (consisting of 230 faculties of MZU and 159 faculties of BBAU) from both the universities and the census method of sampling was adopted for this study. For the collection of primary data from the respondents, the questionnaire method was adopted as a data collection tool, and collected data were scrutinized, tabulated, and analysed for inference by using appropriate software.

Two structured questionnaires were framed with adequate questions related to the study. A questionnaire for faculty members and another for respective university library

I. Survey of Libraries

A structured questionnaire was framed with forty six questions to know the various aspects of both the university libraries including the year of establishment, total number of registered users, library budget, source of finance, library collection (print resources and e-resources), organize in-house training programs to handling e-resources, ICT infrastructure of the library, to know the subscribed e-resources available through E-ShodhSinghu consortium, training, and user education programs, the method followed to conduct the library orientation programme, and opinion regarding the use of e-resources and services by the both of the university libraries.

II. Survey of Respondents

A structured questionnaire was framed with forty six adequate questions related to the study and circulated to faculty members of both the universities to obtain required information with regards to assessment of the use of e-resources. A total of 333 questionnaires were distributed to the faculty members of both the universities, out of which 284 duly filled-in questionnaires were received back 173 filled-up questionnaires were from Mizoram University and 111 filled-up questionnaires were from Babasaheb Bhimrao Ambedkar University in the context of the use of e-resources.

III. Response Rate

A structured questionnaire was distributed among 333 faculty members from both the universities constituting 203 questionnaires in MZU and 130 questionnaires in BBAU out of whom 284 duly filled-in questionnaires were received back with a response rate of 85.29%, which comprised 173 (85.29%) of MZU and 111 (85.38%) of BBAU.

1.13 CHAPTERIZATION

The thesis is presented in the following five chapters

Chapter 1: Introduction

The first chapter introduces the topic of research and gives a brief account of the introduction, e-resources definition, need and significance of the study, statement of the problem, and objectives of the study. Further, it presents the methodology adopted for data collection, data collection instruments and techniques used in data analysis, and the scope and limitation of the study. It also explains the organisation of the thesis.

Chapter 2: Review of literature

The second chapter gives glimpses of studies of e-resources usage and provides certain solid guiding lights for the present study. The review of the study is presented in the following heading such as the use of the internet, use of e-resources, and information search patterns. The study is further arranged in descending chronological order. However, this chapter deals with the changes in the use of e-resources to provide the researcher with a better understanding of the previous studies that happened on this topic and how this study could be improved.

Chapter 3: E-resources: An overview

This chapter deals with the concepts of electronic resources, types of e-resources, information search techniques, online search, search engines, e-databases, and issues and challenges of e-resources.

Chapter 4: Data Analysis and Interpretation

Chapter four deals with the analyses and interpretation of the collected data using appropriate statistical tools and techniques. The total number of distributed and received questionnaires is presented in the chapter. The data is properly represented with tables and graphs. There are *four parts* in this chapter, the *first part* is Demographic Information in which includes respondents' personal details such as gender, age group, designation, and level of education of the users. The *second part* is the use of the internet in this chapter describes the issue and challenges while using e-resources such as the use of the internet, purpose, and motivation of using the internet. The *third part* is the use of e-resources in this chapter describes the use, awareness, awareness of various types of e-resources, benefits of the use of e-resources, and use of e-resources and services. The *fourth and last part* is information search patterns to analyse the search methods of e-resources such as advance search, basic search, the preferred format of resources, comparison of e-resources and print resources, and prefer file format to use e-resources. The data is properly represented with the tables, graphs, and figures.

Chapter 5: Major Finding, Conclusion and Suggestion

Chapter five gives the summary of major findings, conclusion and it suggests improving e-resources usage by the faculty members of both of the Universities. Then concludes the study with suggestions for future research areas. The chapter deals with the major findings obtained from the analysis of the data. The researcher has presented

findings based on the observation from the data analysis. Suggestions provided by the respondents are also mentioned in this chapter for future research/study.

At the end of the thesis, a bibliography and appendices have been given. The bibliography is given as per the rules provided by the APA style manual, 6th ed. (American Psychological Association, 2010)

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6. <http://www.bbau.ac.in/new/AboutUs.aspx> (access on 20-03-2021)

CHAPTER 2
LITERATURE REVIEW

2. INTRODUCTION

To develop current knowledge of a topic, a literature review summarises, interprets, and reviews relevant literature or published content. As a result, it connects to ongoing research and advances expertise in the field. The analysis of literature often aids in the gathering of information needed for the next steps, which include writing the research report and justifying the issues or concerns raised by the research study.

A literature review is a scientific method of retrieving conceptual and applicable literature on the study's in-depth aspects. Fresh concepts, processes, models, standardisation, and descriptive thoughts can all be found in the literature. It always shows the innovative work done on the research subject, since no concept or idea emerges and becomes established overnight, and it takes a long time for any idea to emerge and become established. The primary benefit of conducting a literature review is that it aids in developing a conceptual understanding of the topic, which in turn aids in the development of a conceptual framework and the development of guidelines for conducting a specific research project.

A successful literature review necessitates familiarity with indexes and abstracts, as well as the ability to perform exhaustive bibliographic searches to meaningfully organise the collected data, explain, critique, and relate each source to the topic of inquiry, and present the structured review logically and correctly refer all references cited. The amount of electronic content available in academic libraries, as well as the variety of resources for finding and accessing it, has grown dramatically over the last two decades. Academics' knowledge behaviour has been greatly influenced by both the rise in the amount of information available and the change in its usability.

With the unprecedented advancements in electronic publishing and related digital technologies, a number of electronic information sources and services have emerged. They have altered the makeup of library collections since their launch. In reality, the formats and variety of information sources have changed, resulting in a shift in collection creation and management. Electronic content is becoming more widely used around the world, and its use is increasing at an unprecedented rate as more people understand the benefits it provides in terms of access and retrieval. However, as electronic information reshapes the entire information environment, a range of significant challenges and opportunities emerge.

Academic libraries have been transformed by the digital revolution, which was boosted by information communication technologies. It has an impact on all aspects of

academic library work. During the last few decades, computers and networked electronic services have become an essential part of the academic library. The phenomenon of knowledge or information, which refers to a particular environment in the library where a specified number of PC workstations are networked to databases and other e-resources and made accessible to users, has emphasised this. Users may use the library's online catalogue to find information; use a subject guide or database to find citations on the Internet or full-text articles from web-based journals; browse an electronic journal; fill out an interlibrary lending form; email a reference query to the library's ask-a-librarian service; or lend an e-book.

In fact, electronic tools have become the backbone of many academic institutions. The ability of various users to recognise and use electronic tools is largely based on its ability to identify distinct information elements. The flood of information has expanded the number of electronic information sources accessible on the internet. Electronic resources aid in access, accessibility, and effectiveness, as well as establishing new and exciting ways to use the information and be more efficient in their projects.

In comparison to print media, users who are aware of electronic resources will be better able to keep up with new developments in their respective subject fields. Users must use electronic information services because they offer better, quicker, and easier access to information than information obtained by print media. Electronic tools may provide timely information, confirming the quote: "the right information to the right user at the right time."

A literature search is an important first step in any research project because it allows the researcher to identify previous and current research projects as well as gain useful insight into the theoretical and methodological issues that surround the research subject.

Information scientists have long tried to figure out what factors influence a person's decision to search out information. More recently, researchers have concentrated their efforts on the factors that influence users' decisions to use the library and its services as a source of information, whether physically or electronically, rather than simply browsing the Internet. These questions take on even more significance now that more people are turning to the Internet to find the information they need, information that is not filtered by the library (Kibirge, 2000).

Electronic resources' effectiveness and broad reach for general communication, information processing, and instructional delivery to support teaching and research activities in higher education institutions are widely recognised.

Over the last three decades, a number of studies on the usage of electronic resources in academic libraries have been conducted. While all of the surveys involve faculty members as participants, all of them focused on the use of the Internet, word processors, e-journals, and other similar technologies. A few of them were aimed at raising faculty and student knowledge of the library's electronic services and encouraging them to use them.

2.1 USE OF INTERNET

The internet is a social medium of communication and knowledge that is both thrilling and uplifting. Searching and discovering accessible and hidden digital materials on the Internet remains a critical and time-consuming activity. The challenges are worsened by today's widely dispersed scholarly information environment. A lot of full-text repositories are maintained by commercial and professional society publishers; preprint servers and Open Archive Initiative (OAI) provider sites; specialised Abstracting and Indexing services; publisher and vendor vertical portals; local, regional, and national online catalogues; Web search and metasearch engines; local e-resources. It is vital to assess the influence and use of Internet resources among the scientific community to revamp library and information centre services.

Krishnappa (2020) examines the availability and use of Internet resources among researchers and faculty members at Karnataka's social science research institutes. The study displays and elaborates on different aspects of Internet use, such as frequency of Internet use, the purpose of Internet access, length of time since the internet has been used, most preferred search engines, challenges encountered while using the internet, and degrees of satisfaction. The study's findings suggest that the majority of respondents use the internet daily, with Google being their preferred search engine. They also reveal that the majority of respondents use the internet for research, sending e-mails, and exchanging ideas or opinions with others. They do, however, experience some difficulties when utilising the Internet, such as sluggish access speeds, privacy issues, trouble retrieving relevant information, and a lack of understanding of key sites in a particular field, to name a few. Finally, the study recommends that social science research libraries give better and faster Internet access to researchers and

faculty members to assist them with their research.

Suleiman and Johua (2019) analysed a study on awareness and utilization of the Internet resources and services for academic activity by the academics of Tertiary Institutions in Adamawa State, Nigeria. The purpose of this study was to determine whether academic staff at tertiary institutions in Adamawa State are aware of and use Internet resources and services for academic purposes. To obtain data from the respondents, the researchers used a quantitative research method with a cross-sectional survey design. The researchers employed multi-stage sampling approaches. Three hundred and thirty-three (333) copies of the questionnaire were distributed to respondents in the eight (8) institutions sampled, with two hundred and ninety-two (292) of respondents returning and finding it useful (87.6%). The information gathered was examined with descriptive and inferential statistics in SPSS version 20.0. The findings demonstrated that while respondents were aware of all Internet resources (e-books, e-journals, and online databases), they were largely aware of only e-mail when it came to Internet services. The study also discovered that online databases and e-mail are the most commonly used Internet resources and services by respondents. The academic staff of Adamawa State's tertiary institutions has an inverse and poor link with their awareness of and use of Internet resources and services. For better academic activities, the study proposes that institution management promote awareness and usage of other Internet resources such as e-books and e-journals, as well as Internet services, particularly Usenet, Discussion groups, and Telnet, through training, workshops, and conferences.

Bankole and Adio (2018) conducted a study on pattern of usage of internet among Students of Federal University Oye-Ekiti, Ekiti State, Nigeria. The findings revealed that nearly all respondents used the Internet regularly, with the primary access point being from home/hostels (51.6%), while just (21.1%) used the university library, and the primary access device being mobile phones (91.1%). The majority of them used the Internet to do class assignments (78.4%), enjoy themselves (76.3%), and communicate (45.8%). (73.2%) Social networking and search engines, online newspapers, and e-books were the most popular internet services and resources. Only 28.9% of respondents claimed to know how to utilise the Boolean logic operators, but 53.2 percent said that they filtered their information. Even though just 36% of respondents were satisfied to some extent with the university's Internet service, the respondents acknowledged that using the internet has been extremely beneficial to their academic pursuits. Slow internet speeds, difficulties accessing relevant material,

and a lack of knowledge of information retrieval methods were the main obstacles to using the internet. To maximise student internet usage, FUYOYE officials should focus more on creating an enabling environment for the construction of proper internet infrastructure and improving students' information literacy skills. Other educational institutions in Nigeria and abroad with similar problems to those described in this study could benefit from the findings to improve their internet access.

Owuwatumbi and Olubunmi (2017) surveyed the availability and utilization of Internet facilities among undergraduate students of colleges of education in Nigeria. According to the study, Internet facilities are not readily available, resulting in low utilisation, and poor electric power supply is one of the significant drawbacks. According to the findings, pupils from higher socioeconomic backgrounds use the Internet more frequently than those from lower socioeconomic backgrounds. Finally, the report suggests that both the government and college authorities ensure that students have access to Internet resources and consistent power supply for their studies.

Uloaku (2017) examined the “internet utilization by researchers concerning two selected special libraries in Kaduna state. Researchers were using the internet to gather data for research and publishing, access e-journals, write and receive emails, and so on, according to the survey. The report also highlights issues that users experience on the Internet, such as poor internet service, failed internet connections, and insufficient numbers of connecting systems. The study suggests that efforts be made to improve Internet access speed and reduce the time it takes to read and download web pages by providing additional bandwidth, as well as those institutions install better internet services for the research community's use.”

Emeka and Nyeche (2016) investigated the impact of Internet usage on the academic performance of undergraduate students: A case study of the University of Abuja, Nigeria. The findings reveal that the Internet has become one of the most useful tools in a variety of fields, particularly in terms of academics, in terms of improving students' skills and competence, which helps them in their studies and professional lives. The survey also highlights some of the issues that come with Internet use, such as a lack of computer skills, a slow Internet server, and the difficulty of paying for online services. University libraries should organise user orientation programs, according to the study, to make effective and efficient use of various web-based electronic resources.

Sahoo and Sharma (2015) examine the impact of the Internet on various library processes and services. The study finds that the Internet has revolutionized traditional library activities such as document acquisition, technical processing, circulation, reference service, resource sharing, document delivery, and so on and that in today's world, the Internet has become a necessity for the library's day-to-day activities as part of providing better services to the user community.

Ivwhighweta and Igere (2014) conducted a study on the impact of Internet use on the academic performance of students in tertiary institutions in Nigeria. The study also found that the majority of the respondents were computer literate, that they frequently used cyber cafes to access the Internet, and that they used the Internet to retrieve relevant academic materials, and that the majority of the students rated their use of the Internet for academic purposes as average, with E-journals and E-books. It also stated that students' use of the Internet helped them prepare better for their exams. Power outages, slow Internet speeds, a shortage of computer terminals, too many hits or information overloads, and a lack of computers were all identified as some of the issues that Internet users in Nigeria face. The analysis included recommendations about how to improve the problem.

Adegbija, et.al (2012) conducted a study on the availability and utilization of Internet facilities by postgraduate students in federal universities of Southwest Nigeria. The study's findings revealed that 83.4 percent and 80.4 percent of respondents used some Internet resources frequently, such as search engines and e-mails, while other resources, such as telnet, Skype, and newsgroups, were rarely used, and others, such as scientific and satellite imaging, gopher, and others, were never used. Because the Internet is so widely used, the study recommends that postgraduate students be exposed to additional Internet resources through seminars or other public awareness programmes and that those Internet facilities be made available to postgraduate students in their hostel.

Hadagali and Kumbar (2011) conducted a study on the use of Internet by faculty members and research scholars in the 21st century with respect to the university libraries of Karnataka State, India. The study focused on Internet usage, including frequency of use, location of access, goals of access, motivating factors for Internet access, and search engine preference. The study's findings show that the Internet has become an important tool in these respondents' teaching, research, and learning processes. According to the survey, university libraries in Karnataka should improve

Internet access for professors and research scholars.

Loan (2011) examined that the use of the internet among college students in Kashmir valley and found that all the students of computer science use the internet followed by students of business and commerce, general science, social sciences, and humanities students respectively. The students of business and commerce lead in using the internet for information, students of computer science use it predominantly for communication purposes and students of social science and humanities use it for education purposes. Information overload is the most common problem faced by students while searching the relevant information. The students of general science, social science, and humanities find internet literacy as the major limitation in using the internet. The students of general sciences, social sciences, and humanities, and business and commerce faced institutional curbs to internet access.

2.2 USE OF E-RESOURCES

Shashikala and Reddy (2021) examine the utilisation pattern of e-resources by the faculty of the Kempegowda Institute of Medical Sciences (KIMS) Bangalore. The goal of the research is to learn more about how KIMS faculty members use E-resources and how frequently they access the internet. Faculty members at health science universities and/or medical colleges are involved in teaching and research, with a wide range of information needs and expectations. Recognizing the value and utility of E-resources, most schools in India and abroad have made significant investments in acquiring and providing access to these resources to support information needs, teaching, learning, and research activities. The report discusses how KIMS faculty members use various forms of e-resources in health sciences, as well as how they use web browsers and search engines in this context. This study looked at the levels of satisfaction with E-resources among KIMS faculty members, as well as the barriers to adopting e-resources.

Ansari (2020) conducted a study on the use and awareness of e-resources among research scholars of literature subjects in Banaras Hindu University and found that most of the respondents were aware of the features of e-resources. The majority of the respondents use e-resources to update their knowledge and get help in teaching and research, and respondents have used e-resources daily. Respondents were facing problems of lack of technical knowledge, lack of adequate infrastructure, low internet speed, and lack of adequate e-resources while accessing e-resources. The finding

shows that libraries should improve the facilities and services to their users. The libraries must focus on acquiring more online resources to be made available for the maximum number of users. A single window should also be developed to find their required content at a single click. The library also makes a helpline desk to solve e-resources related issues. Awareness is essential for maximum utilization of the e-resources so, libraries must conduct awareness programs for newly admitted students every year.

Bomman and Ramesh (2020) made an attempt to analyse the engineering college faculty members' use of electronic resources and their impact on academic growth in the Namakkal district in Tamilnadu. The survey approach is used, with a regular, standardised, and pretested questionnaire serving as the study's tool. Data is analysed using percentage analysis, one-way ANOVA, and post-host statistical techniques. Data is also shown using pie and bar charts. The respondents completed 1070 surveys in total. Male faculty members accounted for 618 of the overall sample, while female faculty members accounted for 425. Assistant professors, associate professors, and professors account for 470, 331, and 269 responders, respectively. According to their experience, 342 of them have 0-5 years of teaching experience in engineering colleges, 299 have 6-10 years of experience, 159 have 11-15 years of experience, 140 have 16- 20 years of experience, and the remaining 130 have 21 years or more of teaching experience in engineering colleges. The frequency of accessing online journals differed statistically significantly depending on the gender, experience, and designation of the faculty members. There was a statistically significant difference in the opinion of the faculty members' designation on the usefulness of the e-journal. There was a significant variation in respondents' opinions about the growth in research publishing while using e-resources based on their gender. The relationship between respondents' educational credentials and their perceptions of the rise in research publication through the use of e-journals is highly significant. There was a statistically significant difference between the faculty designations and their views on the use of electronic journals to boost research publication.

Sharma (2019) conducted a study on awareness, accessibility, and use of electronic resources by the faculty members and research scholars of five disciplines of social science of Maharshi Dayanand University, Rohtak, Haryana. A structured questionnaire was distributed among 500 research scholars and faculty members out

of which 30% responded. It was found that more than 3/5th of the research scholars visit Vivekananda library to read books, the largest part of them are aware of the library facilities and are also aware of the availability of resources. Indian Citation Index, Web of Science, and Scopus are being used by faculty members and research scholars for citation analysis. Shodhganga and MDU Institutional repository are being used for Theses and Dissertations. Turnitin software as a plagiarism checker tool is known among the academic community. The majority of the user used UGC-Infonet e-journal Consortium and JSTOR. 2/5th users (research scholars) preferred hostel as the best location for accessing e-resources, almost half are using e-resources daily, half of them are accessing 2-5 hours a week, more than half of them expressed the advantage is that they can access it from anywhere/anytime, restricted timings in the digital library is the major difficulty expressed by half of them, 39.55% are aware of library orientation program conducted in the library.

Sivakami and Rajendran (2019) conducted a study on awareness, availability, and use of e-resources available to Arts and Science College Faculty Members in Erode District is described in this research. The Faculty Members of Arts and Science Colleges were interviewed and data was collected using the questionnaire approach. A total of 300 Questionnaires were given to the Sample of Faculty Members from Arts and Science Colleges, yielding 280 Valid Samples. As a result, the total number of people who responded to the survey is (93.33%). The data were evaluated with the use of a programme named Statistical Package for Social Science (SPSS). The findings of this research demonstrate that the majority of Male respondents (20.83%) utilise E-Journals and E-Books, whereas Female respondents (26.25%) use E-resources by Faculty Members. The majority of male users (86.59%) and female users (84.48%) were aware of the availability of E-resources. According to the findings, the majority of respondents (31.43%) solely use E-resources for lecturer notes. This is critical for Academic Libraries, as the majority of them require increasing amounts of research.

Wani, et al. (2019) conducted a critical study on the use of electronic resources by the faculty members of management institutes in Jalgaon, Khandesh. The study was focused on the present status of management institutes libraries, the availability of electronic resources, understanding, and awareness about electronic resources, and enhancement of the use of electronic resources. The study was a questionnaire-based

survey method for data collection and a total of 175 faculty members and librarian was the focused group in the study. The major finding of the study was the use of e-resources fulfills the needs, faculty members are satisfied with the services they offer through e-resources. The faculty members mostly used e-books and e-journals compared to conventional documents because it is time-saving. While faculty members studying, e-resources are also being used and some good changes in their studies are felt, e-resources have influenced the academic efficiency with dependency on the e-resources increased. The expert persons have been appointed to provide information related to the use of e-resources to the faculty members. In the study, it was suggested that the speed of the internet needs to be increased for quick access to the available e-resources and the library should arrange various orientation and training programmes for faculty members to optimise the use of available e-resources. Ankrah and Atuase (2018) surveyed the use of electronic resources by postgraduate students of the University of Cape Coast by a structured questionnaire. The study was limited to postgraduate students total population of the study was 915 from 4 colleges out of which only 275 which is 30% of the total population was taken for the study. The major findings of the study are about 185(73%) of respondents are aware of e-resources while 67(27%) of the responded otherwise. 123(48.8%) of respondents know about e-resources from the library orientation programmes in addition 115(45.6%) know by seminar/workshops, 41(16.3%) of respondents know by library staff, 39(15.5%) acquire knowledge from lectures, 26(10.3%) library guide, 24(9.5%) from library website while 18(7.1%) of respondents got knowledge from colleagues/friends. The findings of this study also revealed that most postgraduate students rather preferred to access information from Google scholar, and other web-based databases more frequently than the databases in the library. The respondents identified poor internet connection as the most significant constraint for ineffective access to e-resources.

Odunewu and Aluko-Aroeolo (2018) surveyed information literacy, computer competence, and the use of electronic resources by Olabisi Onabanjo faculty members. The study found that majority of the respondents used for the study were scientists from the faculty of Science. They represent 37.6% of the sampled lecturers. It is also found that the majority of them are information literate and possess the necessary skills in computer use competence. They are found to be using electronic information

resources and can access and use the University's library portal. Their claim of using electronic information resources needs to be further investigated as an OCLC (2006) report indicated that 89% of U.S undergraduate students preferred to start their information search with search engines while only 2% start with a library website. The lecturers too may be approaching the searches through the same means and still claim they use electronic resources. The problem here is those information databases and library portals contain carefully selected information resources that have gone through thorough evaluation; whereas search engines bring all sorts of information to the fore. It is thus difficult to establish the authenticity of such information available therein. The study also reveals that the lecturers have access to and use the internet regularly. The majority of the respondents spend time between two and above five hours per day on the net. The study found a strong correlation between information literacy, computer competence, and electronic resource use by the faculty members.

Olajide and Adedokun (2018) investigate the awareness and use of electronic resources among the faculty members of Afe Babalola University, Ado-Ekiti (ABUAD). The study showed that the majority of faculty members are aware of and use various electronic resources, although a third of them are unaware of them. Some of the subscribing databases are unknown to the responders. Faculty members also use electronic resources for research and teaching, as well as recommending them to students. Faculty members also stated that electronic materials are really valuable. The findings will be beneficial to librarians, university administration, and faculty members in terms of increasing information literacy to maximise awareness and usage of subscription e-resources.

Patel and Verma (2018) conducted a study to describe the use of electronic resources by the faculty members of IPS Academy, Indore, Madhya Pradesh. Out of 250 questionnaires distributed 193 properly filled questionnaires were received and subjected to analysis. The specific objectives of the study are to find out the frequency, purpose, web browser, benefits, place of access, problems, satisfaction level, access-related problems, preference of online, etc. of e-resources used by the faculty. The result showed that half of them use e-resources daily, half of them use it for teaching and learning, Google chrome the most used web browser, time-saving the reason, large majority search through subject and general terms combined, half of them prefer pdf format, text, audio, video and combined are preferred, e-journals are the favorite,

department as the place of access, etc. Problems in accessing e-resources as well as satisfaction level explored low network speed was the major problem. Access-related problems and the type of online e-resources/databases examined. Urgent need of user orientation program suggested and acquiring more e-resources in the subject area needed for the users.

Prasad and Baskaran (2018) analysed the use of electronic resources on scholarly information access by the faculty members of state Universities in South Tamil Nadu. A total of 380 respondents have participated from Manonmaniam Sundaranar University, Madurai Kamaraj University, Alagappa University, and Mother Teresa Women's University for this study. The finding reveals that the faculty of science involved the highest number of respondents in this study which is 177 (46.57%) out of 380 respondents. The majority of 285 (75%) of respondents are educationally Ph.D. qualified out of 380 respondents for this study. More numbers respondents 210 (55.26%) out of 380 respondents are extremely satisfied with OPAC/Web OPAC e-resources/services provided at university libraries. The majority of 198 (52.10%) of respondents out of 380 respondents are accessed e-resources very large extent on finding relevant subject information in this study. It is observed that the information explosion could affect the flow of access. It is encouraged to go with high impact factor peer-reviewed e-resources to limit the barriers. Modern technologies are available at university libraries to encourage the access of e-resources with needed training and awareness.

Sharma (2018) Conducted a study on the use of e-resources by faculty members and students: A study of Swami Shraddhanand College, University of Delhi. The study's major goal was to learn how academics compare e-resources to print resources, how they perceive the benefits of e-resources, and how they deal with access issues. Only 180 of the 200 questionnaires issued to faculty and students of Social Sciences (Political Science, History, Geography, and Economics) were returned in this regard. The information gathered was evaluated, yielding some surprising outcomes.

Angadi and Krishnamurthy (2017) studied on impact of electronic information resources and services on humanities research scholars of Karnatak University, Dharwad: an analytical study in this study highlighted the use of electronic information resources among research scholars of humanities discipline. The survey has been conducted by structured questionnaire total of 100 questionnaires were distributed

among researchers out of which 90 (90%) questionnaires were collected. The majority of the respondents 45(50%) preferred both print and online resources, 27(30%) of respondents preferred online resources, and 18(20%) of the respondents preferred printed resources. About 86(95.96%) are aware of the e-resources and 4(4.44%) are not aware, majority of respondents 41(45.56%) are using electronic information resources for research work, 43(47.77%) acquired the necessary skill to use electronic information resources through user education from the university library, 58(64.44%) opine that links to other resources are considered to be a most important feature for the efficiency of their research study. About 30(33.33%) of the respondents are using e-database very frequently and sometimes, 43(47.78%) of respondents use e-journals frequently and 38(42.22%) use e-articles/e-reprints frequently. About 87(96.67%) of respondents are aware UGC-Infonet consortium, 83(99.22%) of respondents are aware of the copyright act, 62(68.89%) of respondents strongly agree that their quality of research has increased by using electronic information resources.

Naik and Padmamma (2017) directed a survey on the usage of electronic resources by faculty members of medical colleges and the satisfaction level of information accessed by the teachers through the available electronic resources. The study was restricted to the faculty members working in Deemed Universities of Karnataka state medical colleges. Out of 1200 questionnaires, 1041 (82.62%) questionnaires were returned by the respondents. Based on responses it was found that 695 (66.76%) of respondents were male and the rest 346 (33.24%) of respondents were female and a maximum of 302 (29.01%) of respondents were in the age group of 41-45 years. In the study maximum number of respondents was an assistant professor with 437 (41.98%) followed by an associate professor with 361 (34.68%) there was no big difference between an assistant professor and associate professor but professors were only 41 (19.4%) in the study, and all the respondents were using electronic gadgets. The highest 77.90% of faculty members have been accessing the Internet at home for their study and 72.24% of respondents use the internet for personal communication. The opinion of respondents about awareness of e-resources was favourable and the e-book was the most using e-resource with 88.86% and PubMed was the most using e-resource by the respondents of medical colleges with 291 (37.65%) users. 561 (53.89%) of respondents were aware of the source of information to accessing information from librarians, a maximum of 751 (72.14%) of respondents learned about to use e-

resources by trial and error method and a maximum of 512 (49.18%) of faculty members were using e-resources for teaching work.

Natarajan (2017) surveyed the use of electronic resources by students of information science at Jimma University, Jimma, Ethiopia. The sample size of the study was 182 from the undergraduate students of information science and a total of 148 (81.32%) questionnaires were found back. The result shows that the usage of e-journals was increasing due to awareness about the e-resources and services among the students of information science. Maximum students approach theses and dissertations and databases to search the information mainly for doing research and further studies. It was also found that the maximum (81.1%) students use the e-resources daily and the library was the most preferred place for accessing e-resources, they suggested that e-resources are available all the time and anywhere for accessing quick information.

Sohail and Ahmad (2017) portray a survey on the use of electronic resources and services by faculty members and students of Fiji National University and evaluated the effectiveness of electronic resources and services in selected campuses of university libraries based on user satisfaction. Out of sixteen libraries of Fiji National University, only eight libraries were selected for the study from a different division, among all eight libraries a total of 150 questionnaires were distributed to the faculty and students, and 140 questionnaires were collected from the respondents. Out of 140 respondents, 50 respondents were faculty, and the rest 90 respondents were students in the study and Nasinu campus had the highest 25 (17.80%) of respondents and the lowest 10 (7.14%) of respondents was from the Nambua campus. It was found that the highest 40 (28.57%) of respondents using e-resources daily and the highest 13 (26%) of faculty members using e-resources monthly only 11 (22%) of faculty members using e-resources daily in the study. It was found that all the faculty members were aware of electronic resources and in the field of electronic resources they are aware of Moodle, an Online research tool, e-database, and OPAC and all the students were aware of Moodle, OPAC. Maximum 140 respondents were aware of Moodle electronic resources in the study. 130 (92.85%) of respondents were accessing e-resources for finding significant information in their area of specialisation, faculty members purpose of using e-resources were very high in this field and 47 (94%) of faculty members were accessing information in his area of specialisation and maximum 90 (82.22%) students purpose of using e-resources was study purpose. It found that the highest 134

(95.71%) of respondents' purpose of using e-resources were studied purpose in the study. In the study, they found that the opinion of respondents was good infrequent use of e-resources and services which provided by the library and respondents facing problem in inadequate IT infrastructure and blockade of the website when they use e-resources and services and the opinion of the respondents about library staff had indicated a lack of skills required and noted a discouraging attitude.

Wijetunge (2017) conducted a study usage of electronic resources of Sri Lankan universities investigated the use of e-resources available through CONSAL (Consortium of Sri Lankan Academic Libraries) and for the library and information science professionals of the Sri Lankan public universities. A structured questionnaire was used to gather data from 99 librarians working in the Sri Lankan public universities. Out of 99 questionnaires, 48(48.5%) respondents were from fourteen universities representing six seniority levels. 46% of respondents belonged to the senior assistant librarian grade II category and 71% of the respondents were female while 42% were in the age group of 39-48 years and 22% did not mention their age. 75% of respondents possessed a masters degree in LIS while 8% had PhDs. 65% frequently use open access material for their research and the majority 33% use them for their research, 60% believed that the available e-resources fulfilled their needs. The study recommends improving access from homes, adding more LIS material, and increasing training to cover as many LIS professionals to increase the usage. The study is limited to the usage of e-resources by the librarians during 2014 and 2015 after the formulation of CONSAL.

Bituka et al. (2016) critically analysed the use of electronic information resources by the faculty members of the science and technology departments in Shivaji University, Kolhapur. The study examines the purpose, awareness, accessibility, and usefulness finds out the problems facing, knows the opinion, and studies the satisfaction level of the faculty members while accessing electronic resources. The study reveals that faculty members face lots of problems when using and accessing EIR like slow access, taking too long to access and download, lack of infrastructure facilities, and preference to print materials. To ensure that the faculty members work efficiently, University management authorities should get new desktops and laptops to the faculty members so that they will easily get their works done as they are faster than the old computers which are found in the departments whose working conditions are not good. A total of

70 sample size was the study and in the study male respondents were in the majority, and the maximum respondent uses the library and only one respondent uses online sources provided by various publishers and the department library and he does not feel to visit the main library. The highest respondents visited the library weekly, maximum respondents 90% were aware of electronic information resources, the department was the most preferred place for accessing information, respondents were aware of e-resources from guidance from friends or colleagues and they are using EIR for research and teaching purpose, and uses EIR daily and the get the updated information regarding change on EIR through email and library home page in the study. The present study found that the use of e-resources by faculty members of science and technology in Shivaji University is common and the majority of the faculty members depend on the use of e-resources to enhance their teaching, their research, keeping themselves updated and for getting the right and correct information. There is a need to enhance the use of electronic information resources among the entire users through the awareness means and library orientation programmers thus calls for a collectiveness role of the faculty and library staff to work hand in hand to ensure that resources meet the right user by ensuring that faculty members enroll for short term courses which should enable them to be updated on the various recent research in their areas.

Chanchinmawia and Verma (2016) conducted a survey on the use of UGC-Infonet digital library consortium by faculty members and research scholars in the school of physical sciences, Mizoram University: a study by structured questionnaire with all faculty members and research scholars in the school of physical sciences to examine the awareness, utilization, and satisfaction with UGC-Infonet digital library consortium and consortium resources by faculties and research scholars and found that 66% of respondents are aware and use UGC-Infonet digital library consortium. A structured questionnaire is designed and circulated to 19 faculty members and 51 research scholars in the School of Physical Sciences. Total 70 questionnaires were distributed among the faculty and research scholars in the school of physical sciences and finally, 59 responses were received which constituting 84.28%. Find that the respondent ratio is almost equal to all the three departments under the School of Physical Science in the study. 49% of respondent feels that this consortium was very useful while 17% feel that it was useful while 34% of respondents reported that they cannot say anything about the usefulness of the UGC-Infonet library consortium.

Das and Singh (2016) conducted a study “Use of e-resources by the different users of Jorhat Medical college library Assam” to find the use of e-resources by the users. The particular study tries to identify the use and awareness of e-resources and frequency of using digital resources problem faced by the users while using e-resources and satisfaction level of users. A structured questionnaire was distributed among the users total of 50 questionnaires were distributed out of which 42 questionnaires were collected. The major findings were (28.57%) users prefer department for accessing e-resources, e-mail has been chosen as the most popular internet service, online databases (43%) and e-journals (38%) as the most popular electronic resources. A majority of the respondent (71.3%) feel fully satisfied with internet service and electronic resources, 30.95% of respondents access the e-resources to find relevant information in the area of their specialization user education and training is required for the users to know different searching techniques and development for accessing e-resources.

Joseph and Sornam (2016) appraised a study on the use of e-resources by the faculty members of engineering colleges in Kerala to find out the awareness, availability, and usage of e-resources. A survey was conducted among the faculty members of 15 selected engineering colleges in the state of Kerala and a total of 375 online questionnaires were distributed out of which a total of 240 filled questionnaires was received back for the study. Based on 240 faculty members it was found that the majority of faculty members were well aware of the use of e-resources and the maximum number of teachers were using e-resources at least once in a week which was 72 (30%). Availability of e-resources was good in all the engineering colleges except a few e-packages. Maximum faculty members usages desktop computers for accessing e-resources and the purpose of using e-resources was collecting study materials for teaching. The study also shows that all the faculty members were satisfied with the facilities available for accessing e-resources and password, a virus threat, poor internet connectivity, lack of time availability, restriction of e-resources to the campus was the difficulties faced by the faculty members while accessing e-resources.

Kashyap (2016) conducted a comparative study on the use of e-resources by selected universities faculty members of Madhya Pradesh and Chhattisgarh and the study was limited to regular faculty members of 06 universities of Chhattisgarh and Madhya Pradesh respectively. A total of 414 faculty members has participated in this study

based on these data it was found that the e-resources were frequently accessed by faculty members of these selected universities from both states, and they were used online e-resources in comparison to offline e-resources. Use of e-resources like an e-book, e-journal, e-theses, e-research report, e-newspaper, e-bibliography, e-technical report, e-encyclopedia, and e-dictionary have been found significantly higher among faculty members of selected universities. The maximum number of faculty member was using online e-resources which were 57.54%, 35.84% of faculty members was using online and offline e-resources and only 11.32% of faculty members liked offline e-resources. It was also found that there is no significant difference in the use of e-resources among faculty members of the selected universities of both states.

Mohan, et al. (2016) made a survey use and impact of e-resources on study and research: a study on research scholars of University of Lucknow. A structured questionnaire was prepared to collect data from the users a total of 100 questionnaires were distributed among the researcher and students out of which 80 questionnaires were received. 55% of respondents are male and the rest 45% of respondents are females. Maximum respondents 63.75% are in 21-25 age group, 23.75% are 26-30 years and 6.25% below 25 years, 3.75% from 31-35 years, and 2.5% are above 35 years. 96% of respondents were using e-resources and 4% are not using e-resources. Most 38.18% used electronic resources are online database 68.62% of respondents were aware of e-resources from the internet and 53.75% respondents used it daily. 51.2% of people used e-resources for study and research. The most preferred e-resources website according to the respondents was jstor.com followed by Shodhganga.

Murugan (2016) conducted a survey on knowledge and use of electronic information resources by the faculty of Banaras Hindu University to determine faculty member knowledge of e-resources, access to computers and use of e-resources, and the area of training required by faculty to utilize e-resources efficiently and effectively and to recommend how the library could use to improve service as well as what areas the library could research further. The results revealed that 97% of the respondents know e-resources. 94% of faculty members are using e-resources for their teaching and research. Most of the respondents are satisfied with the available e-resources in the library.

Anjaiah and Rao (2015) surveyed the use of scholarly electronic information resources by faculty members of NBA accredited engineering college libraries. The study was made to know the origin and development of AICTE-INDEST Consortium, the significance of e-resources in NBA Accredited College libraries in Warangal District, measure the frequency of access to the consortium, most use of e-resources by faculty members, faculty preference to use the e-journals, problems faced by teachers of NBA Accredited engineering college libraries in accessing the e-resources. The study highlights the findings of the survey about the access and effective usage of consortia-based use of e-resources at Warangal district engineering college libraries. The survey shows that the majority 72% of respondents are using e-journals 86% were using e-books and 76% were using other e-resources to obtain subject knowledge also to fulfill their needs, majority of respondents accessing and use e-resources through search engines, using full-text Indian e-journals, e-book, and maximum respondents were satisfied with INDEST-AICTE consortium e-resources.

Benny (2015) conducted a study on the challenges of selection and acquisition of e-resource in academic libraries to ascertain the major challenges faced by the academic librarians while selecting and acquiring e-resources. The survey discovered that e-journals dominate the e-collection of college libraries. It has been discovered that librarians select e-resources using a variety of tools. The selection of e-resources appears to be based on teacher recommendations and the e-resources' subject relevance. According to the findings, librarians obtain e-resources in a variety of ways, depending on the type of e-resource. According to the poll, college librarians provide in-house training to library employees to keep their skills up to date. They also provide training to users and employ a variety of tactics to raise awareness among them. Unfortunately, the college libraries neither have a license agreement nor a preservation strategy for e-resources.

Bhattacharya and Das (2015) have made an effort to analyse the present status and availability of e-resources in the Engineering College Libraries of West Bengal along with their budgetary provisions. The study concluded that, given the current financial state of West Bengal's engineering colleges, an authoritative regulatory body such as the AICTE should justify the situation by prescribing a more comprehensive list of databases of electronic resources in various branches of engineering, rather than just a shortlist, and allowing the institutions to select the required item. Prices will almost

certainly fall in such a situation, ensuring the long-term viability. In this case, a consortium strategy based on a cost-effective model could be implemented.

Dongardive (2015) examined the “use of electronic information sources (EIS) by teaching faculties. The survey was administered among the academic community with the observation and informal interviews at the College of Dry Land Agriculture and Natural Resources of Mekelle University in 2014. A structured questionnaire was given to 176 teaching faculties to find out the frequency, purpose of use, frequently used EIS, methods of learning to use EIS, benefits of EIS, constraints faced, and the satisfaction level of use of EIS. It was suggested to strengthen the existing EIS sources and services and to maximize the use of EIS”.

Kaba and Said (2015) investigate a study to find understanding, awareness, use, and perception of open access resources undertaken at Al Ain University of Science and Technology (AAU). Data were collected from full-time faculty members teaching at AAU, United Arab Emirates (UAE). The study found that faculty members possess a piece of good knowledge and a positive perception of open access resources. Respondents frequently use open access resources for teaching, learning, and research activities. It was found that female faculty members are more likely to use open-access resources than male faculty members. Respondents with a high level of awareness of use were found to have a highly positive perception of open access resources. Presenting research reports at conferences and seminars or publishing research papers is weakly associated with the level of awareness and use of open access resources. The study revealed no association between the faculty member and their use of open access resources.

Sundareswari (2015) assesses and evaluates the use of e-resources available through DELNET, New Delhi examine the exposure of engineering colleges and universities library members to e-resources. A lot of efforts taken in the past few years to solve the problems of the financial crunch by resources sharing through DELNET for university and engineering college libraries. DELNET took major initiatives for university and engineering college’s library users. Some revolutionary steps are providing scholarly resources including peer-reviewed journals links, databases, conference proceedings, and ILL services, etc. these efforts must be a boon to university and engineering college library users which will definitely boost the level of the higher education system in our country. Also highlighted on the function of DELNET according to him

resource sharing of the most popular service DELNET also promotes electronic communication.

Aregbesola and Oguntayo (2014) surveyed the uses of e-resources by faculty members of Landmark University and determine the amount of awareness, frequency of access, motivation, and constraints of e-resources among University faculty members. The data was collected using a structured questionnaire, and the sample was chosen using a stratified random sampling procedure from several university departments. A total of 109 questionnaires were distributed, with 92 filled questionnaires returned from respondents. Based on the above 92 data, it was discovered that the majority of respondents were in the age group of 25-34, accounting for 33 (35.90%), and the majority of respondents were male, accounting for 76 (82.60%) of the total 92 respondents. All of the faculty members were aware of the electronic information resources given by the concerned library, and the majority of respondents used the e-resources facilities 2-3 times a week, which is 24 hours a day, seven days a week (26.10%). The majority of respondents agreed that they use e-resources because they provide a platform for accessing a wide range of e-books, e-journals, and help to access reliable information resources and make it easy to find current materials, it is convenient and quick retrieval, and they can use any library e-resources remotely and outside of the library. The study's statistics suggest that reputable information resources, current materials, remote access to library resources, and simplicity of use were the most important factors in the study's use of online journals.

Bajpai (2014) investigate the use of e-resources by faculty members and research scholars of the Indian Institute of Technology, Kanpur, India. The purpose of the study was to analyse the problems faced by users while accessing e-resources, the level of satisfaction with the collection of e-resources provided by the library to the users of IIT, Kanpur. The study was based on a questionnaire and interview method a total of 300 questionnaires were distributed and out of which a total of 240 questionnaires was found back based on the data find out the attitude of users about e-resources by faculty members and research scholars and it was shown that all the respondents were well aware of the use of e-resources. The collected data were analysed by Chi-Square test for significance and weighted mean statistical techniques. The study reveals that the maximum number of research scholars was 90 (52.94%) accessing e-resources from hostel and faculty members 30 (42.86%) from Campus and respondents access source

was library website with 150 (62.50%) response rate. The highest response rate about the use of e-resource secure 1st rank was e-journal 1020 followed by online full-text databases with 960 securing 2nd rank. From the study, it was stated that e-journal was very useful for the respondents and they were satisfied because it was up to date and provide valuable information from anywhere. Maximum respondents 90 (37.50%) opinion about e-resource was that it was not enough to fulfil the need of information of users and purpose of using of e-resources was preparing project/ assignments and respondents faced problem while accessing e-resources was highest with access control limited to campus only and maximum users opinion for e-resources was easy/ faster access.

Bhat and Mudhol (2014) conducted a survey on the use of e-resources by faculty members and students of Sher-E-Kashmir Institute of Medical Science (SKIMS) Jammu and Kashmir, India. A total of 300 questionnaires were distributed among the respondents which were 120 UG students, 70 PG students, and 110 faculty members selected randomly out of which only 240 questionnaires were found back from the respondents. From the collected data it was found that the highest 70 (29.16%) of respondents belonged to the subject of Anaesthesiology and the lowest from the subject of Neurology which was 28 (11.67%) of respondents. It noted that the majority of respondents age was below 30 years which was 79 (32.91%) and 60.83% of respondents were male in the survey. The frequency of accessing the internet of the users of the medical college was very high and from the subject, Anaesthesiology respondents use more internet faculty in comparison of other subjects, and highest 16 (28.58%) of respondents access internet above 5 hours from the subject of Gastroenterology. From the study it was found that the accessing of internet 2-3 hours was quite common among the respondents, subject Neurology and General surgery respondents visited library daily. The purpose of using e-resources of the respondents found that preparation for class teaching and sending and receiving e-mail was very high, and maximum respondents found that virus was the barrier while accessing e-resources and 28.75% of respondents told that the library service was excellent in this study. It also found that faculty members and students attitudes were positive towards the use of e-resources for their study and research.

Chauhan and Preeti (2014) evaluated the “social science faculty working in Indian universities; those have been using e-resources. Tried to find out the problems they are

facing in accessing them, and what are the efforts made by INFLIBNET (Information Library Network) to spread awareness about such an ambitious initiative of UGC among social science faculty members. It also highlighted some important issues concerning use, acceptance, and planning of this UGC-Infonet consortium”.

Jotwani (2014) studies the trends in acquisition and usage of e-resources at Indian Institute of Technology (IITs) libraries at Kharagpur, Bombay, Madras, Delhi, Kanpur, Guwahati, and Roorkee either individually or through a consortium, and analyzes the usage of these resources during 2004-11. In addition, the study generates a comprehensive inventory of all e-resources available at IIT Libraries. Personal visits, interviews, and a questionnaire were used to collect data. To augment the above information, we checked the websites and annual reports of the Ministry of Human Resource Development, IITs, and the INDEST-AICTE Consortium. The usage was investigated using COUNTER-compliant data provided by the publishers. IIT libraries spend a major percentage of their budgets on acquiring e-resources, according to data research. These libraries' collection development practices have shifted, and e-resources have become an important part of their core collections. The number of downloads of e-resources in all IITs has surged by 135 percent during the last eight years, from 3233818 to 7617691 articles.

Pramanathan and Baskaran (2014) have jointly conducted a study on the “E-resources of UGC-Infonet access by the research scholars of Bharathiudasan University, Tiruchirappalli, India.” The study is based on the research scholars of Arts, Science, Social Science, Management, and Education faculties in a particular university. A survey was conducted for observing the electronic resources its utilization trends among the research scholars. The questionnaire has been designed to coverage of all the requirements and features of electronic resources access by the UGC-Infonet digital library consortia total of 394 research scholars were respondents. About 144 (36.5%) MPhil and Ph.D. scholars access the electronic resources about 240 (60.9%) were mainly access the electronic resources only 10 (2.05%) of research fellowship pursue the research undergone in the various projects. about 6 (16.8%) of respondents belong to Arts Faculty, about 255 (64.7%) of respondents from Science background; Social Science 21 (5.3%), Management 16 (4.1%), Education 14 (3.6%), Language 13 (3.3%) and another category of research scholars are only 9 (2.3%) responded to this study. The majority of the respondents access electronic resources through electronic

mail 252 (63.95%). In the first rank in order electronic journal 240 (60.91%), web pages 183 (46.44%), search engines and portals 161 (40.86%) and online databases 77 (19.54%). 112 (28.42%) of research scholars wanted to access for improved professional competence. 70 (17.8%) of research scholars agreed that there is a need for electronic document supply to receive the particular research information on published which can be received E-mail itself. 242 (61.4%) of research scholars examined that the World Wide Web provides the information is good.

Puttaswamy and Krishnamurthy (2014) made a study on the use of e-resources for teaching and research by the faculty members of various engineering colleges of VTU, Karnataka: a study. It studies the use of e-resources by faculty members and research scholars at various engineering colleges of Visvesvaraya Technological University (VTU) Belgaum, Karnataka. Total 1000 questionnaires were distributed among respondents and 866 (86.06%) questionnaires are received for the analysis. The study reveals that 818 (94%) of the teachers and research scholars of various cadres use e-resources provided by the libraries. An approximately 74% (641) of the respondents refer to e-journals, to keep abreast of current developments in the fields, 294 (34%) refer to abstracts of papers published in journals, and 412 (48%) of respondents update through personal communication for current developments in the field. It is also indicated that the entry-level Assistant Professors and middle-level Associate Professors use more e-Resources rather than senior-level teachers like Professors. The entry-level staff and middle-level staff visit the library on daily basis and spend more time in the library for enriching their knowledge to remain in the field. Almost an equal number of middle-level teachers visit the Library twice a week and spend similar time to access the e-Resources. The senior-level faculty members visit the library rarely as and when the need arises and spend less time to access e-Resources. The important sources of information for the above category were internet resources, scholarly journals, and books.

Reddy (2014) opines in their study “Utilization of e-resources by the faculty members with special reference to Priyadarshini College of Engineering and Technology (PCET), Nellore, India – a case study” evaluate the use of e-resources by the faculty members of Priyadarshini College of Engineering and Technology (PCET), with a view to examine the exposure of faculty members to e-resources. And highlight the problems encountered by the users and suggest some remedial measures for its

improvement. Investigate the use of e-resources by the faculty members of PCET through a survey based on a structured questionnaire. A total of 120 questionnaires was distributed among respondent out of which 105(87.50%) respondent field questionnaire. From the collected data total (72.4%) are male respondents and the rest (27.6%) are female respondents the majority of (67.62%) of respondents are assistant professors, followed by (20.95%) of respondents are associate professors and only 11.43% of respondents are professors. almost 75.24% of respondents are aware of e-resources and 24.76% of respondents are somewhat aware of the use of e-resources. The study confirmed that faculty members are aware of the e-resources and various types of e-resources, e-database, and e-journals. It suggests the improvement in the access facilities with high Internet speed and subscription to more e-resources by the Central Library of PCET.

Adeniran (2013) conducted a study to examine the usage of electronic resources by undergraduates at the Redeemer's University, Nigeria. The survey research method was adopted for the study for the collection of data and a total of 250 respondents were selected who used the library during the period of study. The study revealed that the use of electronic resources has a tremendous impact on the academic performances of the undergraduate students of the university and there is the need for electronic resources for them to acquire more skills in the use. The findings of this study revealed that the respondents even though we're aware of the different types of electronic information resources available in the university library; their use rate of these resources is low. It was also discovered that a large proportion of the respondents made use of the electronic resources mostly for research, assignment, current awareness, information acquisition, and e-mail and news acquisition. Various factors that militate against the effective utilization of electronic resources by undergraduate students were discovered during the study. Among the factors are the large mass of irrelevant information, the need to filter the results from the search, download delay, failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some electronic resources, difficulties in navigating through electronic resource, etc.

Ahmed (2013) describes the pattern of electronic information resources use and satisfaction with paid resources subscribed by the university by the faculty members in eight public universities in Bangladesh. An online questionnaire was used to assess

the use of e-resources by the faculty members of all the universities. The survey indicates the e-resources were widely used by the faculty members of all the universities. It was identified that the major constraints faces by the faculty in accessing online resources. The restrains faced by the faculty members were tested concerning their opinions of satisfaction using chi-square tests. The faculty members were not satisfied with the current level of electronic resources subscribed by the universities. They identify that the limited number of titles, limited access to back issues, difficulty in finding relevant information, inability to access from home, limited access to computers, and slow download speed were major constraints and these all do affect e-resources use in all the universities. The poor IT infrastructure and limited access to e-resources were led to other constraints such as a reluctance to use the resources regularly and consequently low satisfaction with all the resources.

Bankole (2013) conducted a survey to investigate the extent and level of internet access and use among scientists at Olabisi Onabanjo University, Ago Iwoye Nigeria. Internet use was widespread (100%) among the scientists with the majority (43.6%) using it every day, and the mean internet user experience is 63 years. The majority of respondents (64.5%) accessed the internet from a commercial cybercafé' followed by homes (49.1%). Most of the respondents (59.2%) acquired internet use skills through colleagues and friends and 32.7% on their own by trial and error. The respondents used the internet mostly for communication, research,, and updating knowledge. An email was the most popular internet service, while Google, followed by Yahoo and Scholar Google, was the most used search engines. The majority of the scientists (67.3%) prefer getting information from the internet, while less than one-third (30%) still prefer the traditional library. More than half of the respondents (53.6%) were not using library free full-text online resources such as AGORA and HINARI, and most of the respondents spent monthly for internet use. The scientists believed that the internet has enhanced their academic activities by generally holding very positive opinions on the contribution of the internet to their job performance. The major constraints faced by the scientists in using the internet were the epileptic power supply with 60.0% response followed by slow internet connection/speed (57%) and inadequate institutional internet facilities (49.1%). The findings of the study have revealed the need for the university to improve on its internet infrastructures and effective user education among the scientists for the maximal benefit from utilization of the internet.

Chandran (2013) explored the use and user perception of electronic resources in the Siva Institute of Frontier Technology, India. A total of 123 users were included in the study, which was conducted using a questionnaire-based survey method. A well-structured questionnaire was created and delivered to the 200 students and faculty members that were chosen. The questionnaires were returned with 123 copies duly filled in, for a response rate of 61.50 percent. There were both open-ended and closed-ended questions in the survey. Simple statistical approaches were used to classify, evaluate, and tabulate the acquired data. The impact of electronic resources on students and professors in their academic pursuits is the subject of this study.

Murugesan (2013) conducted a case study on awareness and utilization of e-resources by faculty members with special reference to Angel College of Engineering and Technology Tirupur, Tamil Nadu. The study seeks to investigate faculty's awareness and usage of online academic databases to determine the benefits they associate with electronic resources and the challenges they encounter in accessing electronic resources. The study established clearly that faculty members depend highly on online electronic resources not only for research but also to support their teaching. However, patronage of the library's online academic databases was very low. This was large because faculty members were either not aware of the existence of these databases or were not aware the library had a subscription to these databases. In the light of the above revelations, there is the need for the library to heighten awareness creation among faculty members and students on the existence and usage of its electronic resources.

Singh (2013) investigated the use of electronic resources by the students, research scholars, and faculty members of IIM Bangalore. It investigated the users' awareness of the various types of e-resources available in the IIM Bangalore Library, the purpose, and frequency with which they use e-resources, the factors influencing resource utilisation, the impact of e-resources and services on the users' academic work, and suggested ways and means for the effective use of e-resources and services available in the IIM Bangalore Library, among other things. According to the study's findings, the majority of respondents (94.74%) say they don't visit the library very often because the library's entire collection (e-resources) is accessible from their workplace via Wi-Fi/LAN. The majority of respondents (87.84%) use the library to borrow and return books, as well as for research work/projects (79.73%). They are fully aware of the IIM

Bangalore Library's e-resource offerings and capabilities (97.30%). The majority of respondents (94.59%) say they use e-resources because of the large number of online databases/journals available. The majority of respondents (81.08%) are satisfied with the quality of e-resources. They (86.49%) expected the collection to contain a greater number of e-resources.

Tripathi and Jeevan. (2013) in their study "A selective review of research on e-resource usage in academic libraries" highlights the importance of quantitative and qualitative analysis of the usage of e-resources in academic libraries. It also describes various studies undertaken to study the users' behavior and attitude towards e-resources. It shows that usage statistics help in studying and evaluating the users' behaviour in an online environment. The library services can be extended and modified, to reflect user interests in the light of the evaluation and analyses were done.

Hadagali, et al. (2012) carried out a study to investigate the use of e-resources by P.G. students of different universities of Karnataka state (India). The objective of this study is to identify respondents' knowledge and usage of e-resources; users' skills in managing e-resources; factors that influence the effective use of e-resources; difficulties encountered by respondents; and effective remedies to problems encountered. The study discovered that the information content of e-resources is superior to that of print versions and that the majority of users utilise e-resources to conduct bibliographical searches. Users encounter two major issues: a lack of personal computers and a lack of internet bandwidth. The study recommends forming a consortium at the state level to add substantial e-resources to the existing collections in the university libraries.

Roy, et al. (2012) conducted a study on problems in searching online databases: A case study of select central university libraries in India and investigated diverse issues faced by online database searchers at eight central university libraries in India and discovered that users preferred simple and intelligible content pages; site feasibility was directly proportional to user involvement; and retrieval procedures differed by subject. They recommended that databases be chosen based on their retrieval capabilities and online capabilities.

Arua and Chinaka (2011) conducted a study on the use of Library Resources by Staff and Students of Secondary Schools in Umuahia North Local Government Area of Abia State found in his study that 42.86% of respondents replied that their libraries

accommodation is adequate while 57.14% of respondents indicated that their library accommodation is not adequate. Lack of current and up-to-date information materials (42.86%) is the most outstanding problem affecting the use of these libraries followed by poor library accommodation (25.71%) and poor library orientation (20%).

Elavazhagan (2011) conducted a study on “Utilization of e-resources at Valivalam Desikar polytechnic college, Nagapattinam, Tamilnadu: A case study” and examines the existence and use of various e-resources can eliminate the barrier and get maximum utilization of various e-resources. It also highlights the preferences and importance of resources among the teachers and students. The study was limited to the teachers and students and data were collected from 80 faculty members and students in all departments. On behalf of the questionnaire, the majority of the teachers 46(88.46%), and students 28(93.33%) prefer the internet. The second highest preference is e-mail 30(57.69%) for teachers and 23(76.66%) students. Use of e-journals are 19(63.33%) by teachers and 14(26.92%) by students, 13(32.14%) teachers and 32(57.14%) students usually use e-resources. The study also reflects that a large number of teachers 20(83.34%) and students 25(44.64%) think that e-resources never reduce the importance of traditional resources, whereas 4(16.66%) teachers and 31(55.35%) students feel that e-resources may replace traditional sources of information.

Moghaddaszadeh and Nikam (2011) examine a comparative study on the use of e-resources by university library users of Iran and India. The study was conducted on six universities of Iran and India (three universities from both countries) which were the University of Mysore, Bangalore University and Mangalore University from India and Tehran University, Ferdowsi University of Mashhad, and Shiraz University from Iran. The study focuses on research scholars and a faculty member from the subjects of Chemistry, Physics, Mathematics and Statistics, Biology and Biochemistry, and Geology. A total of 1200 questionnaires were distributed among the research scholar and faculty members out of which 903 dully field questionnaires were received back and Statistical Package for the Social Sciences (SPSS) is used in the study for calculation and comparing the findings between two stated countries. From the collected questionnaire consisting of 903, it was found that the maximum 453 respondents were from India, and the rest 450 respondents were from Iran. A significant difference was observed in the study based on respondents when were using e-resources, it was found that out of 450 respondents from Iran 273 (60.70%) of

respondents was male, and the rest 177 (39.30%) of respondents were female users and from India, out of 453 respondents, the largest user 313 (69.10%) were male and rest 140 (30.90%) users were female in the study and the total it was found that the maximum 586 (64.89%) of respondents were male and only 317 (35.11%) of the respondent was female and maximum respondents was in 25-29 years age group which was 385 (42.64%) from both the country, maximum respondents area of specialization was Chemistry and more than 95% of respondents access the internet at the office it was found in the study. There was a significant difference counted while using internet facilities between both the country and the largest number of library users frequently use the Internet for sending e-mail from both countries and it was also found that the users' of both country access information through e-journals and maximum respondents facing problem in slow accessibility while accessing e-resources. The majority of the respondents said that the information got by using e-resources were save the time of users and provided the best knowledge, maximum respondents of Iran using 'Elsevier Science' database and from India maximum respondents using 'Springer Link' to access e-resources in the study.

Mulla (2011) conducted a survey on the use of electronic resources by faculty members in HKBK College of Engineering. To study the use of different types of e-resources, purpose, hindrances faced, observe the impact on traditional resources used by faculty members of the college. It was found that the less number of respondents have more than 25 years of experience in teaching, all the respondents state that they use electronic resources for finding relevant information in their area of specialization, respondents indicate that all the information available in the e-resources is always adequate, too much information retrieves was the main barriers while accessing e-resources, respondents facing problem to use of electronic resources while accessing was lack of training and maximum faculty members state that they found their required information in the range of 75-99 rating scale in the study.

Shukla and Mishra (2011) conducted a survey on the use of e-resources by research scholar of Institute of Technology Banaras Hindu University, India, and determine the extent to which research scholars were aware and make use of e-resources. It was highlighted that the respondents facing problems while accessing e-resources, their views on the usefulness of e-resources compared to that of print resources, and the place from where they prefer to access information. A structured questionnaire was

distributed among research scholars of the Institute of Technology, Banaras Hindu University to collect the necessary data, keeping in view the objective of the study. Respondents prefer e-resources against print resources because of their various good features, for their research progress and are looking in the future to have more e-resources access within university campuses with better internet connectivity. Maximum respondents use e-resources for their research work and respondents use e-resources daily. Majority of the respondents accessed e-resources from the department. Respondents feel uncomfortable regarding the slow speed of the internet while accessing e-resources.

Ansari and Zuberi (2010) conducted a study on the “Use of electronic resources among academics at the University of Karachi” during the period of study the total no of participants was 70. 17(24.3%) professors 5(7.1%) associate professors 26(37.1%) assistant professors and 22(31.4%) lecturers have participated. And found that a large majority (78.5%) know little about e-resources. Both print and e-resources are popular, followed by printed sources (42.9%). The use of e-resources is rare (5.7%). About one-third of respondents use electronic resources for research. About one-quarter to one-third use it to prepare lectures and gain subject knowledge. A large amount of academics i.e. 90% believe electronic resources are reliable, however, the majority of the respondents consider only those electronic resources are reliable which are produced by authentic organizations or publishers. According to them, everything is not reliable on the Internet. A majority of the academics have computer skills that facilitate the use of e-resources, although a majority have little knowledge of e-resources. Most use both electronic and printed resources, and only printed sources. All the respondents are satisfied or quite satisfied with available resources.

Satpathy and Rout (2010) evaluate the use of e-resources by the faculty members of C. V. Raman College of Engineering (CVRCE), Bhubaneswar. Highlighted the problems encountered by the respondents and suggested some remedial measures for its improvement. It was found that faculty members were heavily dependent on e-resources for their required information and keep themselves up-to-date in their subject area. The study confirmed that faculty members were aware of the use of e-resources and various types of e-databases and e-journals. In the study, it was suggested that the improvement in the access facilities with high internet speed and subscription to more electronic resources by the library of CVRCE.

Haridasan and Khan (2009) made a study on the impact and use of e-resources by social scientists in the National Social science Documentation centre (NASSDOC), India, the main purpose of this paper is to present the fact that electronic resources are a significant part of library collections. The study aims to identify the acceptance of e-resources in the National Social Science Documentation Centre (NASSDOC) library in New Delhi, India, and determine their usage, performance, degree of user satisfaction, and barriers faced in the access of e-resources. It also attempts to find out the users' views about computer literacy among social scientists. The major findings of the study indicate that respondents are aware of the e-resources (such as e-books, e-journals, e-encyclopaedias, e-theses, CD-ROM databases, e-mail, internet, and the OPAC). Large numbers of research scholars and faculty members are using e-resources for their research work. Many faculty members strongly agreed with the necessity for computer and internet literacy to access information. A majority of users were satisfied with the e-resources available at the NASSDOC library.

Kaur and Verma (2009) surveyed "Use of Electronic Information Resources: A case study of Thapar University" study the issues like use of electronic information resources its impact on the collection of print and electronic journals its awareness among the users and the places where the users are accessing these resources. The survey was conducted in the academic year 2006-07 at the Thapar University Patiala. A total number of 504 users from the undergraduate, postgraduate, research scholar, and faculty members were selected and their response was obtained with the help of a questionnaire. The major findings of the study were awareness about e-resources and services of the library which shows that only 36.29% were not aware of it. Faculty, research scholars, and postgraduates were more aware of their library e-resources and services as compared to undergraduates. Only 23.71% of respondents knew about UGC-Info net. Faculty and postgraduates were more aware of it as compared to the others. Only 55.56% were using these e-resources. The maximum users 53.98% were using e-journals occasionally. Most of the users use the hostel and computer centre as a place for accessing electronic information that libraries and departments. The e-journals were used by faculty and research scholars more in the departments. The impact of e-journals shows that there is an increase in the collection and usage of e-journals.

Kumar (2009) in their article entitled “Use and Usage of Electronic Resources in Business Schools in India: FIIB” describes the FIIB library and its resources and explains the need, scope, and limitation, methodology of the study. The study was conducted on a questionnaire method total of 100 questionnaires was distributed among library users out of which 82(82%) questionnaire was collected. It found that all the respondents were aware of the e-resources which indicate that the large number of 52(63.5%) of respondents came to know about the e-resources mainly from library notice followed by 22(26.9%) from colleagues, 4(6.8%) from office circular and only 2(4.8%) each from institute website and institute Newsletters. The study shows that the larger number of 32(39%) access online resources daily basis followed by 22(26.9%) twice in a week, 18(22%) once in a week, 6(7.3%) once in a month and 4(4.8%) was not sure. The major findings of the study are most of the members access e-journals daily most of the respondents access e-journals 10 to 12 hours a week the main advantages as opined by the library members are simultaneous usage facilities of e-resources.

Negahban and Talawar (2009) directed a study on the topic of dependency on e-resources among social science faculty members in Iranian Universities. A total of 232 faculty members from various universities from Iran were randomly selected. A questionnaire measuring dependency on various e-resources: e-books, e-journals, e-tutorials, online databases, CD-ROM databases, and e-reports was prepared by the investigator and administered to the sample selected. Statistical methods like descriptive statistics and chi-square tests were employed to verify the hypotheses. Results revealed that Iranian faculty members were more dependent on all the e-resources selected for the study. It was also observed that Iranian faculty members were more dependent on e-journals, followed by e-books, and Online databases, and least on e-reports. The reasons for dependency on various e-resources have been discussed.

Sharma (2009) conducted a study on the use and impact of e-resource Guru Govind Singh Indraprastha University (India): a case study. The study was limited to the teachers and research scholars of Guru Govind Singh Indraprastha University, Delhi. A questionnaire survey was conducted to collect the information total of 100 questionnaires were distributed among the respondent out of which 82(82%) were found usable for analysis. They highlighted that only the well-known e-resources are

preferred by researchers and faculty members the majority of the teachers 46(88.46%) and research scholars 28(93.33%) prefer to use e-journals. 50% of research scholars and 30.77% of teachers make use of e-research reports. It found that 42(80.77%) teachers and 26(86.67%) research scholars can access the e-resources very easily and only 10(19.23%) teachers and 4(13.33%) research scholars feel that using the e-resources is not easy. The majority of teachers, i.e. 34(65.38%) and research scholars, i.e. 23(76.67%) are using the library Web site as a gateway to access the electronic resources. A few of the teachers, i.e. 18 (34.61%) and research scholars, i.e. 7 (23.33%) are not using the library Web site as a gateway to access the electronic resources. They found that 33(63.46%) teachers and 26(86.67%) research scholars usually use e-resources. 15 (28.85%) teachers and 4 (13.33%) research scholars use the e-resources sometimes, whereas 4(7.69%) teachers use e-resources rarely. It is noted that research scholars use the library e-resources more frequently than the teachers. The huge amount of teachers 32(61.54%) and researchers 22(73.33%), think that e-resources never diminish the light of traditional resources, whereas 20(38.46%) teachers and 8(26.67%) research scholars feel that e-resources may replace traditional sources of information. This shows that in the era of information and technology, academics are equally attached to traditional sources of information.

Swain and Panda (2009) evaluate quantitative and qualitative use of electronic resources in the academic ambiance of business school in Orissa India intending to examine the level of electronic information services (EIS) offered to the faculty members of the state with an opinion pool of the faculty members of the respective business schools. The study highlights some of the respondents' challenges and limits, as well as some constructive comments and recommendations for improving the condition of electronic information services in the state's business schools in the future. Faculty members favour the use of e-articles, but electronic theses and dissertations receive the least amount of attention (ETDs). In addition, it was discovered that just a few online databases, such as Emerald Management Xtra (EMX), EBSCO, and PROQUEST, are widely used, but the use of other online databases falls short of expectations. Similarly, the vast majority of faculty members support commercial e-services.

Kumar and Kumar (2008) reported the result of a survey on the use of electronic information sources by the academic community and described that Electronic information sources have become popular because they provide multimedia content, full-text searching, reference linking, and search and browsing flexibility. The study's major goal was to describe how academic communities in various universities used computerised information sources. The survey data was divided into three sections: the first was demographic information, the second was awareness of electronic information sources and the purpose of using electronic information sources, and the third section was respondents' opinions on the benefits and drawbacks of using electronic information sources.

Lohar and Roopashree (2006) evaluate the use of library at the Bapuji Institute of Engineering and Technology (BIET) in Davanagere (Karnataka). A survey of 60 faculty members was conducted through a questionnaire. The analysis of the collected data covers the use of electronic resources and how the electronic resources are improving the academic carrier of the faculty and also what are the problems that are faced in using the electronic resources. Concludes that the main intention of the use of electronic resources has been the academic interest of the users.

Mulla and Chandrashekhara. (2006) opines in their study E-resources and services in engineering college libraries that, the collection and service infrastructure of the libraries in the sample regions are not up to the mark. Engineering college libraries are struggling in building a digital collection and disseminating digital information, due to the lack of Information Communication Technology (ICT) infrastructure, manpower, awareness, user demand, and training. Further, the study recommends concrete effort on the part of individual institutions with the support from the Information Library Network (INFLIBNET) would be a better alternative in designing appropriate collection and service infrastructure. An establishment of Information Communication Technology (ICT) task force for individual institutions composed of Information Technology (IT) experts and department heads would bring fruitful results.

Dadzie (2005) in their article entitled electronic resources: access and usage at Ashesi University College. Sets out to investigate the use of electronic resources by students and faculty of Ashesi University, Ghana, in order to determine the level of use, the type of information accessed, and the effectiveness of the library's communication

tools for information research. The study found that general computer usage for information access was high. Usage of some internet resources was also very high, whilst the use of scholarly databases was quite low. The low conservation was attributed to inadequate information about the existence of these library resources.

Ahmed (2004) conducted a study on the use and user perception of electronic resources in the United Arab Emirates University (UAEU), in this study a survey was conducted on the faculty members of UAEU. A total of 140 questionnaires were sent to the respondent out of which 125(89%) were received. Most respondents were male, 115(92.7%). The age of 84.7% of the respondents was less than 50 years. Most of the respondents held Ph.D.'s only 10(8%) of the respondents held the Masters and one held a Postgraduate Diploma. Less than half of the respondents 51(40.8%) belong to the College of Humanities and Social Sciences the largest college in the university. The remaining respondents were from the following colleges 22(17.6%) from Engineering and IT, 18(14.4%) from Science 16(12.8%) from Education 11(8.8%) from Business & Economics only 5(4%) from Food Systems and at the lowest end only 2(1.4%) from Shariah & Law. The frequency of use of e-resources by the respondent is less than 50%. The most used e-resources were online reference materials. Most of the respondents were satisfied (57.6%) or somewhat satisfied (23.2%) with the e-resources and more than half of the respondents (56.0%) agreed to a certain extent that the library provided an adequate range of e-resources. Results of this survey ascertained the opinion that faculty members seem to be equipped with fairly good computer skills that enable them to search and utilize e-resources. A criterion of less than 0.05 was used to determine the significance of use. Figures show that the frequency of use of e-resources was significantly low for most types of e-resources. The least frequently used e-resources were e-books ($t = 2.10$, $p < 0.05$), the online catalogue ($t = 2.65$, $p < 0.05$) and bibliographic databases ($t = 2.60$, $p < 0.05$). For comparison, online reference works ($t = 2.86$, $p < 0.05$), e-journals ($t = 2.70$, $p < 0.05$) and full-text articles ($t = 2.78$, $p < 0.05$) were found to be more popular, even though they still fell below the anticipated frequency in the survey's set mean.

Herring (2002) made a study on the use of electronic resources in scholarly electronic journals, this study describes a citation analysis of research articles from scholarly electronic journals published in 1999-2000. The analysis focused on the extent to which scholars are using electronic resources and the types and subject areas of online

resources that are being referenced. The data for this study were drawn from a selective sample of scholarly, peer-reviewed e-journals available through the Web without subscription or registration total of twelve journals were selected representing areas of active interdisciplinary research. The 175 articles examined had a total of 4289 unique references. 97(55%) out of 175 articles referenced electronic resources had a total of 2584 unique citations, 26.5 percent of which were to electronic resources. A total of 42.5 percent of the references were to articles in online periodicals, and almost 25 percent were to the same journal in which the article being analysed appeared. The current study, focusing exclusively on e-journals, shows that more than half of the articles studied included electronic references and that 16 percent of the total references were to electronic resources.

Heterick (2002) found that more than 60% of faculty studied are comfortable using electronic resources. They believe that a variety of electronic resources is important to their research, and they consider electronic databases to be invaluable. In addition, 62% expect that they will become increasingly dependent on electronic resources in the future. The resources they use most often are online catalogues, full-text electronic journal databases, and abstracting and indexing databases. More than 70% of all respondents consider their library's online catalogue to be "very important" to their research. However, the importance of this resource varies significantly by field. Just over 60% of the economists consider their library's online catalogue to be "very important", while nearly 90% of humanists regarded it as such. In fact, the home library catalogue is the most important electronic resource for humanists, by a large margin. Based on their replies, it is as important to their research as personal computers.

2.3 E-RESOURCES ACCESS PATTERNS

John and Balasubramanian (2019) analyse a study to deal with the application and uses of Information Communication Technology (ICT) in Academic Libraries concerning Arts and Science Colleges in Tirunelveli. The study was based on a questionnaire method for collecting the required data from PG students, Research scholars, and Faculty members of six colleges that are serving within the corporation area of Tirunelveli and affiliated to Manonmaniam Sundaranar University, Tirunelveli. A survey method was used for collecting primary data. The outcomes of the respondents'

survey show that utilising ICT-based resources is enough. According to the findings, 56.44 percent of respondents always use ICT-based resources, while 40.49 percent use them occasionally. The authors propose that academic libraries expand their video-conferencing capabilities, allowing users to get the most out of their time spent there.

Kumar et al (2018) conducted a study on the usage pattern of e-resources among management students in Nagpur, Maharashtra (India) to investigate the usage pattern of electronic resources (e-resources) among management graduates. The findings of the study will help in enhancing the usage of e-resources among students who opt for management courses. Students are highly aware of e-resources and perceive them to be quite beneficial to their academic success, according to the findings. Due to a lack of search abilities, pupils are discovered to be using non-paid resources more than paid resources. Those studying information technology, economics, and finance use e-resources more frequently than students studying marketing, operations, and human resource management, according to a discipline-by-discipline analysis. Faculty and training have been shown to be powerful motivators for students to use e-resources.

Bhat and Ganaie (2016) identify the most popular places, gadgets, searching tools, and techniques adopted by users of Dr. Y.S. Parmar University of Horticulture and Forestry (DYSPUH & F), Nauni, Solan, Himachal Pradesh, while searching electronic information resources (EIRs). It was discovered that department/office chamber 42%, hostel 29%, and house 26% to be the most popular access points. The majority of users access and read EIRs on laptops. Users prefer to use "search engines" over all other platforms, with "Google" proving to be the most popular. The majority of users begin their search with "title" and then "keywords/subject phrases." Users are still unfamiliar with most complex search strategies, with fewer than half of them being able to use only Boolean operators and less than 10% claiming to be familiar with others. Self-study has taught the majority of users how to employ information search and retrieval skills.

Solanki (2016) conducted a study undertaken to know the scenario of the usage pattern of e-resources available under the N-LIST programme by the Faculty members, undergraduate students, and post-graduate students of colleges affiliated with Saurashtra University. The purpose of the study is to determine the frequency of access, the location of access, the access mechanism, and the users' search technique.

According to the report, 29.4 percent of faculty members use N-LIST e-resources once a week, 22.5 percent of UG students use them once a month, and 29.0 percent of PG students use them rarely. Individual login ID and password were used by 60.8 percent of faculty, 67.3 percent of UG students, and 60.2 percent of PG students, whereas institutional login ID and password were used by 39.2 percent of faculty, 32.7 percent of UG students, and 39.8 percent of PG students to access N-LIST e-resources. To access N-LIST e-resources, 49.0 percent of faculty members and 39.2 percent of UG students used simple search, while 43.0 percent of PG students used advanced search. It also shows the current N-LIST programme member's strength. Data were examined and tabulated using SPSS software based on completed questionnaires obtained from respondents.

Kumbar et al (2014) conducted a study to recognize the different types of electronic resources used by science research scholars, Karnatak University, Dharwad, the purposes and frequency of using electronic resources, and the problems faced by the students while accessing and using the electronic resources in the university. The study was conducted using a structured questionnaire to elicit the opinion of science research scholars. The questionnaire was issued to 100 research scholars from various science departments, and 80 completed questionnaires were returned, yielding an overall response rate of 80%. It was discovered that e-resources have become an important aspect of research researchers' information needs at Karnatak University. It also discovers that e-resources can be effective alternatives for traditional resources. Finally, emphasises the research scholar's recommendations for improving and better utilising library resources and services. The vast majority of respondents were pleased with the university's current assortment of e-resources. The majority of respondents said they only used e-resources for research. When looking at the UGC's investment in e-resources, the analysis shows that consumption is woefully inadequate. As a result, it is recommended that the library and other professionals take minimal interest in raising knowledge about the availability of e-resources, as well as their worth and usefulness in increasing the quality of research. Only then will every scholar be able to use e-resources to keep their knowledge up to date and improve the quality of their work.

Sampath Kumar and Kumar (2013) examine a study on the use of various search engines and Metasearch engines by Indian academics for retrieving information on the web. It also aims to know whether the academics use the search strategy of various search engines for retrieval of information or not, and how the Indian academics learn the various search strategies for using search engines. A total of 450 questionnaires were distributed, out of which 300 duly filled copies were returned, constituting a 66.66% response rate. According to the findings of the poll, the majority of respondents used Google 91.93% and Yahoo 43.85%, while Dogpile and Ixquick 35.78% were used less frequently. For retrieving information, 65.26% of respondents chose the search strategy. The study also found a link between the respondent's profession and their use of search engines ($p=0.018$), as well as their use of search engine search techniques ($p=0.028$). The respondent's occupation is also connected with the method of learning search engine search tactics ($p=0.008$).

Kumar and Kumbar (2012) evaluate the use of electronic resources among the faculty in five autonomous Engineering Colleges in Bengaluru. It evaluates the purpose, benefits, preference of web browsers, search engines, file formats, problem faced, and search patterns as the key parameters. It highlights some problems, constraints, and forwards suggestions for better use of electronic resources. The study examines faculty knowledge and usage of e-resources for academic and research purposes. Furthermore, familiarity with search patterns is necessary for good retrieval. The survey shows that all engineering faculty members have access to electronic information resources. The primary goal of using the internet is to have access to e-learning materials. Faculty profit from the use of e-resources since they can access up-to-date information. The faculty's preferred web browser and search engine for accessing electronic resources are Internet Explorer and Google. Basic and advanced search options are preferred by the professors. The use of field-based search and advanced search options is fairly widespread among them. The title search is the most popular field-based search option, and the 'search option' is the most popular advanced search option. Faculty should be educated on how to use advanced search options provided in the search menu of electronic information resources to get the most out of them. For better use of their information resources, web designers, publishers, and distributors should include an online assistance menu on the search page. The internet's speed should be improved, and technical schools should hold regular seminars, workshops, and orientation

programmes for staff and students to keep them up to date on the latest technology. The institution should install an EZproxy server at the library and information centre so that library resources and services can be delivered to users' doorsteps. This EZproxy configuration will increase off-campus access to electronic information resources automatically. The virtual world's electronic resources represent a significant commitment of people's time, money, and wisdom. Users should become familiar with the most up-to-date search techniques to get the most out of the electronic information resources accessible.

Thanuskodi (2011) examines the usage of electronic resources at Dr. T.P.M. Library, Madurai Kamaraj University and reveals that M.Phil. students undertake more searching of e-resources followed by postgraduate students and Ph.D. Scholars the least. It also suggests that users are aware of e-resources and their many varieties, but that access facilities with high internet speed and a larger subscriber base of electronic information resources should be improved. Respondents were aware of e-resources and the various sorts of e-resources, e-databases, and e-journals, according to the survey. The study advised that the University upgrade its access facilities with fast internet speeds and subscribe to more e-resources.

Dhanavandans et al. (2011) found that the role of engineering colleges in technical manpower development is quite significant. They require a speedy information communication technology infrastructure, as well as adequate growth of electronic resources in this subject. The lack of proper funding is the primary reason for the failure to establish information communication technology infrastructure, particularly in libraries that do not receive financial assistance from the UGC of India or other organisations such as the AICTE. The situation can only be solved with the help of the state government or the ICTE. The building of information and communication technology infrastructure, as well as the development of electronic resources in this context. In Tamil Nadu, the creation of information communication technology infrastructure facilities in self-financing college libraries can improve the efficiency of information assistance, information retrieval, and overall education quality.

2.4 RESEARCH GAP

On the analysis of the above literature review, it has been observed that there is a sufficient number of researches conducted on the use of e-resources by faculty members at various levels. But no detailed study has been carried out in the proposed area of the study and hence, this study is an attempt to full fill this research gap.

2.5 CONCLUSION

Chapter 2 has dealt with the literature review collected from the different sources and divided into three parts i.e. (i) Use of Internet with eleven reviews, (ii) Use of E-Resources with sixty-five reviews, and (iii) E-Resource search pattern with nine reviews. The maximum number of reviews publications was journal articles type documents, followed by conference proceedings, and out of a total of 85 pieces of literature, 24 works of literature were International publications while the rest 61 reviewed were Indian publications. Chapter 3 will deal with e-resources: an overview.

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CHAPTER 3

E-RESOURCES: AN OVERVIEW

3. INTRODUCTION

Information communication technology (ICT) has brought a revolution in each field. It has revolutionized the functioning and services of libraries and knowledge centres. Within the last decade, libraries are using new technologies and introduced electronic resources and services to satisfy the user's desire. The library setting is speedily ever-changing to the electronic setting. The last few decades have seen a growing competition to deliver new digital data services to lots of new users. The net, as a number one communication system, was – up to a number of years past- the sole one and therefore the final channel for providing subtle knowledge and knowledge services. Many new technologies were developed and tested, resulting in the introduction of the latest techniques for distributing knowledge. Internet technologies became the essential solutions for distributing knowledge over the net. Besides new tools, new versatile ways in which of making applications were developed. In comparison to the normal Client/Server paradigm (based on knowledge transmission), the mobile code model has shown huge potential. Nowadays, the increasing advances in network technology are pushing the knowledge revolution towards new telecommunication systems, giving even additional subtle digital channels than the Internet; facet by facet with the normal (audio and video) content, new knowledge services such as e-commerce, digital archives, web 2.0, etc. are often delivered over these broadcasting and portable networks. Awfully aggressive competition is developing among these newer digital systems to deliver versatile, low cost and present knowledge services. In such a moving world, the objectives of the content suppliers are perpetually being revised, thus new solutions need to be enforced at an awfully quick pace. Knowledge is admitted as a key piece within the socioeconomic relations established by the societies, the organizations, and therefore the countries. The data of the technologies and communication is extremely necessary as a result of it refers to a district of the data generated by man which has been created to create viable some exchange forms and of relations; they are basic support to the method of the present economic process that finally results in the knowledge society. It appears that electronic data system is answerable in massive half for the “speed up” of contemporary society, everything should get done quicker, be there sooner, and be offered in real-time. It is not hyperbolic to mention that (the data the knowledge the data) explosion and knowledge Technology revolution have a diode to the emergence

of the electronic information setting. Today online, data is fetched by browsing documents. Tomorrow the online, data might be found by looking out repositories and portals. Within the new millennium of the far side the online, analysis setting technology would leave the correlation of data across repositories and portals to resolve issues. Electronic resources are quickly leaky into the common consciousness of the world, taking their place aboard ancient educational resources in core analysis assignments. Data technology contains a profound impact on each side of contemporary society, together with analysis. Electronic media has provided several prospects and opportunities for providing quicker and faster access to data at the worldwide level. For the purposeful use of electronic data sources associated with nursing, academicians ought to have Digital Data Fluency (DIF). Digital data fluency is that the ability to search out, judge, and use electronic data resources effectively, expeditiously, and ethically. Electronic/Digital data fluency involves knowing however electronic data is completely different from print data; having the talent to use specialized tools for locating electronic resources, and developing the tendencies required within the electronic resources setting.

In this digital age, the increasing demands for e-resources has given rise to use of e-resources. With the introduction of new technology, library and information professionals are finding it difficult to gather, organise, sort, store, and disseminate information. Electronic learners now have access to an overwhelming number of information sources that are easily accessible at their fingertips with the click of a mouse, thanks to the modern age of e-resources. Libraries have evolved into electronic knowledge centres where users can access a variety of electronic information services through the internet, the World Wide Web, as well as open access journals, open-access databases, blogs, and institutional repositories. Academic libraries have moved toward digital repositories and developed consortiums to exchange materials and help users meet their needs. (Nyamboga & Kemparaju, 2003)

Since its advent, the e-resource movement has brought major changes all over the world and has played a significant role in library and information systems. The proliferation of electronic tools has had a huge effect on how people use information, store it, and retain it. There are a number of benefits to using e-resources over print materials, and these benefits have prompted library users to switch from print to e-resources. The word "e-resource" refers to any of the information products that a

library makes available through a computer network, including electronic books and journals.

3.1 CONCEPT OF E-RESOURCES

According to Saye (2001) e-resources are generated through some electronic medium and made accessible to a wide range of viewers both on-site and off-site via some electronic transferring machine or internet. The scope of electronic resources includes a wide range of digital collections, e-books, e-journals, e-databases, and other electronic collections are an example of digital collection and ICT has made it possible to transform electronic data. Services within the categories of e-assignments, e-project reports in many academic institutions and universities all across the world that impels the users' community to use electronic resources for the betterment of their educational needs.

E-resources are considered the mines of knowledge that are explored through trendy ICT devices, refined and redesigned, and typically stored in the cloud space within the most concrete and compact type and may be accessed simultaneously from infinite points by an excellent number of users. The phrase 'electronic resources' has generally defined as 'information accessed by a computer is also helpful as bibliographical guides to potential source but as of yet they sometimes seem as cited reference in their title. Electronic resources and services confer with a variety of electronic and digital sources of information obtainable to lecturers and learners within an educational context. The modification in traditional document delivery services from print to electronic has occurred terribly and libraries data services have undergone an important transformation to effectively deliver e-resources to the academic community. E-resources unitedly with the web became proof of contemporary age being a useful tool for teaching, learning, and research. The library and information landscape have remodeled with the onset of the digital era and today traditional libraries have modified their roles to serve as 'knowledge centres' with priority on value-added electronic information services. Educational and research institutions are specializing in however best they will facilitate research by analysing specific information services that complement as innovative technology. With the appearance of globalization in education, there has been an information explosion. Most of the science and technology, educational institution, and organizations have modified their existing outlooks towards the function, operations, and services. The existing world is

increasingly seething to an electronic one, and the need for Internet and e-resources across academic and research communities has exploded in recent years being the most widely used method of conducting research. Knowledge is kept as a vital weapon for a nation's fiscal, socio-cultural, and political growth in the current era of information, which the world is experiencing. Organizations, especially academic libraries, play an important role to make greater usage, as well as improving their efficiency and competitiveness. People in their day-to-day lives, use knowledge more intensively the accessibility of the appropriate details for the appropriate customer at the appropriate time and at the appropriate expense becomes ever more crucial. The situation has raised significant challenges to the information industry, whose primary goal is to meet the diverse and ever-increasing technical developments that are placing librarians under greater strain. First, information management is greatly expanding the reach of their work. It is now possible to view and process much larger amounts of data than previously possible, and the internet is becoming more widely accepted in libraries and knowledge centres. Information networks have torn downtime and space walls, and multimedia has shown great promise for libraries and information centres. Secondly, consumer demands are increasingly increasing, generating a need in university libraries forevermore advanced, high-quality information resources. Academic libraries have invested a significant amount of funding, skills, and other important electronic tools to reach the current level of service delivery. It is correct that libraries and knowledge centres can now produce a range of information in addition to performing repetitive tasks by using many Information Technology (IT) tools and techniques.

In all fields of knowledge, the evolution of information and communication technology has resulted in transformative improvements. Libraries, as information repositories, are no exception to this trend. Libraries, provide people with resources for research, literacy, reference, and instruction. The medium of communication is evolving, and the format of information distribution and sharing is changing at an incredible rate. People rely on libraries for the most up-to-date information. As a result, technical advancements must be implemented in libraries to satisfy the demand of users.

3.2 EVOLUTION OF E-RESOURCES

Early in the advent of computer technology, the library profession realised the potential of computers to make library resources more accessible. Librarians were frequently excited about technology and were sometimes early adopters. The invention

of the machine-readable cataloguing (MARC) format in the mid-1960s, 30 years before the debut of the World Wide Web and its ultimate availability, marked the beginning of the use of e-resources in libraries. Around the same time, bibliographic databases became available. As early as the 1970s, libraries gave access to data sets such as census and survey data. Libraries acquired software and data on diskettes during the 1980s microcomputer revolution and offered databases on CD-ROM. The full text began to be included in CD-ROM databases. The search interfaces have become more intuitive and user-friendly. Libraries began to offer online catalogues before the World Wide Web, and they became more common.

In 1990, Tim Berners-Lee established the World Wide Web. Following the development of the Mosaic browser in 1992, the Web became widely used in 1993. The graphical user interface, as well as the later development of Web search engines like Yahoo!, made Internet resources more accessible to everyday users. Especially in the mid-1990s, web-based electronic resources were widely available. Web-based catalogues, bibliographic and full-text databases, electronic journals, and, finally, electronic books became available from libraries. There was no requirement for users to conduct extensive research at the library.

3.3 MEANING OF E-RESOURCES

An e-resource is a resource that requires computer access or other electronic devices that delivers a collection of data, be it a text referring to full-text bases, electronic journals, image collections, other multimedia products, numerical, graphical, or time based, as a commercially available title that has been published to be marketed, and that may be delivered on CD ROM, on tape, or in any other format. E-resources are electronic, audio-visual, or information resources that require electronic devices to access, manipulate, or reproduce them. An e-resource is a digital resource that can be accessed from anywhere and at any time. E-books, E-journals, E-databases, academic web resources, patents, and other forms of electronic records are included in these e-resources.

In a digital library setting, an electronic resource is a collection of documents in an electronic format that can be accessed through the internet. E-books, E-journals, E-newspapers, and bibliographic databases, as well as E-images, E-sound, and music collections, are examples of electronic information services.

According to Bavakenthy et al. (2003) e-resources are resources through which knowledge is stored electrically and available by electronic systems and networks.

OPAC, online libraries, e-journals, e-books, internet services, print on demand (PDO), e-mail publishing, wireless publishing, electronic connection and network publishing, and other publishing models are all included in the word “e-resource”. In this sense, the word specifically refers to any electronic device that provides a set of data as a commercially accessible resource, whether in text, numerical, graphical, or time-dependent.

Under IFLA ISBD (ER) 1:

An e-resource consists of computer-controlled resources, including materials that enabled the use of a computer peripheral (e.g. a CD-ROM player); the objects can or may not be used in interactive mode. Numbers, letters, graphics, images, and sound (or a mixture of these), and programs (instructions or procedures for executing certain tasks such as data processing and program execution) are the two types of data (e.g. online services, interactive multimedia). (Khan and Haridasan, 2009).

According to Graham (2003), e-resources are “knowledge mines” that are mined using modern ICT devices, optimised and revamped, and most frequently stored in cyberspace in the most concrete and compact form possible, and can be accessed simultaneously from infinite points by a large number of audiences. The term “e-resources” which has been widely described as information accessible by a computer, may be useful as bibliographic guides to possible sources, but they are still rarely cited as separate references. As a result, e-resources refer to documents in digital formats that are made accessible to library users by a computer-assisted information retrieval system. The internet is said to be the best and most widely used medium for obtaining the majority of e-resources through various search engines and web OPAC, as well as some offline databases in CD/DVD formats that can be accessed even without internet access (Swain and Panda, 2009).

However, electronic resources, on the other hand, have become increasingly relevant in recent years because they are up-to-date, multidimensional, and directional in nature, and they can be accessed and used from anywhere, regardless of geographical boundaries. Such tools add value to a wide range of human endeavors. The area of library and information science has been transformed by information technology. A modern library collection is not limited to print media alone; in fact, libraries are constantly incorporating e-resources into their current collections. The majority of

information seekers are turning to e-resources as the cost of print publications rises. E-resources are described as electronic information resources and services that users can access through a computer network from within the library or from a location outside the library. Users do not need to come to the library for any of their informational needs. They can access online catalogues, web-based databases, e-journals, and other resources that are not available in the library. At the click of a button, e-resources provide access to a large portion of the world's literature quickly, exhaustively, effectively, pin pointedly, up to date, and authentically. Electronic tools such as CD-ROMs, databases, online databases, and e-journals are essential for research-related activities, according to literature from the last decade.

Information experts have long tried to figure out what factors influence a person's decision to search out information. More recently, researchers have concentrated their efforts on the factors that influence people's decisions to pursue information through the library's e-services rather than simply browsing the Internet. These questions become much more important because more people are using the internet to find information that is not facilitated by the library. Informed library users to know that libraries have resources that are more extensive and comprehensive services than most websites provide. Libraries have access to academic literature that is typically not accessible for free on the internet.

One barrier to using a library's resources, especially its e-resources, is that they are not seen as straightforward. Unlike an internet search engine, where a single keyword search will yield thousands of results regardless of the subject, students in the library must pick a database and be more careful in their search terms. Furthermore, database topics often overlap, with variations in times, journals, and subjects addressed, as well as whether or not the content is full-text. Consequently, the library may have a print subscription to a title that is not available full-text online, or the title may be available full-text via a database other than the one initially searched.

3.4 DEFINITIONS OF E-RESOURCES

The term "electronic resources" does not appear to be used consistently. There may be a reference to electronic information services (EIS), electronic information resources, or electronic library resources, to mention just some of the available terminology. Therefore, "electronic resources has broadly been defined as, information accessed by

a computer that may be useful as bibliographic guides to potential sources but which may also appear as cited references in their own right” (Graham, 2003; pp.18-23)

“**Electronic resource**” is defined as “a bibliographic resource that is added to or changed by means of updates that do not remain discrete and are integrated into the whole.” (AACR2) (<http://www.loc.gov/aba/pcc/bibco/documents/irman.pdf>)

"**Electronic resource**" is defined as any work encoded and made available for access through the use of a computer. It includes data available by remote access and direct access (fixed media). In other words, remote access (electronic resources) refers to the use of electronic resources via computer networks. (AACR2, 2002 edition; glossary). Direct access (electronic resources) refers to the use of electronic resources via physical carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

According to White and Crawford, electronic material, has gradually become a major resource in every university library around the world. The introduction of e-resources and services has drastically changed how information is handled and managed in academic settings, especially in university libraries.

“Electronic services are sources of information that can be clearly described as resources that include records in an electronic or electronic format that can be accessed through the Internet,” according to Rehman and Ramzy.

According to Davies and James, an electronic resource is a material (data/program(s)) encoded for control by a computerised system. This material can involve the use of a computer peripheral such as a CD-ROM drive or a link to a computer network such as the internet. As per this definition, it does not include electronic resources which do not require the use of a computer like video discs and compact discs.

Hickey et al. describe “electronic resources those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device,” They can be accessed locally or remotely through the Internet.” E-journals, E-books, Full-text (aggregated) databases, indexing, and abstracting databases, and reference databases are some of the most common categories (biographies, dictionaries, directories, encyclopaedias, etc.), E-images, E-audio/visual tools, and numeric and statistical databases.

An electronic resource is described by Ani and Ahiauzu as "material consisting of data and/or computer program(s) encoded for reading and manipulation by a computer, either directly via a peripheral device such as a CD-ROM drive or remotely via a network such as an internet."

Electronic resources, according to Haridasan and Khan, are "resources in which information is processed electronically and is available via electronic systems and networks." This is in line with the definition of an electronic resource, which is defined as a concept that refers to "electronic resources that are stored both offline and online."

"Term used to characterise all of the information items that a library operates through a computer network..." according to the Library and Information Technology Glossary.

According to Shuling (2007) e-resources have progressively become a major resource in every university library in the world. The emergence of electronic information resources and services has tremendously transformed information handling and management in academic environments and University libraries in particular.

Thanuskodi (2012) defines e-resource as resources that include documents in an electronic or electronic format that can be accessed via the Internet.

3.5 CHARACTERISTICS OF E-RESOURCES

E-resources are useful to institutions and individuals to get instant, relevant, comprehensive information at their fingertips/doorsteps. Keeping these factors in view, some of the major features of e-resources are:

1. E-resources can be accessed around the world without any geographical and time limitations.
2. Users can access electronic resources from any remote location to his/her desktop.
3. Many users can use e-resources simultaneously.
4. It is easy to search the text.
5. Modification, alteration, and updating can be made easily.

6. Electronic resources can be subscribed through consortia or publisher or aggregator etc.
7. Electronic resources are available in various files and formats.
8. Electronic resources can be searched, browse, access, download quickly.
9. The linking feature facilitates links within the documents as well as outside of the documents.
10. Easily copied, stored, and disseminated.

3.6 CATEGORIES OF E-RESOURCES

The internet is a global knowledge centre, it allows you to access a wide range of documents, and it has a major impact on the publishing industry. Various approaches have been developed and implemented by libraries from time to time to maintain bibliographical control over written material using information and communication technology. In general, two types of e-resources are available to meet users' scholarly knowledge needs.

3.6.1 E-RESOURCES WITH A LICENSE

The resource, which falls under the category, is available at a price from the publisher. The majority of commercial publishers' products are only available at a reasonable price. Royal Society of Chemistry, Elsevier, Springer, Blackwell Publishing Agency, Cambridge University Press, and others are some of the most well-known publishers in this field.

3.6.2 OPEN SOURCE E-RESOURCES

The list of such tools is very long and can be divided into many sub-categories, such as:

3.6.2.1 OPEN ACCESS JOURNALS

Many publishers are making a few of their publications open access, and many agencies are making their products open access.

3.6.2.2 INSTITUTIONAL REPOSITORIES

Various institutional repositories are freely available to the public. For example institutional repository of D-space at INFLIBNET (<http://dspace.inflibnet.ac.in>) and

the institutional repository of the Indian Institute of Science, Bangalore are both open to the public.

3.6.2.3 WEBSITES OF ORGANISATIONS/ INDIVIDUALS

Websites of organisations and individuals may also provide reliable information. For example union databases (books, serials, and those accessible at Indian Universities), and other specialised databases maintained and hosted by the INFLIBNET at its official website are excellent sources of information.

3.6.2.4 INDIVIDUAL BLOGS/ PROFESSIONAL DISCUSSION FORUMS

These are the types of sites where you can express yourself with the latest and new options for sharing your thoughts or opinions on the internet opinions of other practitioners from all over the world. Various forums, discussion groups, and blogs are exploding in popularity every day.

3.6.2.5 UNIVERSAL ACCESS TO E-RESOURCES

Libraries have always acted as information reference points, from the days of locked stacks to shelf browsing and card catalogues, punch cards and OPACs, and finally open access and institutional repositories. This historic migration attempted to meet the evolving needs of library users, such as accessibility, interaction richness, low interaction, and low cost.

3.7 SHIFTING PARADIGM TOWARDS USE OF E-RESOURCES

Academic libraries are becoming part of a more advanced environment. The exponential development in ICT has resulted in a sea shift in the information landscape, providing a wide range of opportunities for consumers to manage a variety of information sources quickly and easily. As a result, e-resources have become a vital component of modern library resources, meeting the diverse demands of pupils, instructors, and scholars while posing the least amount of cost and time. It is important to have awareness of user behaviour toward e-resources to prepare more effectively.

The attitude of library users toward knowledge is increasingly moving away from print documents and sifted toward e-resources, so it has become their right to know the extent of the availability and arrangement of e-resources in libraries, such as online journals and databases, e-theses, and dissertations (ETDs), government publications, online newspapers, and so on. With the increased use of technology, it's critical to consider how technologically advanced environments affect faculty attitudes toward e-resources access. Attitudes are influenced by several factors. For example, the advent of open access journals and other tools is causing a new attitude toward e-resources.

Open access is one of the cheapest ways to get electronic resources, and it has increased in popularity as a cost-effective way to get access to some journal material. Supporters of open access claim that posting scholarly papers, online theses, and dissertations, and making them freely available to the public helps to prevent copying and plagiarism of other people's intellectual works. Many open access initiatives still face an uncertain future, even though the open access movement has provided libraries with an invaluable amount of resources.

Problems encountered while accessing e-resources may have influenced attitudes toward e-resources. For example, if there are insufficient computing technologies to access e-resources or weak Internet connections, users' positive perceptions can be impacted. As a result, issues with e-resource connectivity are discussed in the libraries of higher educational institutions.

3.8 TYPES OF E-RESOURCES

Various approaches have been developed and adopted by libraries from time to time with the support of computer and communication technologies to maintain bibliographical control over published content. Users can use a variety of e-resources that are available in both open access and commercial formats. They are as follows:

- E-Journals
- E-Book
- E-Databases
- Electronic Theses and Dissertations
- E-Magazines
- E-Clipping
- E-Patents
- E-Standards
- E-Reports
- Multimedia Products
- E-Image
- Online Newspapers
- Electronic Reference Sources
- Institutional/ Digital Repository
- Scholarly Web Resources
- Blogs

- E-Discuss forums
- E-Courseware
- CD-ROMS
- E-Portals
- Wikis
- RSS feeds
- E-Tutorials

3.8.1 E-JOURNALS

A journal is a primary source of scholarly communication and information in the academic community. Electronic journals, also known as e-journals, are accessible through electronic peripherals. E-journals are extremely user-friendly. “The transition from print-on-paper journals to electronic journals is one of the most fascinating developments in the information field,” according to Meera and Ummer (2010).

3.8.2 E-BOOKS

An e-book is a digital edition of a book that can be read on a laptop, computer, smartphone, or any device. An e-book is an electronic edition of a book that includes all of the book's contents, such as text, charts, diagrams, and illustrations. These books are available in a variety of file formats, including PDF and Word. An e-book collection is typically stored in an e-database, which allows for full-text browsing both inside and across documents. (According to Lonsdale and Armstrong, 2001)

3.8.3 ELECTRONIC DATABASE

A database is a valuable repository of knowledge and can be used for both contemporary and historical searches. An electronic archive is a well-organized compilation of information that can be accessed and recovered quickly. These e-databases are available in text and bibliographic formats. CD ROM Databases and Online Databases are two types of e-databases. CD-ROM Databases: CD-ROM databases are e-resources that enable users to access specific databases in libraries without having access to the Internet. CD-ROM databases are valuable resources for locating bibliographic information on potentially useful records and gaining access to vast amounts of literature for the study.

Electronic databases are a list of electronic sources of information that can be accessed online. Subscriptions to public directories that can be downloaded via the internet are

the most powerful way to provide links to electronic books/journals in university libraries.

3.8.4 ELECTRONIC THESES AND DISSERTATIONS (ETD)

An electronic thesis and dissertation is a multimedia text that can be archived and accessed from anywhere in the world. It can include improved graphics, voice, and animation, among other things. ETDs also allow users to conduct extensive searches using words, phrases, or symbols. Theses and dissertations are concrete proof of a student's academic growth and capacity to accurately communicate scientific findings. Scholars may use ETDs to show their findings more productively and innovatively. The World Wide Web makes research published in theses and dissertations available to researchers all around the world. These documents can also be more readily seen by prospective clients.

A thesis and dissertation's concept can be best expressed in an electronic format than in a paper document. Integrating colour graphs, colour images, hypertext connections, audio, video, animation, spreadsheets, databases, simulations, and other elements into the paper expands the creative possibilities. One can learn about electronic document processing and digital archives by writing a thesis or dissertation and sending it online. These abilities can help scholars plan for potential positions in the information era, such as teaching, doing research, or using the findings of others' research.

3.8.5 E-MAGAZINE

An e-magazine is a publication that is distributed over the Internet, bulletin board systems, and other public computer networks. Webzines are e-magazines that are circulated through the World Wide Web. An ezine is a more technical concept for small magazines and newsletters that are circulated by some electronic means, such as electronic mail. When referring to electronically dispersed tools, some social movements can use the words cyberzine and hyperzine. To represent their readership demographics or to catch alternate words and spellings in online searches, some online magazines may refer to themselves as "electronic magazines" or "e-magazines." An online magazine has some similarities to a journal and even to online journals, but it is generally differentiated by its editorial management approach. Editors or editorial boards are common in magazines, where they review submissions and conduct quality management to ensure that the content meets the publishers' and readers' needs. Many major print publications now charge a premium to see their print magazine titles digitally reproduced through different internet platforms. These content providers

often refer to their digital media merchandise portfolios as web magazines, or digital magazines, in some cases.

3.8.6 ONLINE RESOURCES

Libraries today are littered with overpriced publications, dwindling library budgets, and ever-increasing user demand, all of which have prompted libraries to subscribe to e-books and e-journals. It encouraged the librarian to form consortia and share information. In India, a consortium known as e-shodhsindhu is in operation. E-shodhsindhu, which negotiated with publishers and bought e-journals and e-books for libraries, is identified under them. The contents will be subscribed to by interested libraries based on their demand. E-shodhsindhu can negotiate for the scientific institute to be brought back under its control. Higher educational institutions and research and development centres also subscribe to e-books and e-journals for their consumer base to produce current information at predetermined intervals. Both major publishers prefer to publish e-versions of content alongside the print version, as well as e-versions of information before the print version is available. In the case of journals, publishers have access from the previous month onward.

3.9 E-SHODHSINDHU CONSORTIUM

A library consortium is a partnership of two or more libraries that have agreed to work together to meet some common needs, most often resource sharing. It usually refers to knowledge sharing between and among libraries through cooperation, coordination, and collaboration. Consortia are essentially emerging forms of collaboration among libraries that come together to share electronic resources. And in developed countries like India, it has gained momentum.

In 2016, the MHRD (now renamed Ministry of Education) shaped e-ShodhSindhu by combining three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST, and INDEST-INFONET Consortium, on the advice of an expert committee. The e-Shodhsindhu can also have current access to a variety of services while also serving as a depository. It covers more than 10,000 core and peer-reviewed publications, as well as a range of bibliographical, citation, and factual databases in a variety of disciplines, from a wide number of publishers and aggregators to its member institutions, which include centrally funded technical institutions, universities, and colleges are covered under 12(B) and 2(f) section of the UGC Act.

In the higher education sector, libraries are an important element. Academic libraries in India are facing several challenges as a result of a sluggish budget and an

exponential increase in the cost of library collections. The library world is undergoing a swift and complex transformation, resulting in a new wave of libraries focused on e-resources. Many attempts have been made in recent years to solve the issue of budgetary restrictions by exchanging resources by consortia for the university library. For university library users, the e-ShodhSindhu consortium is a big initiative. These ground-breaking initiatives have resulted in the availability of scientific tools such as peer-reviewed journals, directories, abstracts, and proceedings. These activities must benefit university library users, thus raising the standard of higher education in the nation.

3.9.1 AIMS AND OBJECTIVES

The main objective of the e-ShodhSindhu consortia for higher education e-resources is to provide access to qualitative electronic resources including full text, bibliographic and factual databases to academic institutions at lower rates of subscription. The key aims and objectives of the e-ShodhSindhu are as follows:

- Develop a formidable assortment of e-journals, e-journal archives, and e-book for perpetual access.
- Monitor and promote usage of e-resources in member universities, faculties, and technical establishments in India through awareness and coaching programs.
- Offer access to subscription-based scholarly information (e-book and e-journals) to all or any educational institutions.
- Offer access to scholarly content offered in open access through subject portals and subject gateways.
- Bridge the digital divide and move toward an information-rich society.
- Offer access to choose e-resources to additional institutions including open universities and Ministry of Education funded institutions that are not covered under existing consortia.
- Take up further activities and services that need a collaborative platform and are not being performed by existing consortia.
- Move towards developing a national electronic library with electronic journals and electronic books as its major building blocks.

List of full-text e-resources provided by e-ShodhSindhu digital library consortium:

3.9.2 FULL-TEXT E-RESOURCES

- ❖ ACM Digital Library
- ❖ American Chemical Society
- ❖ American Institute of Physics
- ❖ American Physical Society
- ❖ Annual Reviews
- ❖ ASCE Journals Online
- ❖ ASME Journals Online
- ❖ Bentham Science
- ❖ Economic & Political Weekly
- ❖ JSTOR
- ❖ Oxford University Press
- ❖ Project Muse
- ❖ Springer Link
- ❖ Nature
- ❖ Taylor and Francis

3.9.3 BIBLIOGRAPHIC DATABASES

- ❖ Institute for Studies in Industrial Development (ISID) Database
- ❖ J-Gate Plus (JCCC)
- ❖ MathSciNet
- ❖ Web of Science

3.10 ISSUES AND CHALLENGES OF E-RESOURCES

When it comes to making the best use of e-resources, there are many problems and obstacles to consider. The following are a few of them:

- User attitude towards e-resources
- Technicalities
- Infrastructure
- Cost factor
- Access

- Copyright issues
- Archiving
- Availability

3.10.1 *USERS ATTITUDES TOWARDS E-RESOURCES*

From region to region, users' attitudes toward e-resources differ. Westerners are more used to using computers, laptops, and other similar devices. The majority of Indians also prefer to read materials while keeping them in their hands. It should be a journal article, newspaper, magazine, or other similar publication. The article that the faculties need is usually downloaded from the internet and mailed to them. They prefer to take a printout and browse it rather than reading anything similar on a laptop, tablet, or reader. Students, on the other hand, are encouraged to read papers on their laptops or e-book readers. As a result, it would be impossible to intervene in such situations a shift from print to non-print media.

3.11 *ADVANTAGE OF E-RESOURCES*

Electronic resources provide a variety of advantages not only to libraries but additionally to users, authors, editors, publishers, and archivists. Some of the benefits are as follows:

3.11.1 *SPEED*

Electronic resources give access to information via the internet, faster than print sources. It is much easier to collect content from it, embed it into other content, and cross-index or comparison between various publications. Librarians are unable to be knowledgeable in all subject fields. In conventional print resources, they can only guide users up to their degree of topic knowledge, while in online resources, they can get all the facts regardless of what they do or don't know. Librarians simply enter the keywords from the patron's request into the search box and generate answers in a matter of seconds, allowing users to easily obtain the information they need.

3.11.2 *MULTIPLE ACCESS*

A networked product can offer multi-access at various times (24×7) and to multiple devices at the same time. At the same time, multiple users can use the same services, either from the same location or from different locations.

3.11.3 FUNCTIONALITY

By using an e-resource, a user will be able to approach articles in new ways and interpret their content in new ways.

3.11.4 CONTENT

E-resources can hold a large volume of data, but they can also provide mixed media, such as images, video, audio, and animation, which cannot be replicated in print.

3.11.5 CURRENT INFORMATION

The internet provides more up-to-date content at a lower cost than print resources.

Apart from the above benefits, e-resources can also include international scope, limitless capabilities, lower costs, convenience, search ability, and linking.

3.12 DISADVANTAGE OF E-RESOURCES

Users are preferring e-resources over conventional ones because they save time and money. With the proliferation of numerous e-resources, more and more users are becoming aware of the shortcomings of e-resources.

3.12.1 UNABLE TO SEARCH OLDER INFORMATION

All older information is not accessible online since the internet is a relatively new communication medium. As a result, all older information is unavailable to post on the internet.

3.12.2 UNWANTED ENTITIES WITH THE REQUIRED INFORMATION

When looking for information on the internet, the seeker can receive a large number of unwanted items containing relevant information. Finding the correct details could take a long time. Relevance ranking algorithms are far from accurate as scholars may receive alerts that are irrelevant to their query, or they may have to browse through multiple pages of irrelevant content to find websites that deal with the subject of their search.

- ✚ The idea that e-resources necessitate the use of specific hardware or equipment can be seen as a drawback. Many e-resources are designed to be accessible with specific software that isn't always easy to access. Since e-resources are based on other devices, they can be damaged by hardware or software failure. An e-resource reader's electronic document is meaningless unless the required hardware, Internet access, and battery power are readily accessible. Furthermore, e-resources are more susceptible to harm than printed books because they depend on hardware and software.

- ✚ Reading systems with electronic resources are undoubtedly more costly than physical books. Power is needed by all e-resources devices. There is increasing uncertainty that current e-resources may be inaccessible or unreliable with future e-resources software or technologies.
- ✚ Many imminent users of e-resource devices are concerned about screen brightness and eyestrain. One major issue with reading from an e-resource platform is that it can cause eye strain. The print quality provided by a printing press is somewhat lower than the display resolution of computer screens and mobile devices. The life cycle of e-resources is unreliable. Many digital modes of storage have a much shorter life span than paper. It's impossible to predict when software or hardware would become obsolete due to the exponential growth of modern computer systems. Structures must be set in place while new technology is built to allow for the conversion of old materials to the new systems so that they can still be reached. It is also essential to establish methods for storing electronic document. Electronic components that perform the substitutes for printed books must have a high level of equipment quality.
- ✚ The familiarity and comfort of reading from a book were missing while reading from a screen. An electronic text is more complex to read than a paper book, which can be opened and flipped over.
- ✚ Many titles which are still published in print are not yet available in electronic format. To fully use the capability of new technology, time, expertise, and resources are still needed.

3.13 MOTIVATION FOR THE EFFECTIVENESS OF E-RESOURCES

E-resources are widely available in academic libraries nowadays. However, their correct and full usage is available for public viewing. The way of knowledge is collected, stored, organised, viewed, retrieved, and consumed has changed dramatically in recent decades as a result of advances in computing applications. The use of computers in information systems has resulted in several new goods and services. The internet and the World Wide Web are actively shaping the creation of new means of scholarly communication; their ability for distributing content is very vast, as they effectively resolve the restrictions imposed that print media have. Further, the period between the publication of a product and its arrival has been greatly shortened. The internet can be used to find facts quickly and efficiently. This is relevant for university libraries when most of them need increasing amounts of study.

This crucial fact is persuading more libraries to switch to digital e-resources, which are less costly and more convenient for quick access. This is particularly useful for distant learners who only have a finite amount of time to dial-up to widely accessible electronic services, such as CD-ROMs, OPACs, and the Internet, which are rapidly replacing print media.

3.14 CONCLUSION

Every academic institution has been transformed by information and communication technology. It has transformed the way libraries and information centres operate and provide services. Libraries have been utilising new technology and offering e-resources and services to meet the requirements of their users in recent decades. Users can access the e-resources in a variety of ways and formats. Respondents must be aware of e-resources such as e-journals, e-books, and databases that provide the information they require. As a large amount of data is made available on the Internet, its utilisation is becoming more fruitful and more time-consuming.

Academic libraries can benefit from e-resources in a variety of ways. Libraries must be able to recognise and balance the aspects that determine whether e-resources are a success or failure based on the benefits and drawbacks of e-resources. The use of e-resources for teaching and research by faculty members of both universities will be illustrated in the following chapter, which is an important component of the current research activity.

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CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4. INTRODUCTION

The chapter deals with the analysis of the data and interpretations which was obtained through the structured questionnaire to explore the use of e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University. It draws feasible implications to satisfy the objectives of the study. The collected data has been summarized using statistical techniques with the help of MS-Excel which is systematically presented using tables and graphs.

4.1 DATA ANALYSIS

For the present study, the survey method was used and the questionnaire tool was used to collect the primary data. The collected data was analyzed and interpreted keeping the objectives of the study in the mind. The present study is focused on the faculty member working in both universities. The population for this study consists of permanent teachers such as Professor, Associate Professor, and Assistant Professor. A total of 333 questionnaires were distributed to the faculty members of both the universities, out of which 284 duly filled-in questionnaires were received back with a response rate of 85.29%.

4.2 DISTRIBUTION OF THE QUESTIONNAIRE

A total of 333 questionnaires were distributed among the faculties of both Universities, out of which 284 filled-up questionnaires were received back consisting of 85.29% responses. A total of 203 questionnaires were distributed in Mizoram University out of which a total 173 filled-up questionnaires were received back consisting of 85.29% responses, while in Babasaheb Bhimrao Ambedkar University, 130 questionnaires were distributed out of which a total 111 filled-up questionnaires were received back consisting of 85.38%. The details of the distribution analysis are shown in table 4.1.

Table- 4.1: University-Wise Distribution of the Questionnaires

Questionnaires	Universities		Total
	MZU	BBAU	
Distributed	203	130	333
Received	173	111	284
Percentage	85.22	85.38	85.29

4.3 DESIGNATION WISE DISTRIBUTION

The term designation refers to the nature of a person's work. Given the fact that there is a clear link between information needs and designation, the faculty were requested about their designation. There are three categories of faculty namely Assistant Professor, Associate Professor, and Professor. Table 4.2 shows the designation-wise distribution of the respondents in both of the universities. The table depicts that a very high number of faculty members 212 (74.65%) are Assistant Professors, followed by 56 (19.72%) Professors and 16 (5.36%) Associate Professors.

Table- 4.2: Designation Wise Distribution

Designation	Universities		Total (%)
	MZU (%)	BBAU (%)	
Professor	38 (21.97)	18 (16.22)	56 (19.72)
Associate Professor	12 (6.94)	4 (3.6)	16 (5.63)
Assistant Professor	123 (71.1)	89 (80.18)	212 (74.65)
Total	173 (100.00)	111 (100.00)	284 (100.00)

The above table 4.2 depicts a university-wide break up of faculty members' designation. It is found that 123 (71.10%) of respondents of MZU are assistant professors, 38 (21.97%) of respondents of MZU are professors, and 12 (6.94%) of respondents of MZU are associate professors. Whereas 89 (80.18%) of respondents of BBAU are assistant professors, 18 (16.22%) of respondents of BBAU are professors, and 4 (3.60%) of respondents of MZU are associate professors.

4.4 GENDER-WISE DISTRIBUTION

Table 4.3 shows that the gender-wise distribution of the respondents of both the universities. It can be seen from the data the majority of the respondent i.e. 224 (78.87%), consisting of 132 (76.30%) from MZU and 92 (82.88%) from BBAU are male, while the remaining 60 (21.13%), consisting of 41 (23.70%) from MZU and 19 (17.12%) from BBAU are female respondents. Male respondents dominated over female respondents from both of the universities. It is also found that the highest 82.88% male and lowest 17.12% female respondents were from BBAU. However, 76.30% male and 23.70% female respondents were from MZU.

Table- 4.3: Gender-Wise Distribution of the Respondents

Gender	Universities		Total (%)
	MZU (%)	BBAU (%)	
Male	132 (76.3)	92 (82.88)	224 (78.87)
Female	41 (23.7)	19 (17.12)	60 (21.13)
Total	173 (100.00)	111 (100.00)	284 (100.00)

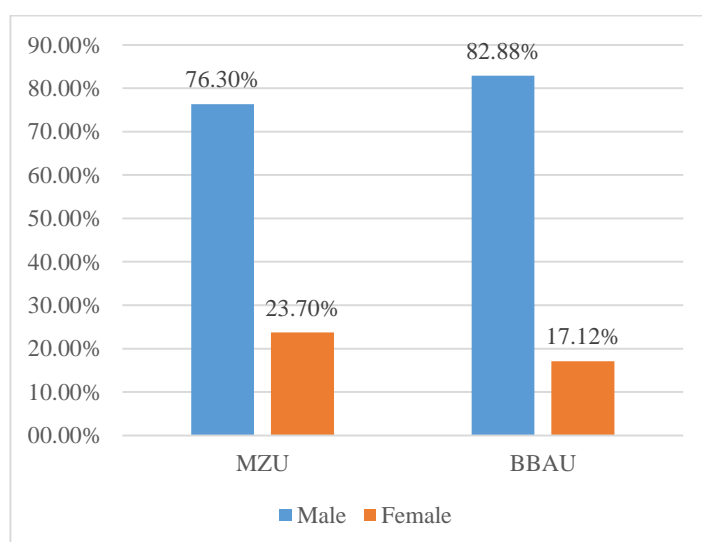


Figure-4.1: Gender Wise Classification of the Respondents

4.5 EDUCATION QUALIFICATION WISE DISTRIBUTION

Table 4.4 and figure 4.2 depict the educational qualification distribution of the faculty members of both universities. It is observed that 254 (89.44%) of faculty members have a Ph.D. degree, followed by 20 (7.04%) of faculty members who have a master degree and only 10 (3.25%) of faculty members have M.Phil./D.Phil. degree in the study. It is also found that the highest 92.79% of respondents have a Ph.D. degree from BBAU and 87.28% from MZU.

Table- 4.4: Education Qualification Wise Distribution

Educational Qualification	Universities		Total (%)
	MZU (%)	BBAU (%)	
Ph.D.	151 (87.28)	103 (92.79)	254 (89.44)
M.Phil./D.Phil.	7 (4.05)	3 (2.7)	10 (3.52)
Masters	15 (8.67)	5 (4.5)	20 (7.04)
Total	173 (100.00)	111 (100.00)	284 (100)

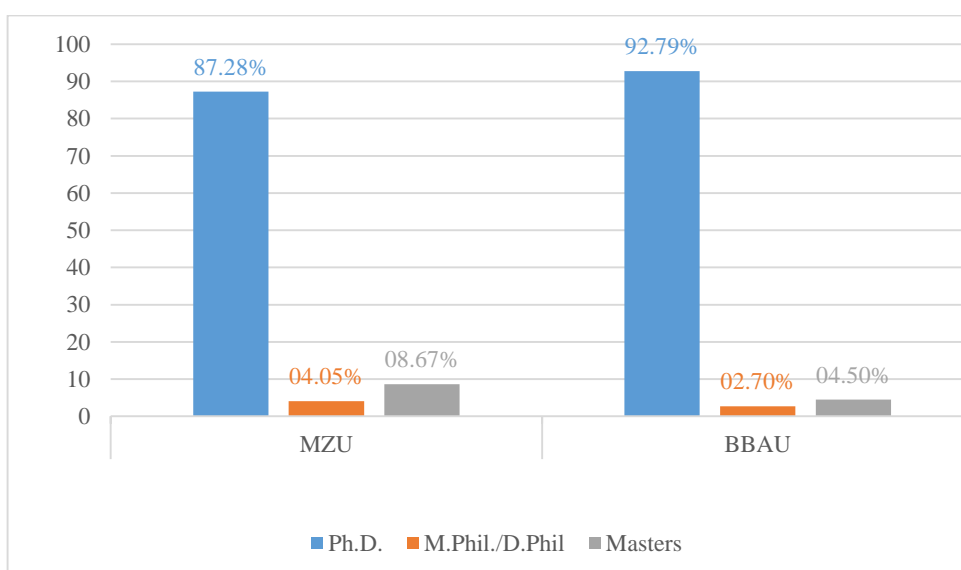


Figure-4.2: Education Qualification Wise Distribution

4.6 AGE-WISE DISTRIBUTION

Table 4.5 and figure 4.3 depict the age-wise distribution of the respondents of both the university i.e. Mizoram University and Babasaheb Bhimrao Ambedkar University. The data is categorized into various ranges starting from below 25 up to 56-65 age group. The study reveals that the majority of the respondents belong to the age group 36-45 with 144 (50.70%) of respondents. A total of 173 faculty surveyed from MZU out of which 85 (49.13%) of faculty come under the age group of 36-45 years, followed by 37 (21.39%) of faculty belong to 26-35 years age group, 34 (19.82%) of faculty fall under 46-55 years age group, and 17 (9.83%) of faculty belong to 56-65 years age group. Whereas a total of 111 faculty members surveyed from BBAU out of the total 59 (53.15%) of faculty fall under 36-45 years age group, followed by 23 (20.72%) of faculty come under 46-55 years age group, 22 (19.82%) of faculty belong to 26-35 years age group and 7 (6.31%) of faculty fall under 56-65 years age group. It also found that there is not a single faculty comes under the age group below 25 years from both the universities.

Table- 4.5: Age-Wise Distribution

Age-group in Year	Universities		Total (%)
	MZU (%)	BBAU (%)	
Below 25	(0)	(0)	0 (0)
26-35	37 (21.39)	22 (19.82)	59 (20.77)
36-45	85 (49.13)	59 (53.15)	144 (50.7)
46-55	34 (19.65)	23 (20.72)	57 (20.07)
56-65	17 (9.83)	7 (6.31)	24 (8.45)
Total	173 (100.00)	111 (100.00)	284 (100.00)

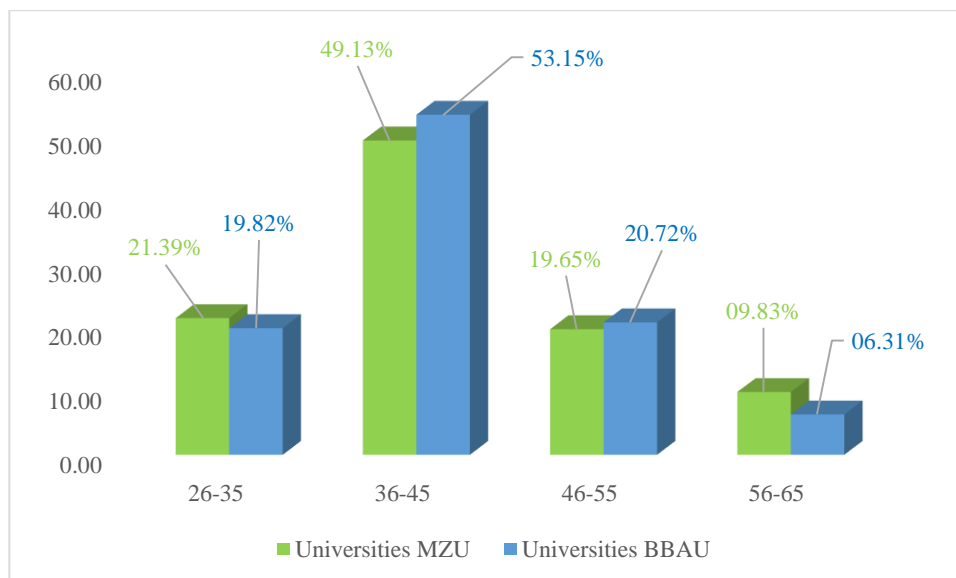


Figure-4.3: Age-Wise Distribution

4.7 USE OF INTERNET

Since Gutenberg, the internet has been the greatest fundamental transformation. “The internet is not a thing, a place, a single technology, or a mode of governance, it is a contract.” Jhon Gage (2009). The introduction of the internet has completely changed the way of academicians around the world, particularly in the academic sector, communicate. Academicians search the information, in numerous methods by which they obtain their essential information from the internet, and most importantly how much they rely on the internet for their academic scholarly pursuits have all been completely revolutionized by the internet. It observed that all the faculty members from both the universities in the study use the internet for academic and recreational purposes. The use of the internet by faculty members is fairly extensive.

4.8 EXPERIENCE OF USE OF INTERNET

Table 4.6 and figure 4.4 show the experience of use of the internet by the faculty members of both the university. It can be observed that 217 (76.41%) of faculty members have more than 13 years of experience in using the internet, followed by 56 (19.37%) of respondents who have experienced between 9-13 years group, 11 (3.87%) of respondents have experienced between 5-8 years group and only 1 (0.35%) of faculty have experienced between 1-4 years group. It is also found that not a single faculty use of internet for less than 1 year.

Table- 4.6: Experience of Use of Internet

Period	Universities		Total
	MZU (%)	BBAU (%)	
< 1 years	(0)	(0)	(0)
1 – 4 years	1 (0.58)	(0)	1 (0.35)
5 - 8 years	8 (4.62)	3 (2.7)	11 (3.87)
9 - 13 years	34 (19.65)	21 (18.92)	55 (19.37)
>13 years	130 (75.14)	87 (78.38)	217 (76.41)
Total	173 (100.00)	111 (100.00)	284 (100.00)

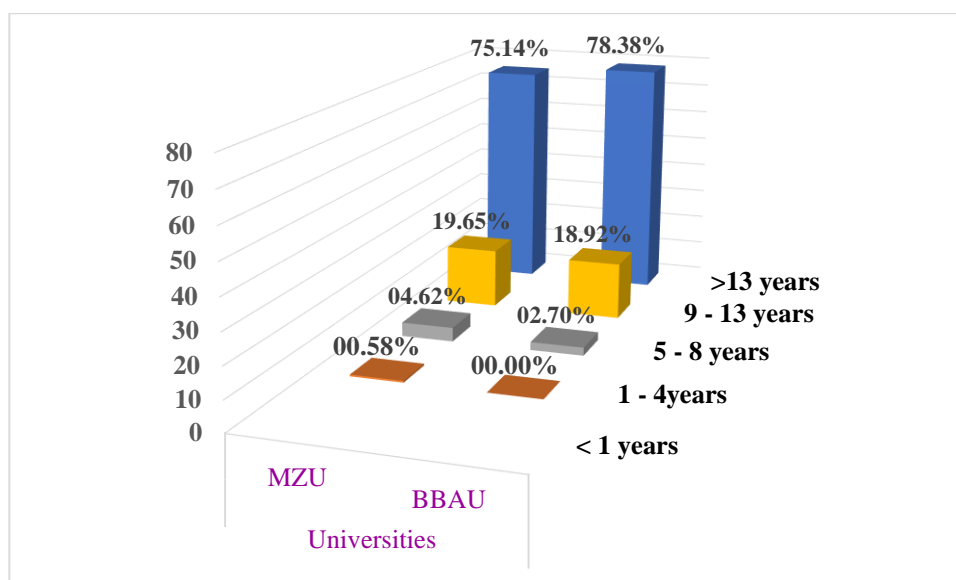


Figure-4.4: Experience of Use of Internet

Table 4.6 and figure 4.4 also depict university-wise break up of experience of use of the internet for accessing online resources. It found that 78.38% of faculty from BBAU have more than 13 years of experience of use of the internet for accessing online resources, while 75.14% of faculty members have more than 13 years of experience of use of the internet for accessing online resources, followed by 19.62% of respondents from MZU have 9-13 years of experience of use of internet while 18.92% of respondents of BBAU have experience of using of the internet in the same group, 4.26% of respondents of MZU and 2.70% of respondents of BBAU have 5-8 years of

experience of use of the internet for accessing online resources, and only 00.58% of respondents from MZU have 1-4 years of experience of use of internet while from BBAU there is not available faculty to use of the internet to access online resources.

4.9 TIME SPENT ON THE USE OF THE INTERNET

The time spent on the use of the internet in a day by faculty members of both the university range in four groups from less than one hour to more than 3 hours. Table 4.7 and figure 4.5 shows that 193 (67.96%) of respondents use the internet more than three hours in a day, followed by 64 (22.54%) of faculty members accessing the internet for 2-3 hours in a day, 25 (8.8%) of respondents use the internet for 1-2 hours, and only 2 (0.7%) of faculty members use the internet less than 1 hour in a day.

Table- 4.7: Time Spent on the Use of the Internet

Time	Universities		Total
	MZU (%)	BBAU (%)	
< 1 hour	2 (1.16)	0 (0)	2 (0.7)
1 - 2 hours	16 (9.25)	9 (8.11)	25 (8.8)
2 - 3 hours	36 (20.81)	28 (25.23)	64 (22.54)
> 3 hours	119 (68.79)	74 (66.67)	193 (67.96)
Total	173 (100.00)	111 (100.00)	284 (100.00)

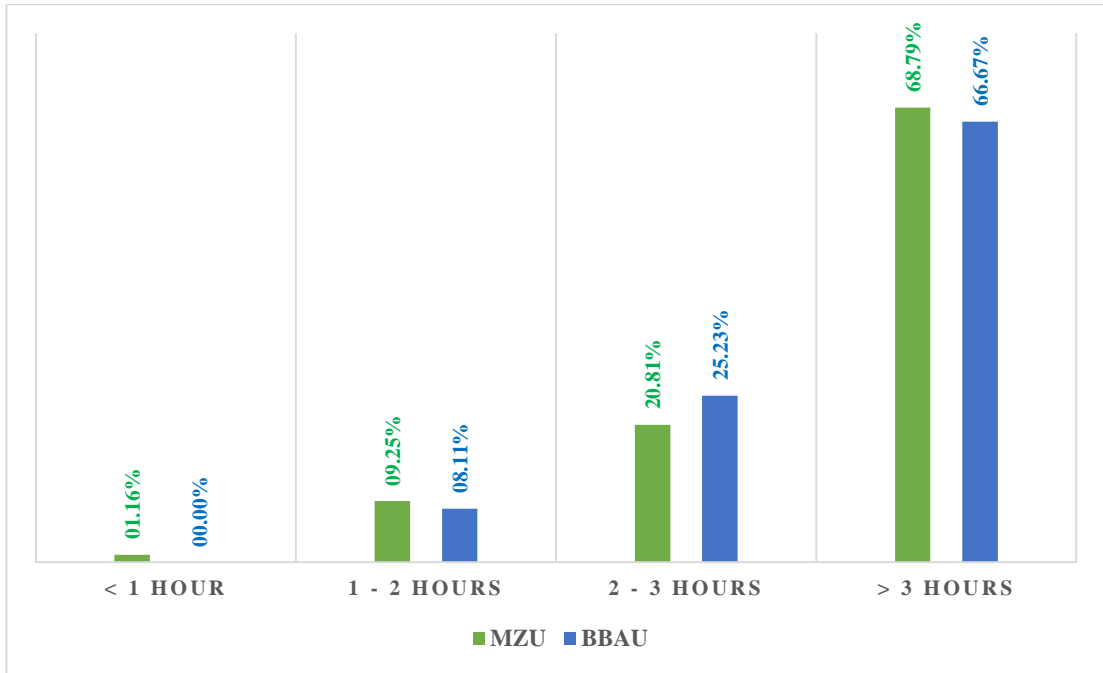


Figure-4.5: Time Spent on the Use of the Internet

The above table 4.7 and figure 4.5 also depicts university (i.e. MZU and BBAU) wise break up of faculty members time spent on the use of the internet. It observed that the highest 68.79% of faculty members from MZU spent time on use internet more than 13 hours in a day for accessing online resources, followed by 20.81% of faculty members spending 2-3 hours, 9.25% of faculty members spent 1-2 hours, and 1.16% of faculty members spent time on the internet less than one hour in a day for accessing online resources. While highest 66.67% of faculty members from BBAU spent time on the use of internet more than 13 hours in a day, followed by 25.28% of faculty members spent time on the internet, and 8.11% of faculty members spent time on use internet in a day for accessing online resources in the study. It is also found that all the faculty members BBAU spent time using the internet 1 hour to more than 13 hours and they are not spent less than one hour time in the study.

4.10 PLACE OF INTERNET ACCESS

Table 4.8 indicate place of access internet by the faculty members of both the university to pursue their information needs. It is found that 281 (98.94%) of faculty members of both universities access the internet from their respective department, followed by 223 (78.52%) of faculty members of both universities access the internet from residence, 28 (9.86%) of respondents of both universities access the internet from other places, 22 (7.75%) of faculty members of both universities access the internet

from the computer lab and 18 (6.34%) of faculty members of both universities access the internet from the library in the study.

Table- 4.8: Place of Internet Access

Place	Universities		Total (%) N= 284
	MZU (%) N= 173	BBAU (%) N= 111	
Department	171 (98.84)	110 (99.1)	281 (98.94)
Library	10 (5.78)	8 (7.21)	18 (6.34)
Residence	138 (79.77)	85 (76.58)	223 (78.52)
Computer Lab	12 (6.94)	10 (9.01)	22 (7.75)
Other	15 (8.67)	13 (11.71)	28 (9.86)

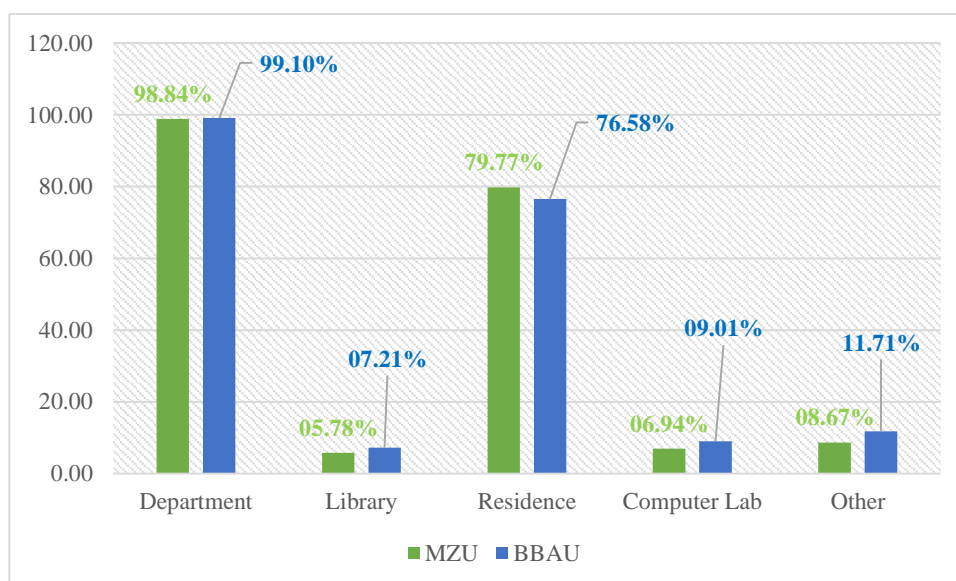


Figure-4.6: Place of Internet Access

The above table 4.8 and figure 4.5 additionally illustrate university-wise break up of faculty members' favorite place of access internet for online resources. It is found that 110 (99.10%) of faculty members of BBAU have access internet through their respective department, followed by 85 (76.58%) of respondents of BBAU have access internet from residence, 13 (11.71%) of respondents of BBAU access internet from other places, 10 (9.01%) of respondents of BBAU access internet from the computer

lab, and 8 (7.21%) of respondents of BBAU access internet from the library. Whereas 171 (98.84%) of faculty members of MZU have access internet through their respective department, 138 (79.77%) of respondents of MZU have access internet from residence, 15 (8.67%) of respondents of MZU have access internet from other places, 12 (6.94%) of respondents of MZU have access from the computer lab, and 10 (5.78%) of respondents of MZU have access internet from the library. It is clear that every department of each university has good ICT infrastructure and internet connectivity for accessing online materials.

4.11 PURPOSE OF ACCESS INTERNET

Table 4.9 and figure 4.7 indicate the purpose of accessing the internet by faculty members of both the university to pursue their information requirements. It is found that 275 (96.83%) of faculty members access internet for reading/ writing research papers, research proposals and projects, followed by 269 (94.72%) of faculty members access internet for data communication (sending and receiving E-Mail, FTP etc.), 262 (92.25%) of respondents access internet for accessing teaching materials, 244 (85.92%) of faculty members access internet for accessing/reading subscribed information resources (e-journals, e- databases etc.), 238 (83.8%) of faculty members access internet for accessing /reading general information resources (news etc.), 181 (63.73%) of faculty members access internet for downloading software, 179 (63.03%) of faculty members access internet for voice/ video communication (IP phone, Skype etc.), 164 (57.75%) of faculty members access internet to access audio/ visual materials, 155 (54.58%) of faculty members access internet for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), 137 (48.24%) of faculty members access internet for entertainment/ recreational (adds, games, movies, songs etc.), 87 (30.63%) of faculty members access internet to access OPAC/ EPAC/Web OPAC, and 26 (9.15%) of faculty members access internet for other purpose to fulfil their information requirements.

Table- 4.9: Purpose of Access Internet

Purpose	Universities		Total (%) N= 284
	MZU (%) N= 173	BBAU (%) N= 111	
For data communication (sending and receiving E-Mail, FTP, etc.)	164 (94.8)	105 (94.59)	269 (94.72)
For voice/ video communication (IP phone, Skype, etc.)	111 (64.16)	68 (61.26)	179 (63.03)
For reading/ writing research papers, research proposals and projects	168 (97.11)	107 (96.4)	275 (96.83)
For accessing teaching materials	161 (93.06)	101 (90.99)	262 (92.25)
For accessing /reading general information resources (news etc.)	144 (83.24)	94 (84.68)	238 (83.8)
For accessing/reading subscribed information resources (e-journals, e- databases, etc.)	148 (85.55)	96 (86.49)	244 (85.92)
For blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.)	95 (54.91)	60 (54.05)	155 (54.58)
To access OPAC/ EPAC/Web OPAC	52 (30.06)	35 (31.53)	87 (30.63)
Downloading software	111 (64.16)	70 (63.06)	181 (63.73)
For entertainment/ recreational (adds, games, movies, songs, etc.)	84 (48.55)	53 (47.75)	137 (48.24)
To access audio/ visual materials	97 (56.07)	67 (60.36)	164 (57.75)

	16	10	26
	(9.25)	(9.01)	(9.15)
Any other			

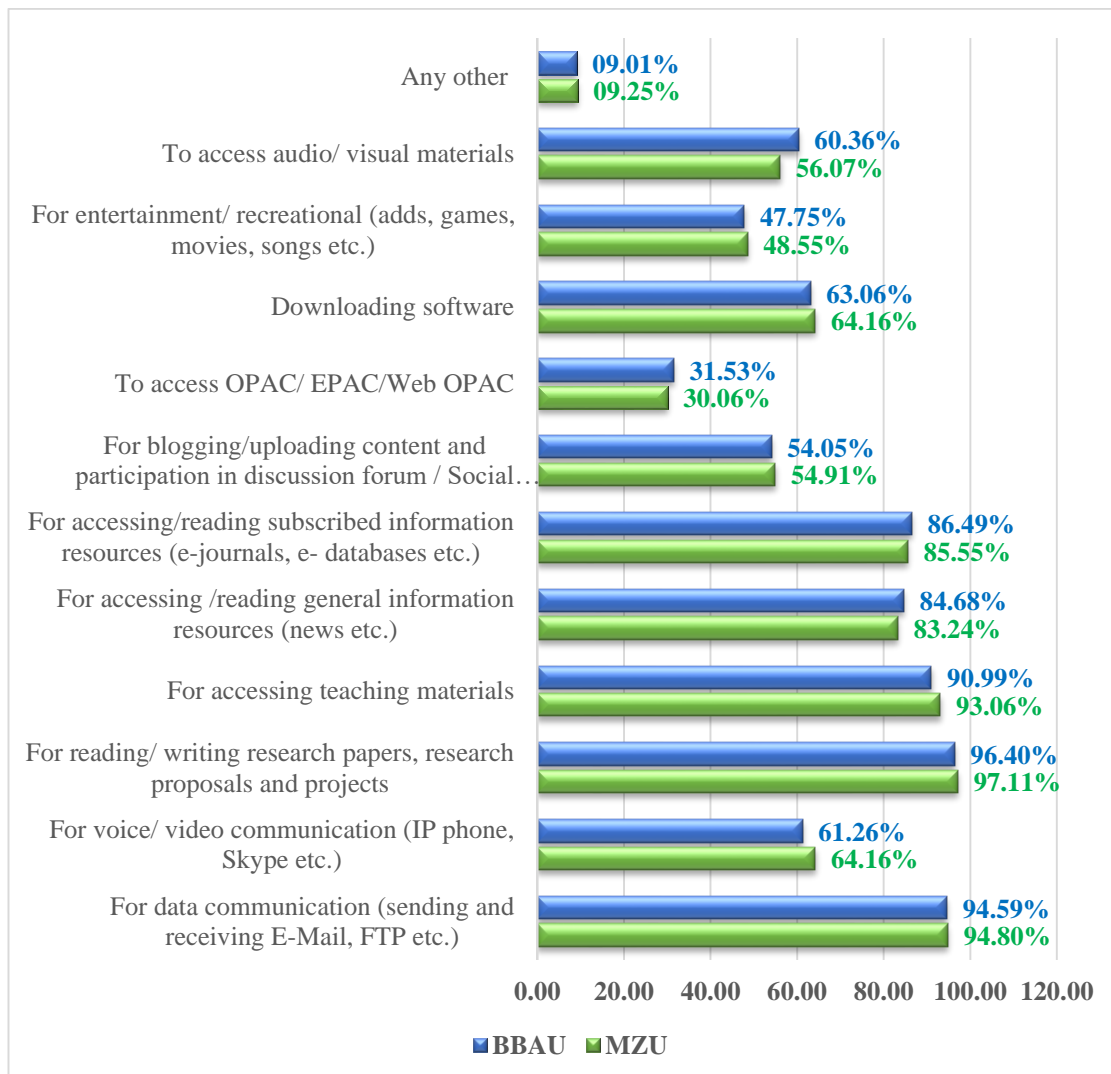


Figure-4.7: Purpose of Access Internet

The above table 4.9 and figure 4.7 additionally illustrate university-wise break up of faculty members for purpose of access the internet for online resources. It is found that 168 (97.11%) of faculty members of MZU access internet for reading/ writing research papers, research proposals and projects, followed by 164 (94.8%) of faculty members of MZU access internet for data communication (sending and receiving E-Mail, FTP etc.), 161 (93.06%) of respondents of MZU access internet for accessing teaching materials, 148 (85.55%) of faculty members of MZU access internet for accessing/reading subscribed information resources (e-journals, e- databases etc.), 144

(83.24%) of faculty members of MZU access internet for accessing /reading general information resources (news etc.), 111 (64.16%) of faculty members of MZU access internet for downloading software, 111 (64.16%) of faculty members of MZU access internet for voice/ video communication (IP phone, Skype etc.), 97 (56.07%) of faculty members of MZU access internet to access audio/ visual materials, 95 (54.91%) of faculty members of MZU access internet for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), 84 (48.55%) of faculty members of MZU access internet for entertainment/ recreational (adds, games, movies, songs etc.), 52 (30.06%) of faculty members of MZU access internet to access OPAC/ EPAC/Web OPAC, and 16 (9.25%) of faculty members of MZU access internet for other purpose to fulfil their information requirements. While 107 (96.40%) of faculty members of BBAU access internet for reading/ writing research papers, research proposals and projects, followed by 105 (94.59%) of faculty members of BBAU access internet for data communication (sending and receiving E-Mail, FTP etc.), 101 (90.99%) of respondents of BBAU access internet for accessing teaching materials, 96 (86.49%) of faculty members of BBAU access internet for accessing/reading subscribed information resources (e-journals, e- databases etc.), 94 (84.68%) of faculty members of BBAU access internet for accessing /reading general information resources (news etc.), 70 (63.06%) of faculty members of BBAU access internet for downloading software, 68 (61.26%) of faculty members of BBAU access internet for voice/ video communication (IP phone, Skype etc.), 67 (60.36%) of faculty members of BBAU access internet to access audio/ visual materials, 60 (54.05%) of faculty members of BBAU access internet for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), 53 (47.75%) of faculty members of BBAU access internet for entertainment/ recreational (adds, games, movies, songs etc.), 35 (31.53%) of faculty members of BBAU access internet to access OPAC/ EPAC/Web OPAC, and 10 (9.01%) of faculty members of BBAU access internet for other purpose to fulfil their information requirements.

4.12 MOTIVATING FACTORS FOR USING THE INTERNET

The internet offers a huge stock of academic materials and it is frequently used by faculty members. Table 4.10 summarises the several motivator elements that encourage faculty members of both the university to use the internet. It found that 269 (94.72%) of faculty members were motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by 252 (88.73%) of faculty members motivated to use the internet for online submission of papers to Journals/ Conferences/ Seminars, etc., 238 (83.8%) of faculty members motivated to use the internet to easy access to information resources, 212 (74.65%) of faculty members motivated to use the internet to know about latest rules, and regulations related to academic activities, 201 (70.77%) of faculty members motivated to use the internet for 24X7 access of resources, 175 (61.62%) of faculty members motivated to use the internet because the internet provides faster communication for social networking, 173 (60.92%) of faculty members motivated to use the internet for user-friendly search engines, and 21 (7.39%) of faculty members motivated to use the internet for other factors.

Table- 4.10: Motivating Factors for Using the Internet

Factors	Universities		Total % N= 284
	MZU (%) N= 173	BBAU (%) N= 111	
To update self-knowledge in the subject with the help of available updated information	165 (95.38)	104 (93.69)	269 (94.72)
Internet provides faster communication for social networking	107 (61.85)	68 (61.26)	175 (61.62)
User friendly search engines	106 (61.27)	67 (60.36)	173 (60.92)
Online Submission of papers to Journals/ Conferences/ Seminars etc.	155 (89.6)	97 (87.39)	252 (88.73)

Easy access to information resources	145 (83.82)	93 (83.78)	238 (83.8)
24X7 access of resources	124 (71.68)	77 (69.37)	201 (70.77)
To know about the latest rules, and regulations related to academic activities.	129 (74.57)	83 (74.77)	212 (74.65)
Any other	13 (7.51)	8 (7.21)	21 (7.39)

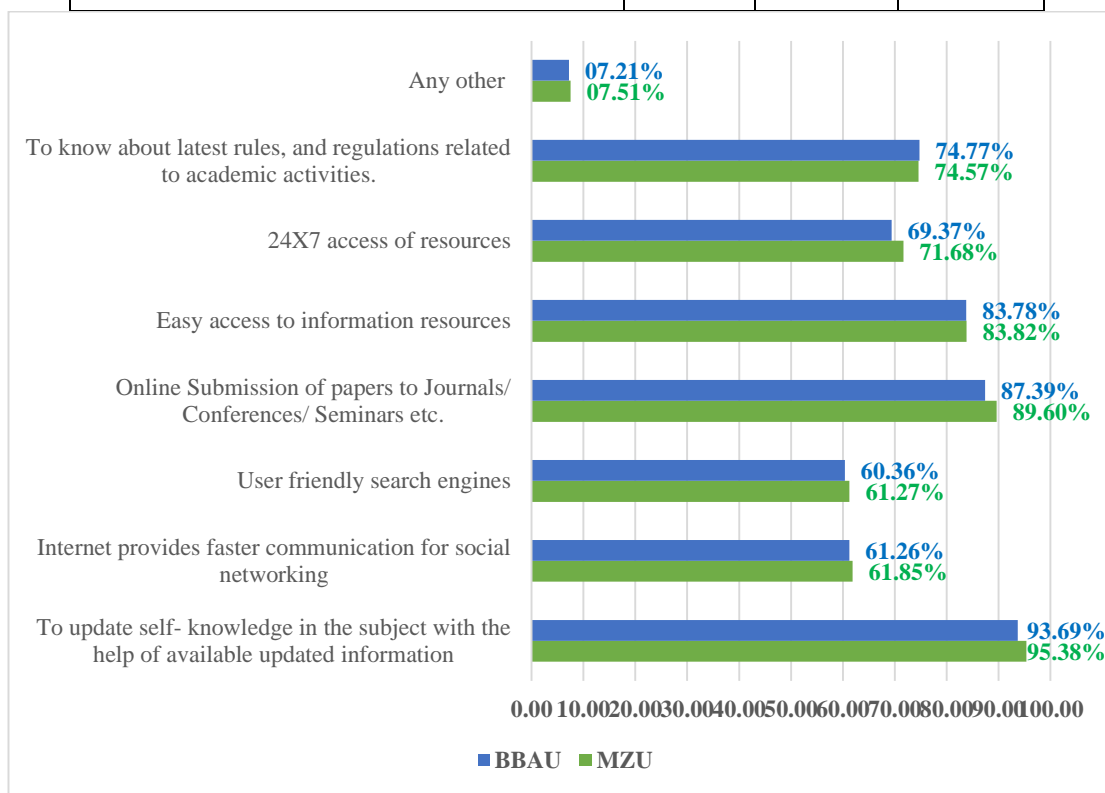


Figure-4.8: Motivating Factors for Using the Internet

The above table 4.10 and figure 4.8 additionally illustrate university wise break up of faculty members of MZU motivated to use internet. It found that 165 (95.38%) of faculty members of MZU motivated to use internet to update self-knowledge in the subject with the help of available updated information, followed by 155 (89.6%) of faculty members of MZU motivated to use internet for online submission of papers to Journals/ Conferences/ Seminars etc., 145 (83.82%) of faculty members of MZU motivated to use internet to easy access to information resources, 129 (74.57%) of

faculty members of MZU motivated to use internet to know about latest rules, and regulations related to academic activities, 124 (71.68%) of faculty members of MZU motivated to use internet for 24X7 access of resources, 107 (61.85%) of faculty members of MZU motivated to use internet because internet provides faster communication for social networking, 106 (61.27%) of faculty members of MZU motivated to use internet for user friendly search engines, and 13 (7.51%) of faculty members of MZU motivated to use internet for other factor. While 104 (93.69%) of faculty members of BBAU were motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by 97 (87.39%) of faculty members of BBAU motivated to use the internet for online submission of papers to Journals/ Conferences/ Seminars, etc., 93 (83.78%) of faculty members of BBAU motivated to use the internet to easy access to information resources, 83 (74.77%) of faculty members of BBAU motivated to use the internet to know about latest rules, and regulations related to academic activities, 77 (69.37%) of faculty members of BBAU motivated to use the internet for 24X7 access of resources, 68 (61.26%) of faculty members of BBAU motivated to use the internet because the internet provides faster communication for social networking, 67 (60.36%) of faculty members of BBAU motivated to use the internet for user-friendly search engines, and 8 (7.21%) of faculty members of BBAU motivated to use the internet for other factors.

4.13 PROBLEM FACED WHILE ACCESSING THE INTERNET

Respondents of both universities encounter a number of problems when they access and use the internet. Table 4.11 express the problem faced when accessing and using the internet by the faculty members of both the university. From the table, it is found that 217 (76.41%) of faculty members facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by 123 (43.31%) of faculty members facing problems of server down while accessing the internet, 97 (34.15%) of respondents facing problems of slow processing of computer/machine while accessing the internet, 76 (26.76%) of respondents facing problems for lack of authenticity/reliability of resources while accessing the internet, 58 (20.42%) of faculty members facing problems of frequent power failure while accessing the internet, 55 (19.37%) of faculty members facing problems for getting unsynchronized information while accessing the internet, 22 (7.75%) of faculty members facing problems of changes in

URL while accessing the internet, and 21 (7.39%) of faculty members facing problems in other things while accessing the internet.

Table- 4.11: Problem Faced While Accessing the Internet

Problems	Universities		
	MZU (%) N= 173	BBAU (%) N= 111	Total % N= 284
Poor Internet connectivity (Low Speed)	133 (76.88)	84 (75.68)	217 (76.41)
Problem of frequent power failure	37 (21.39)	21 (18.92)	58 (20.42)
Slow processing of computer/machine	59 (34.1)	38 (34.23)	97 (34.15)
Server Down	75 (43.35)	48 (43.24)	123 (43.31)
Changes in URL	12 (6.94)	10 (9.01)	22 (7.75)
Lack of authenticity/ Reliability	44 (25.43)	32 (28.83)	76 (26.76)
Getting unsynchronized information	33 (19.08)	22 (19.82)	55 (19.37)
Any other	12 (6.94)	9 (8.11)	21 (7.39)

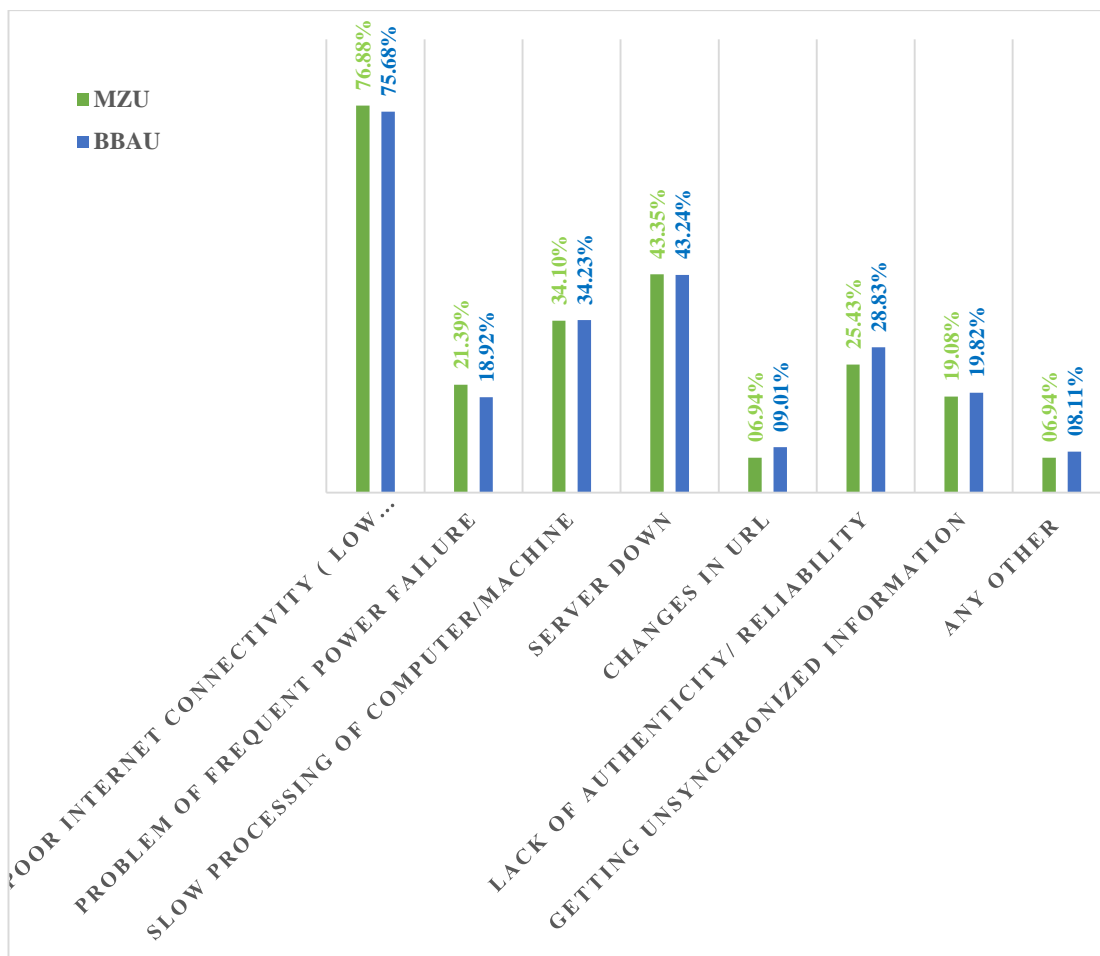


Figure-4.9: Problem Faced While Accessing the Internet

The above table 4.11 and figure 4.9 also depict university-wise break up of problems faced by faculty members while accessing the internet. 133 (76.88 %) of faculty members of MZU facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by 75 (43.35 %) of faculty members of MZU facing problems of server down while accessing the internet, 59 (34.1 %) of respondents of MZU facing problems of slow processing of computer/ machine while accessing the internet, 44 (25.43 %) of respondents of MZU facing problems for lack of authenticity/ reliability of resources while accessing the internet, 37 (21.39 %) of faculty members of MZU facing problems of frequent power failure while accessing the internet, 33 (19.08 %) of faculty members of MZU facing problems for getting unsynchronized information while accessing the internet, 12 (6.94 %) of faculty members of MZU facing problems of changes in URL while accessing the internet, and 12 (6.94 %) of faculty members of MZU facing problems in other things while accessing the internet. Whereas 84 (75.68 %) of faculty members of BBAU facing the problem of poor

internet connectivity (low speed) while accessing the internet, followed by 48 (43.24 %) of faculty members of BBAU facing problems of server down while accessing the internet, 38 (34.23 %) of respondents of BBAU facing problems of slow processing of computer/ machine while accessing the internet, 32 (28.83 %) of respondents of BBAU facing problems for lack of authenticity/ reliability of resources while accessing the internet, 21 (18.92 %) of faculty members of BBAU facing problems of frequent power failure while accessing the internet, 22 (19.82 %) of faculty members of BBAU facing problems for getting unsynchronized information while accessing the internet, 10 (9.01 %) of faculty members of BBAU facing problems of changes in URL while accessing the internet, and 9 (8.11 %) of faculty members of BBAU facing problems in other things while accessing the internet.

4.14 AWARENESS OF E-RESOURCES AVAILABLE/ SUBSCRIBED BY THE LIBRARY

The university library under the study provides access to various e-resources. It is important to know the faculty members whether they are aware of these e-resources available/ subscribed in their respective libraries. To use e-resources, they must know their availability. Therefore, respondents of both universities are asked if they know the e-resources available/ subscribed in their library. Table 4.12 shows that awareness of e-resources by the respondents of both the university i.e. MZU and BBAU found that the maximum 270 (95.07%) of faculty members of both universities are aware of e-resources and only 14 (4.93%) of faculty members of both universities are not aware of e-resources.

Table- 4.12: Awareness of E-Resources

Awareness of e- resources	Universities		
	MZU (%)	BBAU (%)	Total (%)
Yes	163 (94.22)	107 (96.4)	270 (95.07)
No	10 (5.78)	4 (3.6)	14 (4.93)

Total	173 (100.00)	111 (100.00)	284 (100.00)
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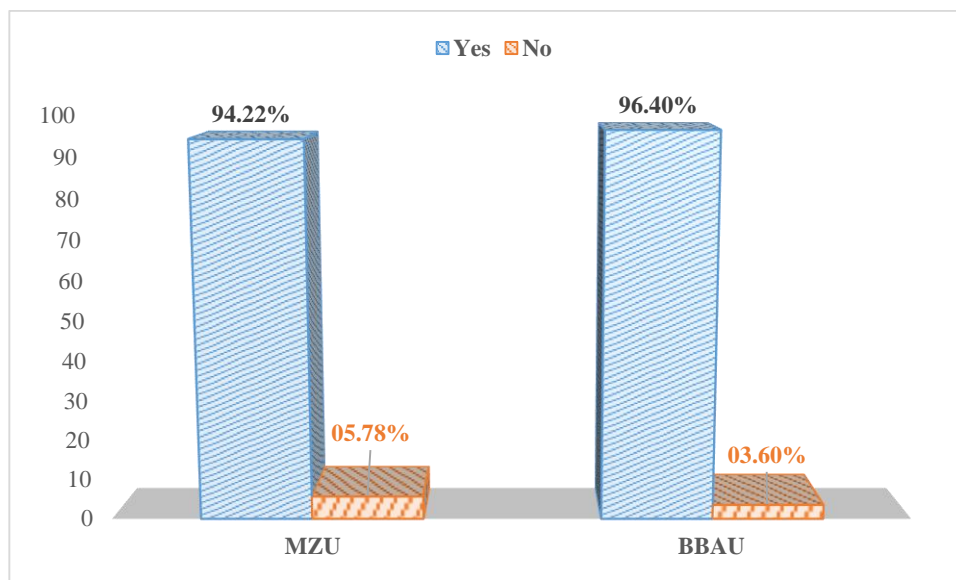


Figure-4.10: Awareness of E-Resources

The above table 4.12 and figure 4.10 also depict university-wise break up about awareness of e-resources by the faculty members. It found that 163 (94.22 %) of faculty members of MZU are aware of e-resources and only 10 (5.78%) of faculty members of MZU are not aware of e-resources. Whereas 107 (96.40 %) of faculty members of BBAU are aware of e-resources and only 4 (5.78%) of faculty members of BBAU are not aware of e-resources.

4.15 USE OF E-RESOURCES

Electronic resources are now very important because they are the latest and can be accessed from anywhere across all geographic boundaries. E-resources are becoming an increasingly important aspect of library collections, adding potential value to the library's resources. Despite the fact that e-resources need a significant amount of finance to develop digital assets, they provide good value to users. Table 4.13 and figure 4.10 describe the use of e-resources by the faculty members of both universities and it found that 277 (97.54%) of respondents are using e-resources while only 7 (2.46%) of respondents are not using e-resources.

Table- 4.13: Use of E-Resources

Use of e-resources	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	166 (95.95)	111 (100)	277 (97.54)
No	7 (4.05)	0 (0)	7 (2.46)
Total	173 (100.00)	111 (100.00)	284 (100.00)

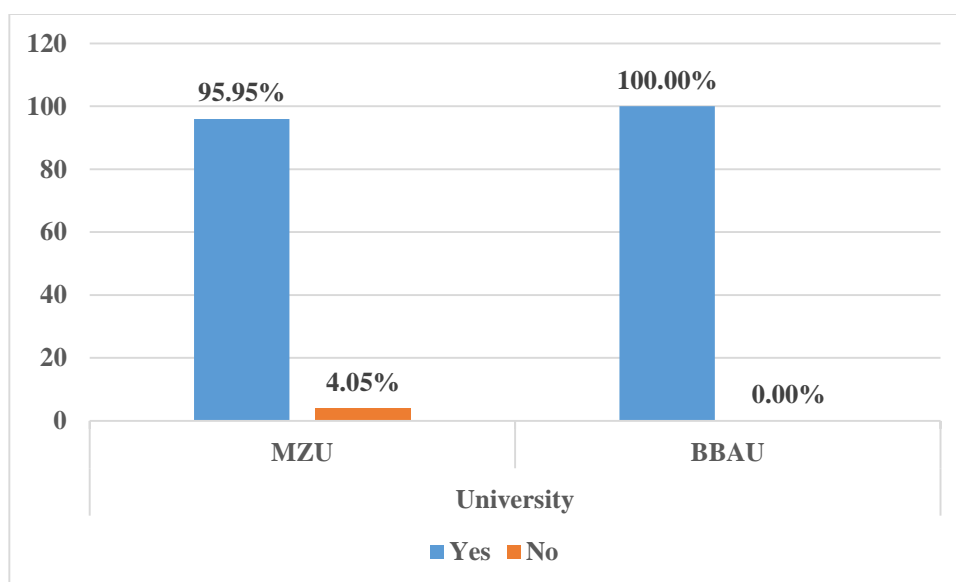


Figure-4.11: Use of E-Resources

The above table 4.13 and figure 4.11 also depict the university-wise break up about the use of e-resources by the faculty members. It found that 166 (95.95%) of faculty members of MZU are using e-resources and only 7 (4.05%) of faculty members of MZU are not using e-resources. Whereas all 111 (100.00%) of faculty members of BBAU are using e-resources.

4.16 USE OF VARIOUS TYPES OF E-RESOURCES

Any free or fee-based information resource that can be accessed via a personal computer is characterized as an electronic resource. These resources include e-journals, e-books, e-technical reports, e-conference proceedings, e-drawings and designs, e-teaching materials, e-standards, e-tutorials, e-databases, electronic theses and dissertations, e-patents, subject gateways/e-portals, blogs, wikis, RSS feeds, open-source literature, e-reference resources, and the university's faculty members employ a variety of e-resources in their academic and research activities. University faculty members consider themselves e-resources consumers and, in this sense, most of them are the use of e-resources. Table 4.14 and figure 4.12 depict the various types of e-resources used by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University. A total 266 (93.66%) of faculty members of both universities using e-journals, followed by 244 (85.92%) of faculty members of both universities use e-book, 218 (76.76%) of faculty members of both universities use e-teaching materials, 197 (69.37%) of faculty members of both universities use e-thesis and dissertations, 186 (65.49%) of faculty members of both universities use e-reference resources (dictionaries, encyclopaedias etc.), 167 (58.80%) of faculty members of both universities use e-tutorials, 156 (54.93%) of faculty members of both universities use e-conference proceedings, 140 (49.3%) of faculty members of both universities use e-databases, 131(46.13%) of faculty members of both universities use institution repository, 130(45.77%) of faculty members of both universities use e-technical reports, 113 (39.79%) of faculty members of both universities use blogs/ wikis, 102 (35.92%) of faculty members of both universities use subject gateways, 86 (30.28%) of faculty members of both universities use e- patents, e-standards, 77 (27.11%) of faculty members of both universities use e-drawings and designs, and only 8 (2.82%) of faculty members of both universities use other e-resources.

Table- 4.14: Use of Various Types of E-Resources

Sl. No.	Types of e-resources	Universities				Total	
		MZU (%) <i>N= 173</i>		BBAU (%) <i>N= 111</i>		(%) <i>N= 284</i>	
		Yes	No	Yes	No	Yes	No
a.	E-Journals	161 (93.06)	12 (6.94)	105 (94.59)	6 (5.41)	266 (93.66)	18 (6.34)
b.	E-Books	148 (85.55)	25 (14.45)	96 (86.49)	15 (13.51)	244 (85.92)	40 (14.08)
c.	E-Technical Reports	78 (45.09)	95 (54.91)	52 (46.85)	59 (53.15)	130 (45.77)	154 (54.23)
d.	E-Conference Proceedings	92 (53.18)	81 (46.82)	64 (57.66)	47 (42.34)	156 (54.93)	128 (45.07)
e.	E-Drawings and Designs	45 (26.01)	128 (73.99)	32 (28.83)	79 (71.17)	77 (27.11)	207 (72.89)
f.	E-Teaching Materials	131 (75.72)	42 (24.28)	87 (78.38)	24 (21.62)	218 (76.76)	66 (23.24)
g.	E- Patents, E- Standards	49 (28.32)	124 (71.68)	37 (33.33)	74 (66.67)	86 (30.28)	198 (69.72)
h.	E-Tutorials	101 (58.38)	72 (41.62)	66 (59.46)	45 (40.54)	167 (58.8)	117 (41.2)
i.	E- Databases	83 (47.98)	90 (52.02)	57 (51.35)	54 (48.65)	140 (49.3)	144 (50.7)
j.	E- Thesis and Dissertations	119 (68.79)	54 (31.21)	78 (70.27)	33 (29.73)	197 (69.37)	87 (30.63)
k.	Subject Gateways	59 (34.1)	114 (65.9)	43 (38.74)	68 (61.26)	102 (35.92)	182 (64.08)
l.	Blogs, Wikis	69 (39.88)	104 (60.12)	44 (39.64)	67 (60.36)	113 (39.79)	171 (60.21)

m.	E- Reference resources (Dictionaries, encyclopaedias etc.)	111 (64.16)	62 (35.84)	75 (67.57)	36 (32.43)	186 (65.49)	98 (34.51)
n.	Institution Repository (IR)	77 (44.51)	96 (55.49)	54 (48.65)	57 (51.35)	131 (46.13)	153 (53.87)
o.	Any other	5 (2.89)	168 (97.11)	3 (2.7)	108 (97.3)	8 (2.82)	276 (97.18)

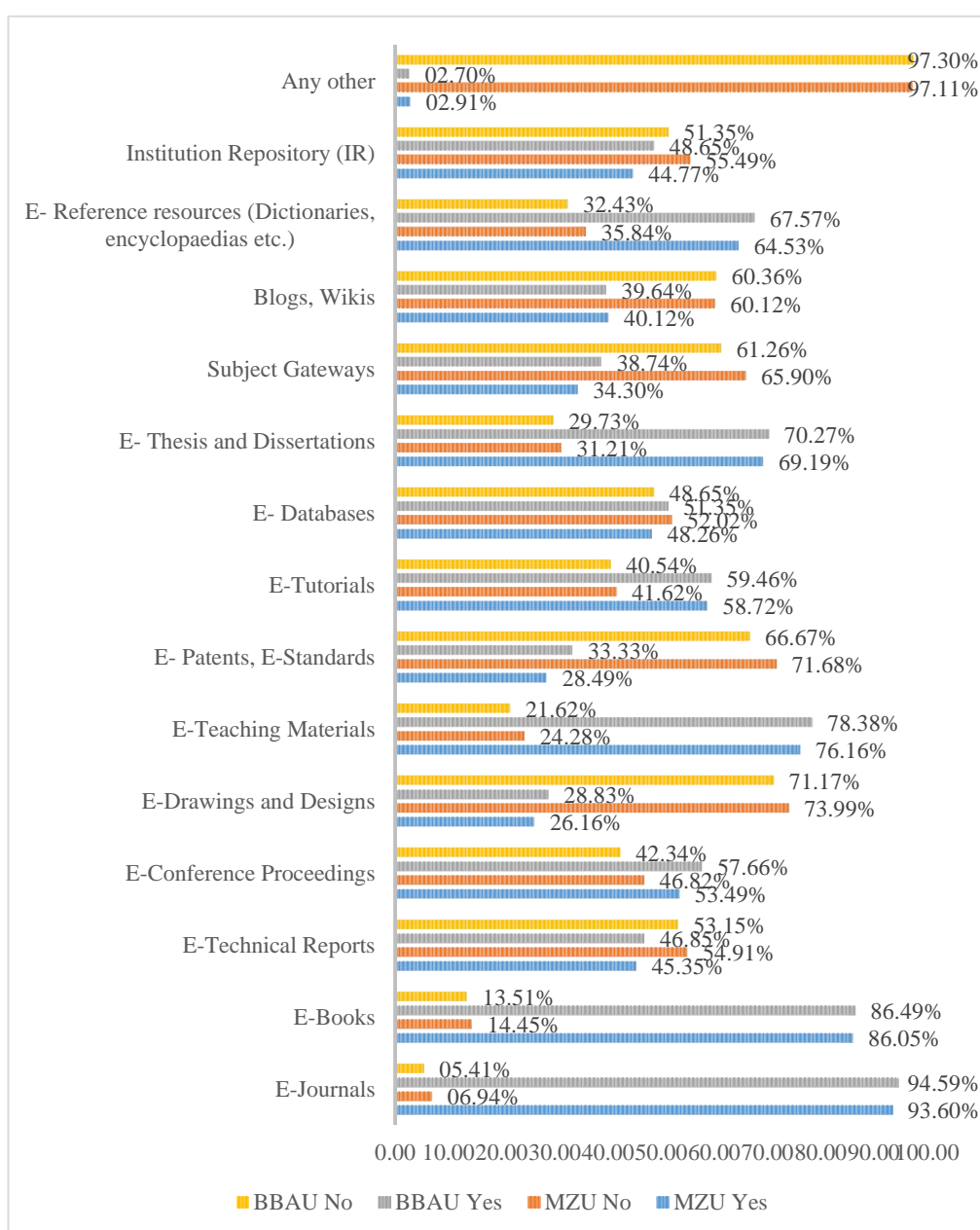


Figure-4.12: Use of Various Types of E-Resources

The above table 4.14 and figure 4.12 categorically represent the university-wise data of the respondent from both universities. A total of 161 (93.06 %) of faculty members of MZU using e-journals, followed by 148 (85.55 %) of faculty members of MZU use e-books, 131 (75.72 %) of faculty members of MZU use e-teaching materials, 119 (68.79 %) of faculty members of MZU use e-thesis and dissertations, 111 (64.16 %) of faculty members of MZU use e-reference resources (dictionaries, encyclopaedias, etc.), 101 (58.38 %) of faculty members of MZU use e-tutorials, 92 (53.18 %) of faculty members of MZU use e-conference proceedings, 83 (47.98%) of faculty members of MZU use e-databases, 77 (44.51%) of faculty members of MZU use institution repository, 78 (45.09 %) of faculty members of MZU use e-technical reports, 69 (39.88 %) of faculty members of MZU use blogs/ wikis, 59 (34.1 %) of faculty members of MZU use subject gateways, 49 (28.32%) of faculty members of MZU use e- patents, e-standards, 45 (26.01%) of faculty members of MZU use e-drawings and designs, and only 5 (2.89 %) of faculty members of MZU use other e-resources. While, 105 (94.59%) of faculty members of BBAU using e-journals, followed by 96 (86.49%) of faculty members of BBAU use e-books, 87 (78.38%) of faculty members of BBAU use e-teaching materials, 78 (70.27%) of faculty members of BBAU use e-thesis and dissertations, 75 (67.57%) of faculty members of BBAU use e-reference resources (dictionaries, encyclopaedias, etc.), 66 (59.46%) of faculty members of BBAU use e-tutorials, 64 (57.66%) of faculty members of BBAU use e-conference proceedings, 57 (51.35%) of faculty members of BBAU use e-databases, 54 (48.65%) of faculty members of BBAU use institution repository, 52 (46.85%) of faculty members of BBAU use e-technical reports, 44 (39.64%) of faculty members of BBAU use blogs/ wikis, 43 (38.74%) of faculty members of BBAU use subject gateways, 37 (33.33%) of faculty members of BBAU use e- patents, e-standards, 32 (28.83%) of faculty members of BBAU use e-drawings and designs, and only 3 (2.70%) of faculty members of BBAU use other e-resources.

4.17 FREQUENCY OF USING VARIOUS TYPES OF E-RESOURCES

The frequency of using various types of e-resources is a significant indicator of how the faculty members of both the university are utilised the available e-resources. A question was asked how frequently they used available e-resources using a time scale that includes 5: Daily, 4: More than twice in a week, 3: Once in a week, 2: More than twice in a month, 1: Once in a month'. The data is scrutinised and presented in table

4.15. It is found from table 4.16 a total of 104 (60.12%) of faculty members of MZU use e-journal daily, followed by 36 (20.18%) of faculty members of MZU use e-journals more than twice a week, 21 (12.14%) of respondents of MZU use e-journals once in a week, and 12 (6.94%) of respondents of MZU use e-journals more than twice in a month. While 73 (65.77%) of faculty members of BBAU use e-journals daily, followed by 24 (21.62%) of faculty members of BBAU use e-journals more than twice in a week, 9 (8.11%) of faculty members of BBAU use e-journals once in a week, and 5 (4.5%) of faculty members of BBAU use e-journals More than twice in a month.

A total of 69 (39.88%) of respondents of MZU use e-book daily, followed by 52 (30.06%) of faculty members of MZU who use e-books more than twice a week, 35 (20.23%) of respondents of MZU use e-books once in a week, 13 (7.51%) of respondents of MZU use e-books more than twice in a month, and 4 (2.31%) of respondents of MZU use e-books once in a month. While 39 (35.14%) of faculty members of BBAU use e-books daily, followed by 36 (32.43%) of faculty members of BBAU use e-books more than twice in a week, 28 (25.23%) of faculty members of BBAU use e-books once in a week, 6 (5.41%) of faculty members of BBAU use e-books more than twice in a month, 2 (1.8%) of respondents of BBAU use e-books once in a month.

A total of 11 (6.36%) of respondents of MZU use e-technical reports daily, followed by 24 (13.87%) of faculty members of MZU who use e-technical reports more than twice a week, 27 (15.61%) of respondents of MZU use e-technical reports once in a week, 9 (5.2%) of respondents of MZU use e-technical reports more than twice in a month, and 8 (4.62%) of respondents of MZU use e-technical reports once in a month. While 10 (9.01%) of faculty members of BBAU use e-technical reports daily, followed by 13 (11.71%) of faculty members of BBAU use e-technical reports more than twice in a week, 18 (16.22%) of faculty members of BBAU use e-technical reports once in a week, 6 (5.41%) of faculty members of BBAU use e-technical reports more than twice in a month, 6 (5.41%) of respondents of BBAU use e-technical reports once in a month.

A total of 63 (36.42%) of respondents of MZU use e-conference proceedings daily, followed by 63 (36.42%) of faculty members of MZU who use e-conference proceedings more than twice a week, 22 (12.72%) of respondents of MZU use e-

conference proceedings once in a week, 11 (6.36%) of respondents of MZU use e-conference proceedings more than twice in a month, and 14 (8.09%) of respondents of MZU use e-conference proceedings once in a month. While 40 (36.04%) of faculty members of BBAU use e-conference proceedings daily, followed by 31 (27.93%) of faculty members of BBAU use e-conference proceedings more than twice in a week, 17 (15.32%) of faculty members of BBAU use e-conference proceedings once in a week, 12 (10.81%) of faculty members of BBAU use e-conference proceedings more than twice in a month, 11 (9.91%) of respondents of BBAU use e-conference proceedings once in a month.

A total of 7 (4.05%) of respondents of MZU use e-drawings and designs daily, followed by 10 (5.78%) of faculty members of MZU who use e-drawings and designs more than twice a week, 8 (4.62%) of respondents of MZU use e-drawings, and designs once in a week, 10 (5.78%) of respondents of MZU use e-drawings and designs more than twice in a month, and 10 (5.78%) of respondents of MZU use e-drawings and designs once in a month. While 5 (4.50%) of faculty members of BBAU use e-drawings and designs daily, followed by 5 (4.50%) of faculty members of BBAU e-drawings and designs more than twice in a week, 5 (4.50%) of faculty members of BBAU use e-drawings and designs once in a week, 8 (7.21%) of faculty members of BBAU use e-drawings and designs more than twice in a month, 8 (7.21%) of respondents of BBAU use e-drawings and designs once in a month.

A total of 111 (64.16%) of respondents of MZU use e-teaching materials daily, followed by 37 (21.39%) of faculty members of MZU use e-teaching materials more than twice a week, 15 (8.67%) of respondents of MZU use e-teaching materials once in a week, 9 (5.20%) of respondents of MZU use e-teaching materials more than twice in a month, and 1 (0.58%) of respondents of MZU use e-teaching materials once in a month. While 76 (68.47%) of faculty members of BBAU use e-teaching materials daily, followed by 19 (17.12%) of faculty members of BBAU use e-teaching materials more than twice in a week, 11 (9.91%) of faculty members of BBAU use e-teaching materials once in a week, 5 (4.50%) of faculty members of BBAU use e-teaching materials more than twice in a month, (0.00%) of respondents of BBAU use e-teaching materials once in a month.

A total of 10 (5.78%) of respondents of MZU use e-patents, e-standards daily, followed by 9 (5.2%) of faculty members of MZU use e-patents, e-standards more than twice a week, 13 (7.51%) of respondents of MZU use e-patents, e-standards once in a week, 21 (12.14%) of respondents of MZU use e-patents, e-standards more than twice in a month, and 57 (32.95%) of respondents of MZU use e-patents, e-standards once in a month. While 8 (7.21%) of faculty members of BBAU use e-patents, e-standards daily, followed by 7 (6.31%) of faculty members of BBAU use e-patents, e-standards more than twice in a week, 12 (10.81%) of faculty members of BBAU use e-patents, e-standards once in a week, 3 (2.70%) of faculty members of BBAU use e-patents, e-standards more than twice in a month, 28 (25.23%) of respondents of BBAU use e-patents, e-standards once in a month.

A total of 42 (24.28%) of respondents of MZU use e-tutorials daily, followed by 81 (46.82%) of faculty members of MZU use e-tutorials more than twice a week, 14 (8.09%) of respondents of MZU use e-tutorials once in a week, 14 (8.09%) of respondents of MZU use e-tutorials more than twice in a month, and 5 (2.89%) of respondents of MZU use e-tutorials once in a month. While 15 (13.51%) of faculty members of BBAU use e-tutorials daily, followed by 25 (22.52%) of faculty members of BBAU use e-tutorials more than twice in a week, 11 (9.91%) of faculty members of BBAU use e-tutorials once in a week, 10 (9.01%) of faculty members of BBAU use e-tutorials more than twice in a month, 4 (3.60%) of respondents of BBAU use e-tutorials once in a month.

A total of 23 (13.29%) of respondents of MZU use e-databases daily, followed by 18 (10.4%) of faculty members of MZU use e-databases more than twice a week, 43 (24.86%) of respondents of MZU use e-databases once in a week, 52 (30.06%) of respondents of MZU use e-databases more than twice in a month, and 25 (14.45%) of respondents of MZU use e-databases once in a month. While 15 (13.51%) of faculty members of BBAU use e-databases daily, followed by 12 (10.81%) of faculty members of BBAU use e-databases more than twice in a week, 16 (14.41%) of faculty members of BBAU use e-databases once in a week, 12 (10.81%) of faculty members of BBAU use e-databases more than twice in a month, 4 (3.60%) of respondents of BBAU use e-databases once in a month.

MZU respondents use e-thesis and dissertations daily, with 44 (25.43%) of faculty members using them more than twice a week, followed by 36 (20.81%) of respondents using them once a week, 34 (19.65%) of respondents using them more than twice a month, and 15 (8.67%) of MZU respondents using them more than twice a month. While 33 (29.73%) of faculty members of BBAU use e-thesis and dissertations more than twice a month, followed by 28 (25.23%) of faculty members of BBAU use e-thesis and dissertations once in a week, 23 (20.72%) of faculty members of BBAU use e-thesis and dissertations daily, 19 (17.12%) of faculty members of BBAU use e-thesis and dissertations more than twice in a week, and 8 (7.21%) of respondents of BBAU use e-thesis and dissertations once in a month.

A total of 21 (12.14%) of respondents of MZU use subject gateways daily, followed by 42 (24.28%) of faculty members of MZU who use subject gateways more than twice a week, 63 (36.42%) of respondents of MZU use subject gateways once in a week, 25 (14.45%) of respondents of MZU use subject gateways more than twice in a month, and 22 (12.72%) of respondents of MZU use subject gateways once in a month. While 6 (5.41%) of faculty members of BBAU use subject gateways daily, followed by 9 (8.11%) of faculty members of BBAU use subject gateways more than twice in a week, 16 (14.41%) of faculty members of BBAU use subject gateways once in a week, 3 (2.70%) of faculty members of BBAU use subject gateways more than twice in a month, 8 (7.21%) of respondents of BBAU use subject gateways once in a month.

A total of 14 (8.09%) of respondents of MZU use Blogs, Wikis daily, followed by 16 (9.25%) of faculty members of MZU use Blogs, Wikis more than twice a week, 23 (13.29%) of respondents of MZU use Blogs, Wikis once in a week, 12 (6.94%) of respondents of MZU use Blogs, Wikis more than twice in a month, and 6 (3.47%) of respondents of MZU use Blogs, Wikis once in a month. While 9 (8.11%) of faculty members of BBAU use Blogs, Wikis daily, followed by 9 (8.11%) of faculty members of BBAU use Blogs, Wikis more than twice in a week, 14 (12.61%) of faculty members of BBAU use Blogs, Wikis once in a week, 8 (7.21%) of faculty members of BBAU use Blogs, Wikis more than twice in a month, 5 (4.50%) of respondents of BBAU use Blogs, Wikis once in a month.

A total of 37 (21.39%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) daily, followed by 52 (30.06%) of faculty members of MZU use

e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice a week, 61 (35.26%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a week, 14 (8.09%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a month, and 9 (5.20%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a month. While 38 (34.23%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) daily, followed by 38 (34.23%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a week, 21 (18.92%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a week, 9 (8.11%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a month, 5 (4.50%) of respondents of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a month.

A total of 14 (8.09%) of respondents of MZU use institutional repository daily, followed by 37 (21.39%) of faculty members of MZU use institutional repository more than twice a week, 51 (29.48%) of respondents of MZU use institutional repository once in a week, 27 (15.61%) of respondents of MZU use institutional repository more than twice in a month, and 44 (25.43%) of respondents of MZU use institutional repository once in a month. While 11 (9.91%) of faculty members of BBAU use institutional repository daily, followed by 8 (7.21%) of faculty members of BBAU use institutional repository more than twice in a week, 12 (10.81%) of faculty members of BBAU use institutional repository once in a week, 8 (7.21%) of faculty members of BBAU use institutional repository more than twice in a month, 15 (13.51%) of respondents of BBAU use institutional repository once in a month.

A total (0.00%) of respondents of MZU use other resources daily, followed by (0.00%) of faculty members of MZU using other resources more than twice a week, 1 (0.58%) of respondents of MZU use other resources once, in a week, 1 (0.58%) of respondents of MZU use other resources more than twice in a month, and 1 (0.58%) of respondents of MZU use other resources once in a month. While (0.00%) of faculty members of BBAU use other resources daily, followed by (0.00%) of faculty members of BBAU use other resources more than twice in a week, 1 (0.9%) of faculty members of BBAU use other resources once, in a week, (0.00%) of faculty members of BBAU use other

resources more than twice in a month, 1 (0.9%) of respondents of BBAU use other resources once in a month.

Table- 4.15: Frequency of Using Various Types of E-Resources

Types of E-Resources	Universities									
	MZU (%) <i>N= 173</i>					BBAU (%) <i>N= 111</i>				
	5	4	3	2	1	5	4	3	2	1
E-Journals	104 (60.1 2)	36 (20. 81)	21 (12. 14)	12 (6.9 4)	0 (0)	73 (65. 77)	24 (21. 62)	9 (8.1 1)	5 (4.5)	0 (0)
E-Books	69 (39.8 8)	52 (30. 06)	35 (20. 23)	13 (7.5 1)	4 (2.3 1)	39 (35. 14)	36 (32. 43)	28 (25. 23)	6 (5.4 1)	2 (1.8)
E-Technical Reports	11 (6.36)	24 (13. 87)	27 (15. 61)	9 (5.2)	8 (4.6 2)	10 (9.0 1)	13 (11. 71)	18 (16. 22)	6 (5.4 1)	6 (5.4 1)
E-Conference Proceedings	63 (36.4 2)	63 (36. 42)	22 (12. 72)	11 (6.3 6)	14 (8.0 9)	40 (36. 04)	31 (27. 93)	17 (15. 32)	12 (10. 81)	11 (9.9 1)
E-Drawings and Designs	7 (4.05)	10 (5.7 8)	8 (4.6 2)	10 (5.7 8)	10 (5.7 8)	5 (4.5)	5 (4.5)	5 (4.5)	8 (7.2 1)	8 (7.2 1)
E-Teaching Materials	111 (64.1 6)	37 (21. 39)	15 (8.6 7)	9 (5.2)	1 (0.5 8)	76 (68. 47)	19 (17. 12)	11 (9.9 1)	5 (4.5)	0 (0)
E- Patents, E-Standards	10 (5.78)	9 (5.2)	13 (7.5 1)	21 (12. 14)	57 (32. 95)	8 (7.2 1)	7 (6.3 1)	12 (10. 81)	3 (2.7)	28 (25. 23)

E-Tutorials	42 (24.2 8)	81 (46. 82)	14 (8.0 9)	14 (8.0 9)	5 (2.8 9)	15 (13. 51)	25 (22. 52)	11 (9.9 1)	10 (9.0 1)	4 (3.6)
E- Databases	23 (13.2 9)	18 (10. 4)	43 (24. 86)	52 (30. 06)	25 (14. 45)	15 (13. 51)	12 (10. 81)	16 (14. 41)	12 (10. 81)	4 (3.6)
E- Thesis and Dissertations	44 (25.4 3)	44 (25. 43)	36 (20. 81)	34 (19. 65)	15 (8.6 7)	23 (20. 72)	19 (17. 12)	28 (25. 23)	33 (29. 73)	8 (7.2 1)
Subject Gateways	21 (12.1 4)	42 (24. 28)	63 (36. 42)	25 (14. 45)	22 (12. 72)	6 (5.4 1)	9 (8.1 1)	16 (14. 41)	3 (2.7)	8 (7.2 1)
Blogs, Wikis	14 (8.09)	16 (9.2 5)	23 (13. 29)	12 (6.9 4)	6 (3.4 7)	9 (8.1 1)	9 (8.1 1)	14 (12. 61)	8 (7.2 1)	5 (4.5)
E- Reference resources (Dictionaries , encyclopedias etc.)	37 (21.3 9)	52 (30. 06)	61 (35. 26)	14 (8.0 9)	9 (5.2)	38 (34. 23)	38 (34. 23)	21 (18. 92)	9 (8.1 1)	5 (4.5)
Institutional Repository (IR)	14 (8.09)	37 (21. 39)	51 (29. 48)	27 (15. 61)	44 (25. 43)	11 (9.9 1)	8 (7.2 1)	12 (10. 81)	8 (7.2 1)	15 (13. 51)
Any other	(0)	(0)	1 (0.5 8)	1 (0.5 8)	1 (0.5 8)	(0)	(0)	1 (0.9)	(0)	1 (0.9)
5: Daily, 4: More than twice in a week, 3: Once in a week, 2: More than twice in a month, 1: Once in a month										

Note: Figures in parenthesis indicate the percentage

4.18 PLACE OF ACCESSING VARIOUS TYPES OF E-RESOURCES

Table 4.16 shows the place of access to e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University. It is found from table 4.16 a total of 18 (10.4%) of faculty members of MZU accessed e-journal from the library, followed by 153 (88.44%) of faculty members of MZU accessing e-journals from the department, 72 (41.62%) of respondents of MZU accessing e-journals from residence, 3 (1.73%) of respondents of MZU accessing e-journals from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-journals from other places. While 14 (12.61%) of faculty members of BBAU accessed e-journals from the library, followed by 102 (91.89%) of faculty members of BBAU accessing e-journals from the department, 46 (41.44%) of faculty members of BBAU accessed e-journals from residence, 1 (0.9%) of faculty members of BBAU accessing e-journals from the computer lab., and 1 (0.9%) of respondents of BBAU accessing e-journals from other places.

A total of 11 (6.36%) of respondents of MZU accessed e-book from the library, followed by 147 (84.97%) of faculty members of MZU accessing e-books from the department, 53 (30.64%) of respondents of MZU accessing e-books from residence, 4 (2.31%) of respondents of MZU accessing e-books from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-books from other places. While 9 (8.11%) of faculty members of BBAU accessed e-books from the library, followed by 89 (80.18%) of faculty members of BBAU accessing e-books from the department, 41 (36.94%) of faculty members of BBAU accessed e-books from residence, 1 (0.9%) of faculty members of BBAU accessing e-books from the computer lab., and 1 (0.9%) of respondents of BBAU accessing e-books from other places.

A total of 3 (1.73%) of respondents of MZU accessed e-technical reports from the library, followed by 74 (42.77%) of faculty members of MZU accessing e-technical reports from the department, 38 (21.97%) of respondents of MZU accessing e-technical reports from residence, 2 (1.16%) of respondents of MZU accessing e-technical reports from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-technical reports from other places. While 3 (2.7%) of faculty members of BBAU accessed e-technical reports from the library, followed by 50 (45.05%) of faculty members of BBAU accessing e-technical reports from the department, 24

(21.62%) of faculty members of BBAU accessed e-technical reports from residence, 1 (0.9%) of faculty members of BBAU accessing e-technical reports from the computer lab., and 1 (0.9%) of respondents of BBAU accessing e-technical reports from other places.

A total of 5 (2.89%) of respondents of MZU accessed e-conference proceedings from the library, followed by 123 (71.1%) of faculty members of MZU accessing e-conference proceedings from the department, 42 (24.28%) of respondents of MZU accessing e-conference proceedings from residence, 2 (1.16%) of respondents of MZU accessing e-conference proceedings from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-conference proceedings from other places. While 6 (5.41%) of faculty members of BBAU accessing e-conference proceedings from the library, followed by 76 (68.47%) of faculty members of BBAU accessing e-conference proceedings from the department, 27 (24.32%) of faculty members of BBAU accessing e-conference proceedings from residence, 1 (0.9%) of faculty members of BBAU accessing e-conference proceedings from the computer lab., 1 (0.9%) of respondents of BBAU accessing e-conference proceedings from other places.

A total of 2 (1.16%) of respondents of MZU accessing e-drawings and designs from the library, followed by 43 (24.86%) of faculty members of MZU accessing e-drawings and designs from the department, 29 (16.76%) of respondents of MZU accessing e-drawings and designs from residence, 1 (0.58%) of respondents of MZU accessing e-drawings and designs from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-drawings and designs from other places. While 2 (1.8%) of faculty members of BBAU accessing e-drawings and designs from the library, followed by 33 (29.73%) of faculty members of BBAU e-drawings and designs from the department, 20 (18.02%) of faculty members of BBAU accessing e-drawings and designs from residence, (0.00) of faculty members of BBAU accessing e-drawings and designs from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-drawings and designs from other places.

A total of 5 (2.89%) of respondents of MZU accessing e-teaching materials from the library, followed by 139 (80.35%) of faculty members of MZU accessing e-teaching materials from the department, 57 (32.95%) of respondents of MZU accessing e-teaching materials from residence, (0.00) of respondents of MZU accessing e-teaching

materials from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-teaching materials from other places. While 6 (5.41%) of faculty members of BBAU accessing e-teaching materials from the library, followed by 79 (71.17%) of faculty members of BBAU accessing e-teaching materials from the department, 38 (34.23%) of faculty members of BBAU accessing e-teaching materials from residence, 1 (0.90%) of faculty members of BBAU accessing e-teaching materials from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-teaching materials from other places.

A total of 9 (5.2%) of respondents of MZU accessing e-patents, e-standards from the library, followed by 48 (27.75%) of faculty members of MZU accessing e-patents, e-standards from the department, 24 (13.87%) of respondents of MZU accessing e-patents, e-standards from residence, 1 (0.58%) of respondents of MZU accessing e-patents, e-standards from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-patents, e-standards from other places. While 7 (6.31%) of faculty members of BBAU accessing e-patents, e-standards from the library, followed by 36 (32.43%) of faculty members of BBAU accessing e-patents, e-standards from the department, 18 (16.22%) of faculty members of BBAU accessing e-patents, e-standards from residence, (0.00) of faculty members of BBAU accessing e-patents, e-standards from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-patents, e-standards from other places.

A total of 8 (4.62%) of respondents of MZU accessing e-tutorials from the library, followed by 118 (68.21%) of faculty members of MZU accessing e-tutorials from the department, 53 (30.64%) of respondents of MZU accessing e-tutorials from residence, 2 (1.16%) of respondents of MZU accessing e-tutorials from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-tutorials from other places. While 6 (5.41%) of faculty members of BBAU accessing e-tutorials from the library, followed by 71 (63.96%) of faculty members of BBAU accessing e-tutorials from the department, 32 (28.83%) of faculty members of BBAU accessing e-tutorials from residence, 1 (0.90%) of faculty members of BBAU accessing e-tutorials from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-tutorials from other places.

A total of 3 (1.73%) of respondents of MZU accessing e-databases from the library, followed by 81 (46.82%) of faculty members of MZU accessing e-databases from the department, 30 (17.34%) of respondents of MZU accessing e-databases from residence, 1 (0.58%) of respondents of MZU accessing e-databases from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-databases from other places. While 5 (4.50%) of faculty members of BBAU accessing e-databases from the library, followed by 51 (45.95%) of faculty members of BBAU accessing e-databases from the department, 23 (20.72%) of faculty members of BBAU accessing e-databases from residence, (0.00) of faculty members of BBAU accessing e-databases from the computer lab., and 1 (0.90%) respondents of BBAU accessing e-databases from other places.

A total of 21 (12.14%) of respondents of MZU accessing e-thesis and dissertations from the library, followed by 141 (81.50%) of faculty members of MZU accessing e-thesis and dissertations from the department, 51 (29.48%) of respondents of MZU accessing e-thesis and dissertations from residence, 1 (0.58%) of respondents of MZU accessing e-thesis and dissertations from the computer lab., and 1 (0.58%) of respondents of MZU accessing e-thesis and dissertations from other places. While 10 (9.01%) of faculty members of BBAU accessing e-thesis and dissertations from the library, followed by 75 (67.57%) of faculty members of BBAU accessing e-thesis and dissertations from the department, 34 (30.63%) of faculty members of BBAU accessing e-thesis and dissertations from residence, 1 (0.90%) of faculty members of BBAU accessing e-thesis and dissertations from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-thesis and dissertations from other places.

A total of 3 (1.73%) of respondents of MZU accessing subject gateways from the library, followed by 56 (32.37%) of faculty members of MZU accessing subject gateways from the department, 25 (14.45%) of respondents of MZU accessing subject gateways from residence, 1 (0.58%) of respondents of MZU accessing subject gateways from the computer lab., and 1 (0.58%) of respondents of MZU accessing subject gateways from other places. While 3 (2.70%) of faculty members of BBAU accessing subject gateways from the library, followed by 49 (44.14%) of faculty members of BBAU accessing subject gateways from the department, 28 (25.23%) of faculty members of BBAU accessing subject gateways from residence, (0.00) of

faculty members of BBAU accessing subject gateways from the computer lab., and 5 (4.50%) of respondents of BBAU accessing subject gateways from other places.

A total of 6 (3.47%) of respondents of MZU accessing Blogs, Wikis from the library, followed by 59 (34.10%) of faculty members of MZU accessing Blogs, Wikis from the department, 44 (25.43%) of respondents of MZU accessing Blogs, Wikis from residence, 1 (0.58%) of respondents of MZU accessing Blogs, Wikis from the computer lab., and 1 (0.58%) of respondents of MZU accessing Blogs, Wikis from other places. While 5 (4.50%) of faculty members of BBAU accessing Blogs, Wikis from the library, followed by 36 (32.43%) of faculty members of BBAU accessing Blogs, Wikis from the department, 28 (25.23%) of faculty members of BBAU accessing Blogs, Wikis from residence, (0) of faculty members of BBAU accessing Blogs, Wikis from the computer lab., and 1 (0.90%) of respondents of BBAU accessing Blogs, Wikis from other places.

A total of 10 (5.78%) of respondents of MZU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the library, followed by 104 (60.12%) of faculty members of MZU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the department, 57 (32.95%) of respondents of MZU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from residence, 2 (1.16%) of respondents of MZU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the computer lab., and (0) of respondents of MZU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from other places. While 3 (2.70%) of faculty members of BBAU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the library, followed by 71 (63.96%) of faculty members of BBAU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the department, 35 (31.53%) of faculty members of BBAU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from residence, 35 (31.53%) of faculty members of BBAU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the computer lab., and 1 (0.90%) of respondents of BBAU accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from other places.

A total of 8 (4.62%) of respondents of MZU accessing institution repository from the library, followed by 81 (46.82%) of faculty members of MZU accessing institution repository from the department, 35 (20.23%) of respondents of MZU accessing

institution repository from residence, 2 (1.16%) of respondents of MZU accessing institution repository from the computer lab., and 1 (0.58%) of respondents of MZU accessing institution repository from other places. While 6 (5.41%) of faculty members of BBAU accessing institution repository from the library, followed by 68 (61.26%) of faculty members of BBAU accessing institution repository from the department, 22 (19.82%) of faculty members of BBAU accessing institution repository from residence, 1 (0.90%) of faculty members of BBAU accessing institution repository from the computer lab., and 1 (0.90%) of respondents of BBAU accessing institution repository from other places.

A total (0.00) of respondents of MZU accessing other resources from the library, followed by 2 (1.16%) of faculty members of MZU accessing other resources from the department, (0.00) of respondents of MZU accessing other resources from residence, (0.00) of respondents of MZU accessing other resources from the computer lab., and (0.00) of respondents of MZU accessing other resources from other places. While (0.00) of faculty members of BBAU accessing other resources from the library, followed by 1 (0.90%) of faculty members of BBAU accessing other resources from the department, (0.00) of faculty members of BBAU accessing other resources from residence, (0.00) of faculty members of BBAU accessing other resources from the computer lab., and (0.00) of respondents of BBAU accessing other resources from other places.

Table- 4.16: Place of Accessing Various Types of E-Resources

Types of E-Resources	Universities									
	MZU (%)					BBAU (%)				
	Lib.	Dept.	Re si.	Co mp. Lab	Ot he r	Lib .	De pt.	Re si.	Co mp. Lab	Ot he r
E-Journals	18 (10.4)	153 (88.44)	72 (41.62)	3 (1.73)	1 (0.58)	14 (12.61)	102 (91.89)	46 (41.44)	1 (0.90)	1 (0.90)

E-Books	11 (6.36)	147 (84.97)	53 (30 .64)	4 (2.3 1)	1 (0. 58)	9 (8. 11)	89 (80. 18)	41 (36 .94)	1 (0.9 0)	1 (0. 90)
E-Technical Reports	3 (1.73)	74 (42.77)	38 (21 .97)	2 (1.1 6)	1 (0. 58)	3 (2. 7)	50 (45. 05)	24 (21 .62)	1 (0.9 0)	1 (0. 90)
E-Conference Proceedings	5 (2.89)	123 (71.1)	42 (24 .28)	2 (1.1 6)	1 (0. 58)	6 (5. 41)	76 (68. 47)	27 (24 .32)	1 (0.9 0)	1 (0. 90)
E-Drawings and Designs	2 (1.16)	43 (24.86)	29 (16 .76)	1 (0.5 8)	1 (0. 58)	2 (1. 8)	33 (29. 73)	20 (18 .02)	(0)	1 (0. 90)
E-Teaching Materials	5 (2.89)	139 (80.35)	57 (32 .95)	(0)	1 (0. 58)	6 (5. 41)	79 (71. 17)	38 (34 .23)	1 (0.9 0)	1 (0. 90)
E- Patents, E- Standards	9 (5.2)	48 (27.75)	24 (13 .87)	1 (0.5 8)	1 (0. 58)	7 (6. 31)	36 (32. 43)	18 (16 .22)	(0)	1 (0. 90)
E-Tutorials	8 (4.62)	118 (68.21)	53 (30 .64)	2 (1.1 6)	1 (0. 58)	6 (5. 41)	71 (63. 96)	32 (28 .83)	1 (0.9 0)	1 (0. 90)

E- Databases	3 (1.73)	81 (46.82)	30 (17.34)	1 (0.58)	1 (0.58)	5 (4.5)	51 (45.95)	23 (20.72)	(0)	1 (0.90)
E- Thesis and Dissertations	21 (12.14)	141 (81.5)	51 (29.48)	1 (0.58)	1 (0.58)	10 (9.01)	75 (67.57)	34 (30.63)	1 (0.90)	1 (0.90)
Subject Gateways	3 (1.73)	56 (32.37)	25 (14.45)	1 (0.58)	1 (0.58)	3 (2.7)	49 (44.14)	28 (25.23)	(0)	5 (4.50)
Blogs, Wikis	6 (3.47)	59 (34.1)	44 (25.43)	1 (0.58)	1 (0.58)	5 (4.5)	36 (32.43)	28 (25.23)	(0)	1 (0.90)
E- Reference resources (Dictionaries, encyclopedias, etc.)	10 (5.78)	104 (60.12)	57 (32.95)	2 (1.16)	(0)	3 (2.7)	71 (63.96)	35 (31.53)	1 (0.90)	1 (0.90)
Institution Repository (IR)	8 (4.62)	81 (46.82)	35 (20.23)	2 (1.16)	1 (0.58)	6 (5.41)	68 (61.26)	22 (19.82)	1 (0.90)	1 (0.90)
Any other	(0)	2 (1.16)	(0)	(0)	(0)	(0)	1 (0.9)	(0)	(0)	(0)
<i>Lib.= Library, Dept.= Department, Resi.= Residence, Comp. Lab=Computer Lab</i>										

Note: Figures in parenthesis indicate percentages

4.19 AWARENESS AND USE OF E-RESOURCES AND SERVICES OF E-SHODHSINDHU BASED DATABASE/ RESOURCES

The E-ShodhSindhu consortium provides various types of information resources and services to the user community. The information resources used by the faculty members of both the university have been summarized in table 4.17. It found that the majority of 173 (60.92%) of faculty members of both universities are aware and use Springer Link, followed by 167 (58.50%) of faculty members of both universities are aware and use JSTORE, 160 (56.34%) of faculty members of both universities are aware and use Taylor and Francis, 124 (43.66%) of faculty members of both universities are aware and use Scopus, 107 (37.68%) of faculty members of both universities are aware and use Elsevier's Science Direct, 99 (34.86%) of faculty members of both universities are aware and use Web of Science, 75 (26.41%) of faculty members of both universities are aware and use Oxford University Press, 74 (26.06%) of faculty members of both universities are aware and use Emerald Insight Full Text, 70 (24.65%) of faculty members of both universities are aware and use Nature, 55 (19.37%) of faculty members of both universities are aware and use Annual Reviews, 50 (17.61%) of faculty members of both universities are aware and use IEEE/ IEE Electronic Library Online, 37 (13.03%) of faculty members of both universities are aware and use Web of Science Lease Access, 31 (10.92%) of faculty members of both universities are aware and use ProQuest Science, 27 (9.51%) of faculty members of both universities are aware and use Indian Standards, 26 (9.15%) of faculty members of both universities are aware and use American Chemical Society, 26 (9.15%) of faculty members of both universities are aware and use J-Gate Consortia, 23 (8.1%) of faculty members of both universities are aware and use ACM Digital Library, 22 (7.75%) of faculty members of both universities are aware and use Institute for Studies in Industrial Development (ISID) Database, 20 (7.04%) of faculty members of both universities are aware and use Project Muse, 20 (7.04%) of faculty members of both universities are aware and use ciFinderScholar, 18 (6.34%) of faculty members of both universities are aware and use ASME Journals Online, 14 (4.93%) of faculty members of both universities are aware and use I-Scholar, 13 (4.58%) of faculty members of both universities are aware and use ASTM Standards, 12 (4.23%) of faculty members of both universities are aware and use American Physical Society, 12 (4.23%) of faculty members of both universities are aware and use ASCE Journals, 11

(3.87%) of faculty members of both universities are aware and use Manupatra, 8 (2.82%) of faculty members of both universities are aware and use other resources, 7 (2.46%) of faculty members of both universities are aware and use Asian CERC Insight, 6 (2.11%) of faculty members of both universities are aware and use Institute of Physics, 6 (2.11%) of faculty members of both universities are aware and use COMPENDEX on Ei Village, 5 (1.76%) of faculty members of both universities are aware and use INSPEC or Ei Village, 4 (1.41%) of faculty members of both universities are aware and use ABI/INFORM Complete, 4 (1.41%) of faculty members of both universities are aware and use EBSCO's Business Sources Premiers, 4 (1.41%) of faculty members of both universities are aware and use MathsSciNet, 3 (1.06%) of faculty members of both universities are aware and use ACCESS Engineering, 3 (1.06%) of faculty members of both universities are aware and use Euromonitor GMID, and 1 (0.35%) of faculty members of both universities are aware and use CRIS INFAC Ind. Information.

Table- 4.17: Awareness and Use of E-Resources and Services of E-ShodhSindhu Based Database/ Resources

Sl. No.	Full-Text Resources	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
i.	ABI/INFORM Complete	3 (1.73)	1 (0.9)	4 (1.41)
ii.	ACM Digital Library	12 (6.94)	11 (9.91)	23 (8.1)
iii.	ACCESS Engineering	2 (1.16)	1 (0.9)	3 (1.06)
iv.	American Chemical Society	14 (8.09)	12 (10.81)	26 (9.15)
v.	Institute of Physics	4 (2.31)	2 (1.8)	6 (2.11)

vi.	American Physical Society	7 (4.05)	5 (4.5)	12 (4.23)
vii.	ASME Journals Online	11 (6.36)	7 (6.31)	18 (6.34)
viii.	ASCE Journals	7 (4.05)	5 (4.5)	12 (4.23)
ix.	Annual Reviews	28 (16.18)	27 (24.32)	55 (19.37)
x.	CRIS INFAC Ind. Information	0 (0)	1 (0.9)	1 (0.35)
xi.	EBSCO's Business Sources Premiers	1 (0.58)	3 (2.7)	4 (1.41)
xii.	Elsevier's Science Direct	65 (37.57)	42 (37.84)	107 (37.68)
xiii.	Emerald Insight Full Text	60 (34.68)	14 (12.61)	74 (26.06)
xiv.	Euromonitor GMID	2 (1.16)	1 (0.9)	3 (1.06)
xv.	IEEE/ IEE Electronic Library Online	29 (16.76)	21 (18.92)	50 (17.61)
xvi.	Indian Standards	17 (9.83)	10 (9.01)	27 (9.51)
xvii.	Asian CERC Insight	4 (2.31)	3 (2.7)	7 (2.46)
xviii.	Nature	40 (23.12)	30 (27.03)	70 (24.65)
xix.	ProQuest Science	17 (9.83)	14 (12.61)	31 (10.92)

xx.	Springer Links	104 (60.12)	69 (62.16)	173 (60.92)
xxi.	ASTM Standards	8 (4.62)	5 (4.5)	13 (4.58)
xxii.	JSTORE	80 (46.24)	87 (78.38)	167 (58.8)
xxiii.	Oxford University Press	47 (27.17)	28 (25.23)	75 (26.41)
xxiv.	Project Muse	12 (6.94)	8 (7.21)	20 (7.04)
xxv.	Taylor and Francis	97 (56.07)	63 (56.76)	160 (56.34)
Database				
xxvi.	COMPENDEX on Ei Village	3 (1.73)	3 (2.7)	6 (2.11)
xxvii.	INSPEC or Ei Village	3 (1.73)	2 (1.8)	5 (1.76)
xxviii.	J-Gate Consortia	14 (8.09)	12 (10.81)	26 (9.15)
xxix.	MathsSciNet	2 (1.16)	2 (1.8)	4 (1.41)
xxx.	SciFinderScholar	12 (6.94)	8 (7.21)	20 (7.04)
xxxi.	Web of Science	62 (35.84)	37 (33.33)	99 (34.86)
xxxii.	Scopus	76 (43.93)	48 (43.24)	124 (43.66)

xxxiii.	Web of Science Lease Access	24 (13.87)	13 (11.71)	37 (13.03)
xxxiv.	Institute for Studies in Industrial Development (ISID) Database	13 (7.51)	9 (8.11)	22 (7.75)
Other				
xxxv.	I-Scholar	0 (0)	14 (12.61)	14 (4.93)
xxxvi.	Manupatra	0 (0)	11 (9.91)	11 (3.87)
xxxvii	Other	5 (2.89)	3 (2.7)	8 (2.82)

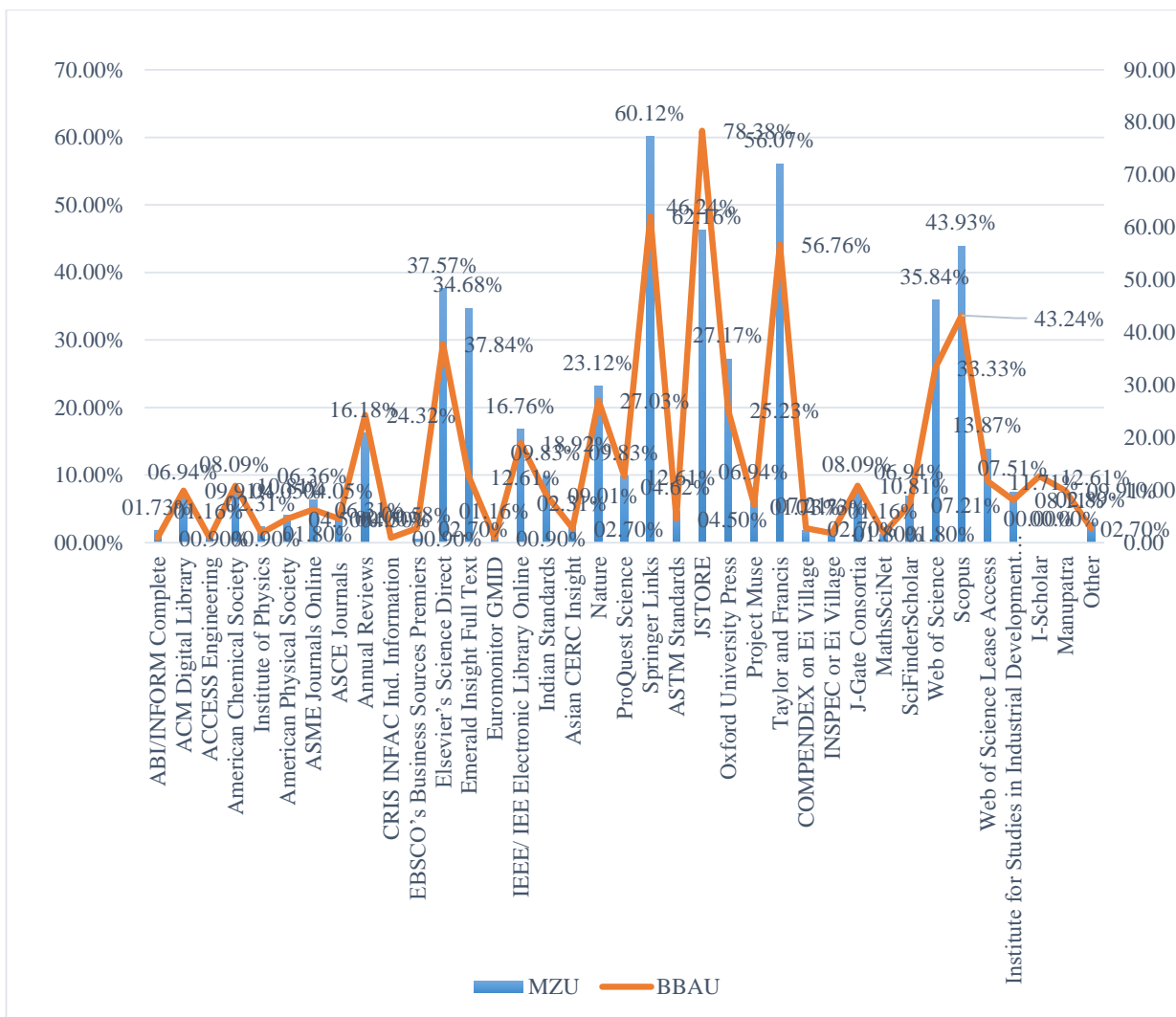


Figure-4.13: Awareness and Use of E-Resources and Services of E-Shodhsindhu Based Database/ Resources

The above table 4.17 and figure 4.13 depict the university-wise break up of both the university i.e. Mizoram University and Babasaheb Bhimrao Ambedkar University. It found that the majority of 104 (60.12%) of faculty members of MZU are aware and use Springer Link, followed by 97 (56.07%) of faculty members of MZU are aware and use Taylor and Francis, 80 (46.24%) of faculty members of MZU are aware and use JSTORE, 76 (43.93%) of faculty members of MZU are aware and use Scopus, 65 (37.57%) of faculty members of MZU are aware and use Elsevier's Science Direct, 62 (35.84%) of faculty members of MZU are aware and use Web of Science, 60 (34.68%) of faculty members of MZU are aware and use Emerald Insight Full Text, 47 (27.17%) of faculty members of MZU are aware and use Oxford University Press, 40 (23.12%) of faculty members of MZU are aware and use Nature, 29 (16.76%) of faculty

members of MZU are aware and use IEEE/ IEE Electronic Library Online, 28 (16.18%) of faculty members of MZU are aware and use Annual Reviews, 24 (13.87%) of faculty members of MZU are aware and use Web of Science Lease Access, 17 (9.83%) of faculty members of MZU are aware and use ProQuest Science, 17 (9.83%) of faculty members of MZU are aware and use Indian Standards, 14 (8.09%) of faculty members of MZU are aware and use American Chemical Society, 14 (8.09%) of faculty members of MZU are aware and use J-Gate Consortia, 13 (7.51%) of faculty members of MZU are aware and use Institute for Studies in Industrial Development (ISID) Database, 12 (6.94%) of faculty members of MZU are aware and use ACM Digital Library, 12 (6.94%) of faculty members of MZU are aware and use Project Muse, 12 (6.94%) of faculty members of MZU are aware and use ciFinderScholar11 (6.36%) of faculty members of MZU are aware and use ASME Journals Online, 8 (4.62%) of faculty members of MZU are aware and use ASTM Standards, 7 (4.05%) of faculty members of MZU are aware and use American Physical Society, 7 (4.05%) of faculty members of MZU are aware and use ASCE Journals, 5 (2.89%) of faculty members of MZU are aware and use other resources, 4 (2.31%) of faculty members of MZU are aware and use Asian CERC Insight, 4 (2.31%) of faculty members of MZU are aware and use Institute of Physics, 3 (1.73%) of faculty members of MZU are aware and use COMPENDEX on Ei Village, 3 (1.73%) of faculty members of MZU are aware and use INSPEC or Ei Village, 3 (1.73%) of faculty members of MZU are aware and use ABI/INFORM Complete, 2 (1.16%) of faculty members of MZU are aware and use MathsSciNet, 2 (1.16%) of faculty members of MZU are aware and use ACCESS Engineering, 2 (1.16%) of faculty members of MZU are aware and use Euromonitor GMID, and 1 (0.58%) of faculty members of MZU are aware and use EBSCO's Business Sources Premiers.

While 87 (78.38%) of faculty members of BBAU are aware and use JSTORE, followed by 69 (62.16%) of faculty members of BBAU are aware and use Springer Link, 63 (56.76%) of faculty members of BBAU are aware and use Taylor and Francis, 48 (43.24%) of faculty members of BBAU are aware and use Scopus, 42 (37.84%) of faculty members of BBAU are aware and use Elsevier's Science Direct, 37 (33.33%) of faculty members of BBAU are aware and use Web of Science, 30 (27.03%) of faculty members of BBAU are aware and use Nature, 28 (25.23%) of faculty members of BBAU are aware and use Oxford University Press, 27 (24.32%) of faculty members of BBAU are aware and use Annual Reviews, 21 (18.92%) of faculty members of

BBAU are aware and use IEEE/ IEE Electronic Library Online, 14 (12.61%) of faculty members of BBAU are aware and use Emerald Insight Full Text, 14 (12.61%) of faculty members of BBAU are aware and use ProQuest Science, 14 (12.61%) of faculty members of BBAU are aware and use I-Scholar, 13 (11.71%) of faculty members of BBAU are aware and use Web of Science Lease Access, 12 (10.81%) of faculty members of BBAU are aware and use American Chemical Society, 12 (10.81%) of faculty members of BBAU are aware and use J-Gate Consortia, 12 (10.81%) of faculty members of BBAU are aware and use ACM Digital Library, 12 (10.81%) of faculty members of BBAU are aware and use Manupatra, 10 (9.01%) of faculty members of BBAU are aware and use Indian Standards, 9 (8.11%) of faculty members of BBAU are aware and use Institute for Studies in Industrial Development (ISID) Database, 8 (7.21%) of faculty members of BBAU are aware and use Project Muse, 8 (7.21%) of faculty members of BBAU are aware and use ciFinderScholar, 7 (6.31%) of faculty members of BBAU are aware and use ASME Journals Online, 5 (4.5%) of faculty members of BBAU are aware and use ASTM Standards, 5 (4.5%) of faculty members of BBAU are aware and use American Physical Society, 5 (4.5%) of faculty members of BBAU are aware and use ASCE Journals, 3 (2.7%) of faculty members of BBAU are aware and use other resources, 3 (2.7%) of faculty members of BBAU are aware and use Asian CERC Insight, 3 (2.7%) of faculty members of BBAU are aware and use COMPENDEX on Ei Village, 3 (2.7%) of faculty members of BBAU are aware and use EBSCO's Business Sources Premiers, 2 (1.8%) of faculty members of BBAU are aware and use Institute of Physics, 2 (1.8%) of faculty members of BBAU are aware and use INSPEC or Ei Village, 2 (1.8%) of faculty members of BBAU are aware and use MathsSciNet, 1 (0.9%) of faculty members of BBAU are aware and use ABI/INFORM Complete, 1 (0.9%) of faculty members of BBAU are aware and use ACCESS Engineering, 1 (0.9%) of faculty members of BBAU are aware and use Euromonitor GMID, and 1 (0.9%) of faculty members of BBAU are aware and use CRIS INFAC Ind. Information.

4.20 SOURCE OF AWARENESS ABOUT THE USE OF E-RESOURCES

Table 4.18 shows the ways and means through which the faculty members of both universities become aware of sources of e-resources. From the observation of the table it is clear that maximum 181 (63.73%) of respondents of both universities become aware and use of e-resources by personal communication with friends, subject experts

and resource persons, followed by 179 (63.03%) of faculty members of both universities become aware and use of e-resources by cited in report/ journals/ conference papers, 163 (57.39%) of faculty members of both universities become aware and use of e-resources by bibliographical database searching (Indexing and Abstracting databases), 146 (51.41%) of respondents of both universities become aware and use of e-resources by e-mail alerts from publishers/ distributors etc., 123 (43.31%) of respondents of both universities become aware and use of e-resources by chance, by browsing or looking for materials, 113 (39.79%) of respondents of both universities become aware and use of e-resources by announcements in journals, 59 (20.77%) of respondents of both universities become aware and use of e-resources referred by the librarian, and 8 (2.82%) of faculty members of both universities become aware and use of e-resources by other ways.

Table- 4.18: Source of Awareness about the Use of E-Resources

Sl. No.	Awareness Factor	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	By personal communication with friends, subject experts, and resource persons	109 (63.01)	72 (64.86)	181 (63.73)
b.	Cited in report/ journals/conference papers	108 (62.43)	71 (63.96)	179 (63.03)
c.	Bibliographical Database Searching (Indexing and Abstracting Databases)	100 (57.8)	63 (56.76)	163 (57.39)
d.	E-mail alerts from publishers/distributors etc.	90 (52.02)	56 (50.45)	146 (51.41)
e.	By chance, by browsing or looking for materials	75 (43.35)	48 (43.24)	123 (43.31)
f.	Announcements in Journals	70 (40.46)	43 (38.74)	113 (39.79)

g.	Referred by the librarian	35 (20.23)	24 (21.62)	59 (20.77)
h.	Any other	5 (2.89)	3 (2.7)	8 (2.82)

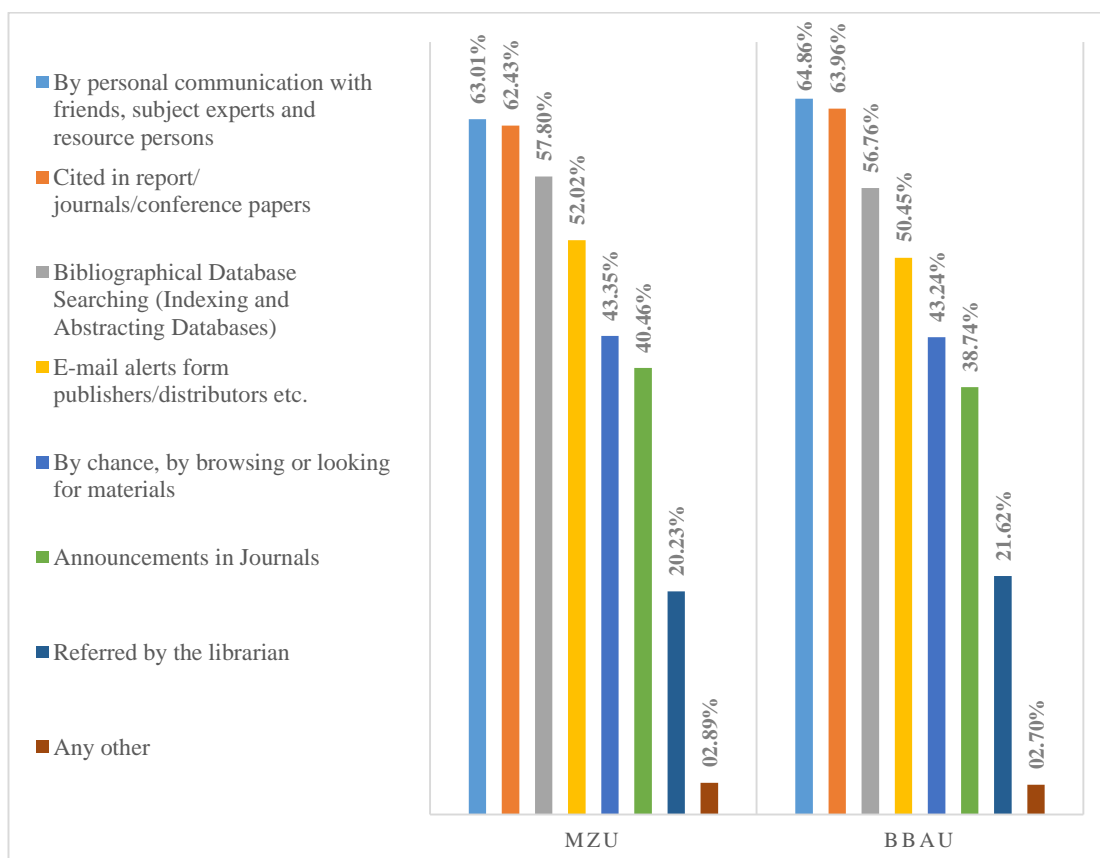


Figure-4.14: Source of Awareness about the Use of E-Resources

The above table 4.18 and figure 4.14 also depict university-wise break up of source of awareness and use of e-resources by the faculty members of both the university. From the table and figure it found that the maximum of 109 (63.01%) of respondents of MZU become aware and use e-resources by personal communication with friends, subject experts, and resource persons, followed by 108 (62.43%) of faculty members of MZU become aware and use of e-resources by cited in report/ journals/ conference papers, 100 (57.80%) of faculty members of MZU become aware and use of e-resources by bibliographical database searching (Indexing and Abstracting databases), 90 (52.02%) of respondents of MZU become aware and use of e-resources by e-mail alerts from publishers/ distributors, etc., 75 (43.35%) of respondents of MZU become aware and use of e-resources by chance, by browsing or looking for materials, 70

(40.46%) of respondents of MZU become aware and use of e-resources by announcements in journals, 35 (20.23%) of respondents of MZU become aware and use of e-resources referred by the librarian, and 5 (2.89%) of faculty members of MZU become aware and use of e-resources by other ways.

While, the maximum 72 (64.86%) of respondents of BBAU become aware and use of e-resources by personal communication with friends, subject experts, and resource persons, followed by 71 (63.96%) of faculty members of BBAU become aware and use of e-resources by cited in report/ journals/ conference papers, 63 (56.76%) of faculty members of BBAU become aware and use of e-resources by bibliographical database searching (Indexing and Abstracting databases), 56 (50.45%) of respondents of BBAU become aware and use of e-resources by e-mail alerts from publishers/ distributors, etc., 48 (43.24%) of respondents of BBAU become aware and use of e-resources by chance, by browsing or looking for materials, 43 (38.74%) of respondents of BBAU become aware and use of e-resources by announcements in journals, 24 (21.62%) of respondents of BBAU become aware and use of e-resources referred by the librarian, and 3 (2.70%) of faculty members of BBAU become aware and use of e-resources by other ways.

4.21 LEARN TO USE E-RESOURCES

Table 4.19 and figure 4.15 depict that how to learn to use e-resources by the respondents of both the university i.e. Mizoram University and Babasaheb Bhimrao Ambedkar University. The study reveals that the majority 259 (91.20%) of respondents of both universities learn to use e-resources by self-learning, followed by 130 (45.77%) of faculty members of both universities learn to use e-resources by attending courses, training, workshops, and seminars, 113 (39.79%) of faculty members of both universities learn to use of e-resources by guidance from other colleagues, 85 (29.93%) of faculty members of both universities learn to use of e-resources by trial and error method, 48 (16.90%) of faculty members of both universities learn to use of e-resources by guidance from computing staff/ technicians, 26 (9.15%) of faculty members of both universities learn to use of e-resources by guidance from library staff, and 7 (2.46%) of faculty members of both universities learn to use of e-resources by other sources.

Table- 4.19: Learn to Use E-Resources

Sl. No.	Learn to use e-resources	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Trial and error	52 (30.06)	33 (29.73)	85 (29.93)
b.	Self-learning	159 (91.91)	100 (90.09)	259 (91.2)
c.	Guidance from other colleagues	72 (41.62)	41 (36.94)	113 (39.79)
d.	Guidance from library staff	14 (8.09)	12 (10.81)	26 (9.15)
e.	Attending courses, training, workshops, and seminars	78 (45.09)	52 (46.85)	130 (45.77)
f.	Guidance from computing staff/Technicians	27 (15.61)	21 (18.92)	48 (16.9)
g.	Any other	4 (2.31)	3 (2.7)	7 (2.46)

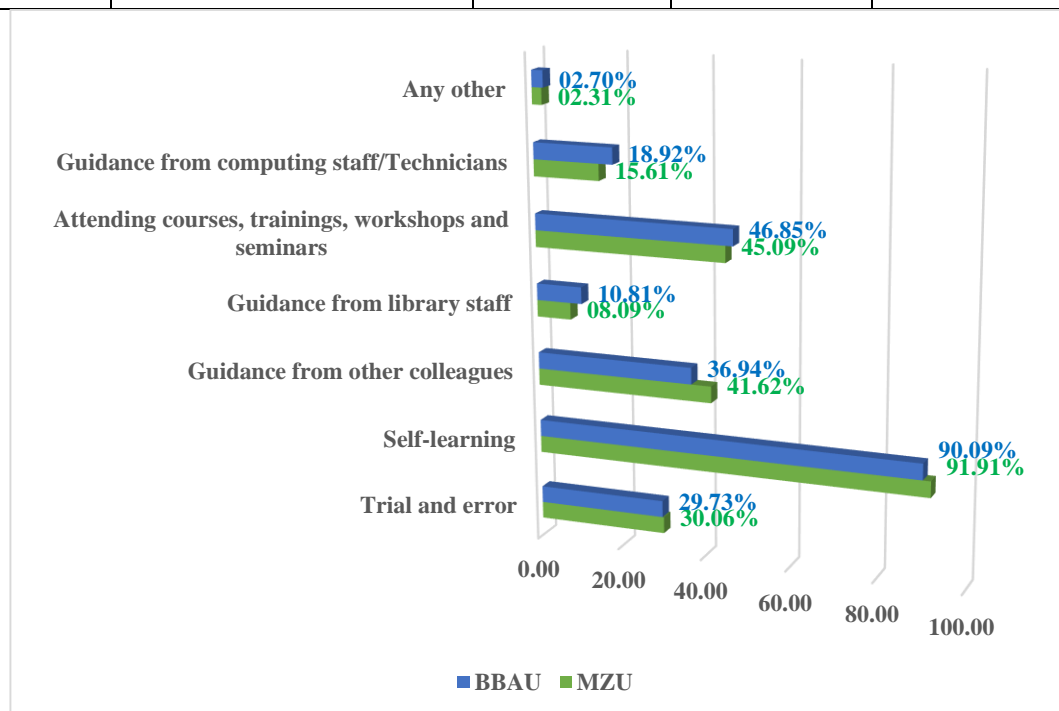


Figure-4.15: Learn to Use E-Resources

The above table 4.19 and figure 4.15 also depict university-wise break up of learning to use of e-resources by faculty members of both the university. From the table and figure it found that a maximum of 159 (91.91%) of respondents of MZU learn to use e-resources by self-learning, followed by 78 (45.09%) of faculty members of MZU learn to use e-resources by attending courses, training, workshops, and seminars, 72 (41.62%) of faculty members of MZU learn to use of e-resources by guidance from other colleagues, 52 (30.06%) of faculty members of MZU learn to use of e-resources by trial and error method, 27 (15.61%) of faculty members of MZU learn to use of e-resources by guidance from computing staff/ technicians, 14 (8.09%) of faculty members of MZU learn to use of e-resources by guidance from library staff, and 4 (2.31%) of faculty members of MZU learn to use of e-resources by other sources.

While maximum of 100 (90.09%) of respondents of BBAU learn to use e-resources by self-learning, followed by 52 (46.85%) of faculty members of BBAU learn to use e-resources by attending courses, training, workshops, and seminars, 41 (36.94%) of faculty members of BBAU learn to use of e-resources by guidance from other colleagues, 33 (29.73%) of faculty members of BBAU learn to use of e-resources by trial and error method, 21 (18.92%) of faculty members of BBAU learn to use of e-resources by guidance from computing staff/ technicians, 12 (10.81%) of faculty members of BBAU learn to use of e-resources by guidance from library staff, and 3 (2.70%) of faculty members of BBAU learn to use of e-resources by other sources.

4.22 EXPERIENCE OF USE OF E-RESOURCES

Table 4.20 summarized the about experience of the use of e-resources by the faculty members of both universities. It is observed that 124 (43.66%) of faculty members of both the university have experience in using e-resources above 10 years, followed by 56 (19.72%) of faculty members of both universities have experience in using e-resources between 5-7 years, 54 (19.01%) of faculty members of both universities have experience in using e-resources between 8-10 years, 38 (13.38%) of faculty members of both universities have experience in using e-resources between 2-4 years, and 12 (4.23%) of faculty members of both universities have experience in using e-resources less than one year.

Table- 4.20: Experience of Use of E-Resources

Sl. No.	Frequency	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Less than 1 years	8 (4.62)	4 (3.6)	12 (4.23)
b.	Between 2- 4 years	24 (13.87)	14 (12.61)	38 (13.38)
c.	Between 5- 7 years	35 (20.23)	21 (18.92)	56 (19.72)
d.	Between 8-10 years	32 (18.5)	22 (19.82)	54 (19.01)
e.	Above 10 years	74 (42.77)	50 (45.05)	124 (43.66)
Total		173 (100.00)	111 (100.00)	284 (100.00)

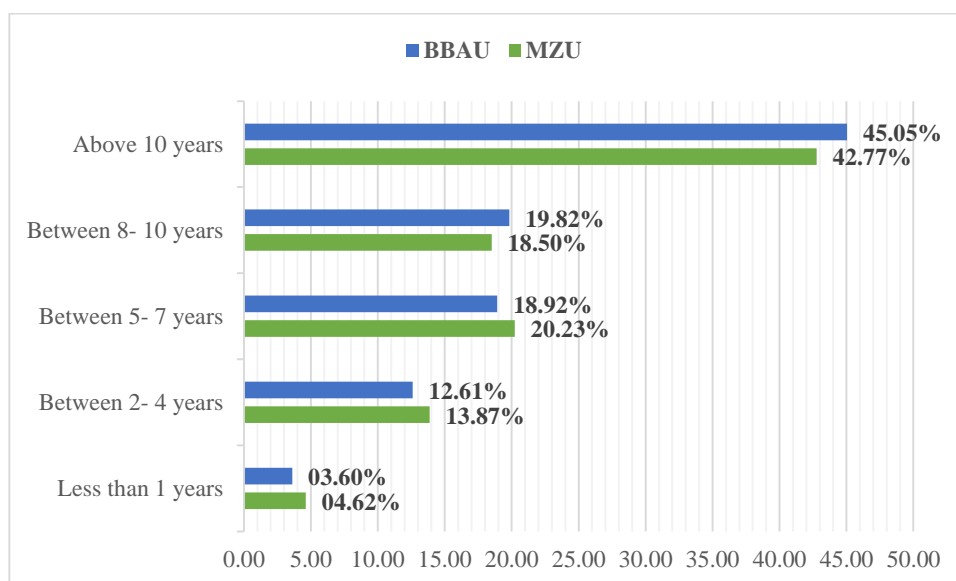


Figure-4.16: Experience of Use of E-Resources

The above table 4.20 and figure 4.16 also depicts university-wise break up of experience in using e-resources by faculty members of both universities. From the table and figure it is found that 74 (42.77%) of faculty members of MZU have experience in using e-resources above 10 years, followed by 35 (20.23%) of faculty members of MZU who have experience in using e-resources between 5-7 years, 32 (18.50%) of faculty members of MZU have experience in using e-resources between 8-10 years, 24 (13.87%) of faculty members of MZU have experience in using e-resources between 2-4 years, and 8 (4.62%) of faculty members of MZU have experience in using e-resources less than one year.

While, 50 (45.05%) of faculty members of BBAU have experience in using e-resources above 10 years, followed by 22 (19.82%) of faculty members of BBAU have experience in using e-resources between 8-10 years, 21 (18.92%) of faculty members of BBAU have experience in using e-resources between 5-7 years, 14 (12.61%) of faculty members of BBAU have experience in using e-resources between 2-4 years, and 4 (3.60%) of faculty members of BBAU have experience in using e-resources less than one year.

4.23 PURPOSE OF USE OF E-RESOURCES

The table 4.21 and figure 4.17 has been summarized for purpose of use of e-resources by the faculty member of both universities. It is found that 268 (94.37%) of faculty members of both universities use e-resources for reading/ writing research papers, followed by 241 (84.46%) of faculty members of both universities use e-resources for reading/ writing research proposal, reports and projects, 233 (82.04%) of faculty members of both universities use e-resources for preparing/ accessing teaching materials, 212 (74.65%) of faculty members of both universities use e-resources for preparation for seminars, conference and workshop, 182 (64.08%) of faculty members of both universities use e-resources for curriculum design, 160 (56.34%) of faculty members of both universities use e-resources for basic scientific and technical information, 149 (52.46%) of faculty members of both universities use e-resources for collecting general information, 130 (45.77%) of faculty members of both universities use e-resources to access audio/ visual materials, 74 (26.06%) of faculty members of both universities use e-resources for drawings, designs, graphs and patents, and 2 (0.70%) of faculty members of both universities use e-resources for other purpose.

Table- 4.21: Purpose of Use of E-Resources

Sl. No.	Purpose	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Reading/ Writing research papers	164 (94.8)	104 (93.69)	268 (94.37)
b.	Reading/ Writing research proposal, reports and projects	148 (85.55)	93 (83.78)	241 (84.86)
c.	Preparing/ accessing teaching materials	142 (82.08)	91 (81.98)	233 (82.04)
d.	For drawings, designs, graphs and patents	42 (24.28)	32 (28.83)	74 (26.06)
e.	Curriculum design	109 (63.01)	73 (65.77)	182 (64.08)
f.	Preparation for Seminars, conference and workshop	131 (75.72)	81 (72.97)	212 (74.65)
g.	For basic scientific and technical information	95 (54.91)	65 (58.56)	160 (56.34)
h.	For collecting general information	90 (52.02)	59 (53.15)	149 (52.46)
i.	To access audio/ visual materials	74 (42.77)	56 (50.45)	130 (45.77)
j.	Any other	1 (0.58)	1 (0.9)	2 (0.7)

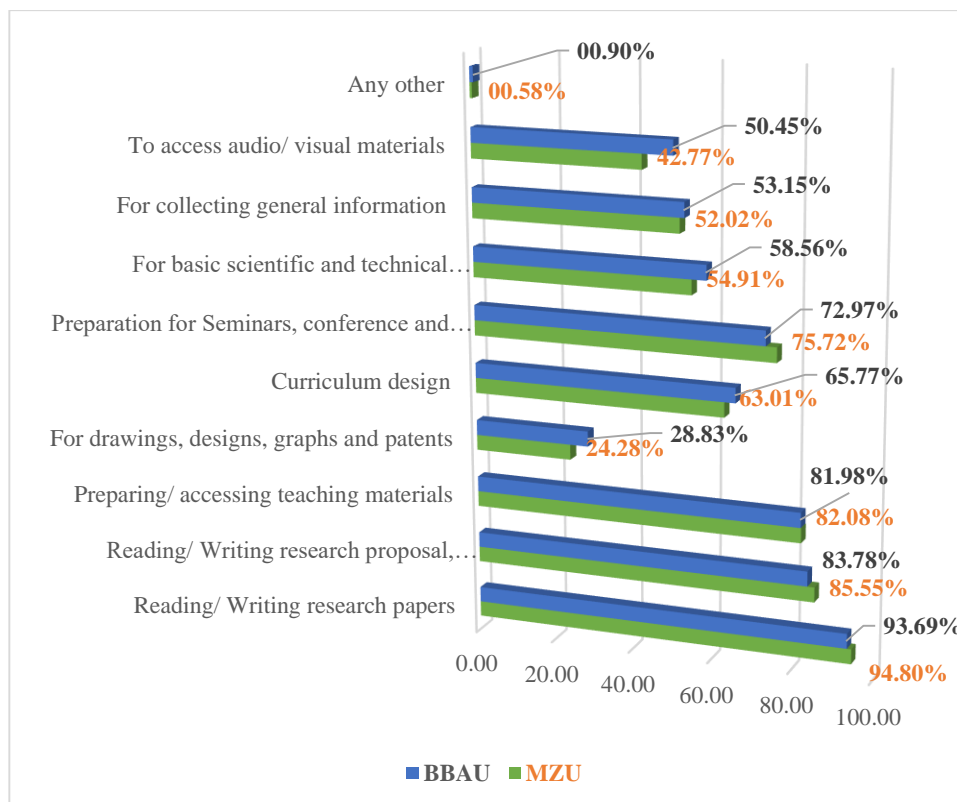


Figure-4.17: Purpose of Use of E-Resources

The above table 4.21 and figure 4.17 also depict a university-wide breakup of the purpose of using e-resources by faculty members of both universities. It is identified that 164 (94.8%) of faculty members of MZU use e-resources for reading/ writing research papers, followed by 148 (85.55%) of faculty members of MZU use e-resources for reading/ writing research proposals, reports, and projects, 142 (82.08%) of faculty members of MZU use e-resources for preparing/ accessing teaching materials, 131 (75.72%) of faculty members of MZU use e-resources for preparation for seminars, conference and workshop, 109 (63.01%) of faculty members of MZU use e-resources for curriculum design, 95 (54.91%) of faculty members of MZU use e-resources for basic scientific and technical information, 90 (52.02%) of faculty members of MZU use e-resources for collecting general information, 74 (42.77%) of faculty members of MZU use e-resources to access audio/ visual materials, 42 (24.28%) of faculty members of MZU use e-resources for drawings, designs, graphs and patents, and only 1 (0.58%) of faculty members of MZU use e-resources for other purposes.

While, 104 (93.69%) of faculty members of BBAU use e-resources for reading/ writing research papers, followed by 93 (83.78%) of faculty members of BBAU use

e-resources for reading/ writing research proposals, reports, and projects, 91 (81.98%) of faculty members of BBAU use e-resources for preparing/ accessing teaching materials, 81 (72.97%) of faculty members of BBAU use e-resources for preparation for seminars, conference and workshop, 73 (65.77%) of faculty members of BBAU use e-resources for curriculum design, 65 (58.56%) of faculty members of BBAU use e-resources for basic scientific and technical information, 59 (53.15%) of faculty members of BBAU use e-resources for collecting general information, 56 (50.45%) of faculty members of BBAU use e-resources to access audio/ visual materials, 32 (28.83%) of faculty members of BBAU use e-resources for drawings, designs, graphs and patents, and only 1 (0.90%) of faculty members of BBAU use e-resources for other purposes.

4.24 BENEFITS OF THE USE OF E-RESOURCES

Table 4.22 and figure 4.18 has been summarized for the benefits of using e-resources by the faculty member of both universities. It is found that 233 (82.04%) of faculty members of both universities using e-resources for access to up-to-date information, followed by 228 (80.28 %) of faculty members of both universities using e-resources for time-saving, 214 (75.35%) of faculty members of both universities using e-resources for a better source of information, 208 (73.24%) of faculty members of both universities using e-resources for improvement in the quality of professional work, 202 (71.13%) of faculty members of both universities using e-resources for 24×7 access, 189 (66.55%) of faculty members of both universities using e-resources for easy portability, 156 (54.93%) of faculty members of both universities using e-resources for information available in various formats as per the need, and 9 (3.17%) of faculty members of both universities using e-resources for other benefits.

Table- 4.22: Benefits of the Use of E-Resources

Sl. No.	Benefits	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Time saving	139 (80.35)	89 (80.18)	228 (80.28)
b.	Better source of information	133 (76.88)	81 (72.97)	214 (75.35)
c.	Access to up-to-date information	143 (82.66)	90 (81.08)	233 (82.04)
d.	Improvement in the quality of professional work	129 (74.57)	79 (71.17)	208 (73.24)
e.	Information available in various formats as per the need.	94 (54.34)	62 (55.86)	156 (54.93)
f.	Easy portability of e-resources	113 (65.32)	76 (68.47)	189 (66.55)
g.	24×7 access to e-resources	121 (69.94)	81 (72.97)	202 (71.13)
h.	Any other	5 (2.89)	4 (3.6)	9 (3.17)

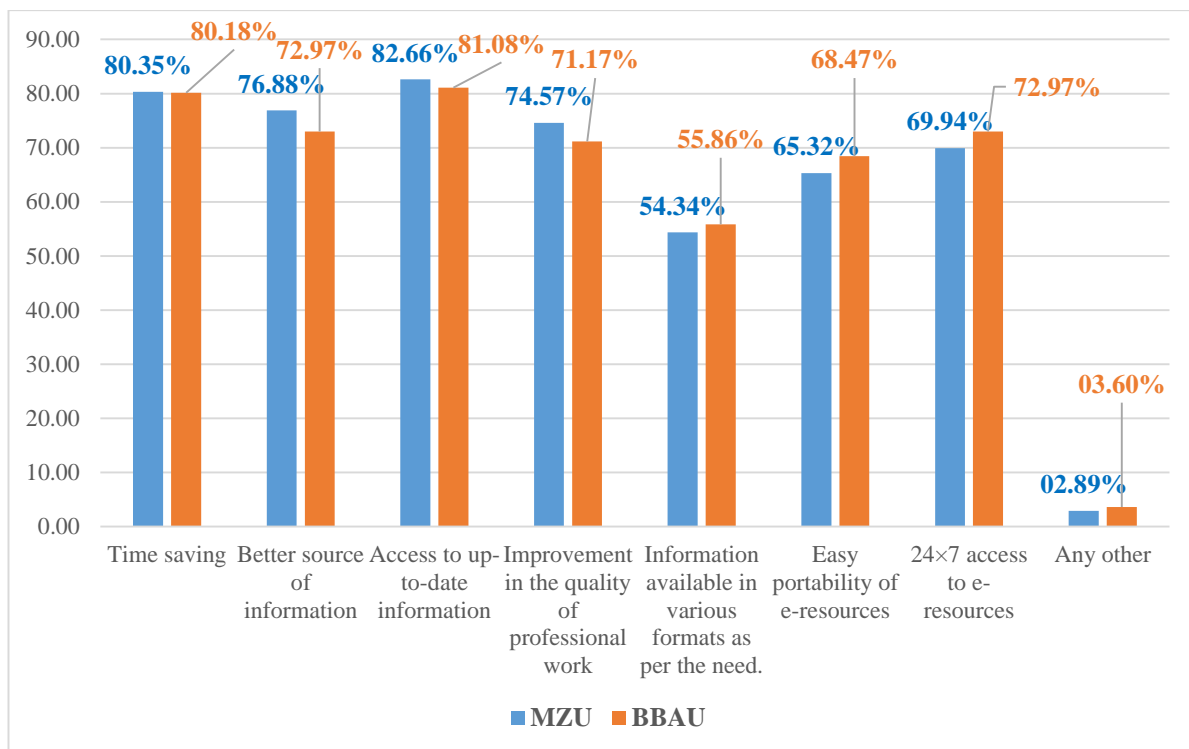


Figure-4.18: Benefits of the Use of E-Resources

The above table 4.22 and figure 4.18 also depict university-wise break up of benefits of using e-resources by faculty members of both universities. It is identified that 143 (82.66%) of faculty members of MZU are benefited from using e-resources for access to up-to-date information, followed by 139 (80.35%) of faculty members of MZU are benefited from using e-resources for time-saving, 133 (76.88%) of faculty members of MZU are benefited using e-resources for a better source of information, 129 (74.57%) of faculty members of MZU are benefited using e-resources for improvement in the quality of professional work, 121 (69.94%) of faculty members of MZU are benefited using e-resources for 24x7 access, 113 (65.32%) of faculty members of MZU are benefited using e-resources for easy portability, 94 (54.34%) of faculty members of MZU are benefited using e-resources for information available in various formats as per the need, and 5 (2.89%) of faculty members of MZU are using e-resources for other benefits.

While, 90 (81.08%) of faculty members of BBAU are benefited from using e-resources for access to up-to-date information, followed by 89 (80.18%) of faculty members of BBAU are benefited from using e-resources for time-saving, 81 (72.97%) of faculty members of BBAU are benefited from using e-resources for a better source of information, 81 (72.97%) of faculty members of BBAU are benefited using e-

resources for 24×7 access, 79 (71.17%) of faculty members of BBAU are benefited using e-resources for improvement in the quality of professional work, 76 (68.47%) of faculty members of BBAU are benefited using e-resources for easy portability, 62 (55.86%) of faculty members of BBAU are benefited using e-resources for information available in various formats as per the need, and 4 (3.60%) of faculty members of BBAU are benefited using e-resources for other benefits.

4.25 OPINION ABOUT THE PROBLEM FACED WHILE USING/ ACCESSING E-RESOURCES

Table 4.23 shows that the opinion about the problem faced while accessing e-resources by the faculty members of both universities. Out of 284 faculty members' 186 (65.49%) of respondents of both universities faced problems while using/ accessing e-resources and 98 (34.51%) of respondents of both universities did not face any problem while using/ accessing e-resources.

Table- 4.23: Problem Faced While Using E-Resources

Opinion	Universities		Total (%) <i>N= 284</i>
	MZU (%) <i>N= 173</i>	BBAU (%) <i>N= 111</i>	
Yes	114 (65.9)	72 (64.86)	186 (65.49)
No	59 (34.1)	39 (35.14)	98 (34.51)
Total	173 (100.00)	111 (100.00)	284 (100.00)

The above table 4.23 also depicts the university-wise break up of opinions about the problem faced while accessing e-resources by faculty members of both universities. It is found that 114 (65.90%) of faculty members of MZU faced problems while using/ accessing e-resources and 59 (34.10%) of faculty members of MZU did not face any problem while using/ accessing e-resources. While 72 (64.86%) of faculty members of BBAU faced problems while using/ accessing e-resources and 39 (35.14%) of faculty members of BBAU did not face any problem while using/ accessing e-resources.

4.26 PROBLEM FACED WHILE USING E-RESOURCES

Table 4.24 illustrates the various problems faced by the faculty members of both universities while using/ accessing e-resources. It observed that 143 (50.35%) of faculty members of both universities faced problem of poor connectivity (low bandwidth) while accessing e-resources, followed by 92 (32.39%) of faculty members of both universities faced problem of retrieval of irrelevant/ junk information while accessing e-resources, 52 (18.31%) of faculty members of both universities faced problem of unfamiliar file formats and non-availability of latest software (to view, read and write accessed information) while accessing e-resources, 50 (17.61%) of faculty members of both universities faced problem of unorganized information content while accessing e-resources, 41 (14.44%) of faculty members of both universities faced problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, 33 (11.62%) of faculty members of both universities faced problem of change in URL while accessing e-resources, 29 (10.21%) of faculty members of both universities faced problem of change of the content/ information while accessing e-resources, 23 (8.10%) of faculty members of both universities faced problem of lack of assistance from library staff while accessing e-resources, and 20 (7.04%) of faculty members of both universities faced other problem while accessing e-resources.

Table- 4.24: Problem Faced While Using E-Resources

Sl. No.	Problems	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Poor connectivity (Low bandwidth)	89 (51.45)	54 (48.65)	143 (50.35)
b.	Retrieval of irrelevant/ junk information	53 (30.64)	39 (35.14)	92 (32.39)
c.	Unfamiliar file formats	31 (17.92)	21 (18.92)	52 (18.31)
d.	Change in URL	19 (10.98)	14 (12.61)	33 (11.62)
e.	Change of the content/ information	16 (9.25)	13 (11.71)	29 (10.21)

f.	Non-availability of the latest software (to view, read and write accessed information)	32 (18.5)	20 (18.02)	52 (18.31)
g.	Unorganized information content	29 (16.76)	21 (18.92)	50 (17.61)
h.	Lack of assistance from library staff	13 (7.51)	10 (9.01)	23 (8.1)
i.	Lack of IT knowledge to effectively utilize the service/ e-resources	23 (13.29)	18 (16.22)	41 (14.44)
j.	Any other	13 (7.51)	7 (6.31)	20 (7.04)

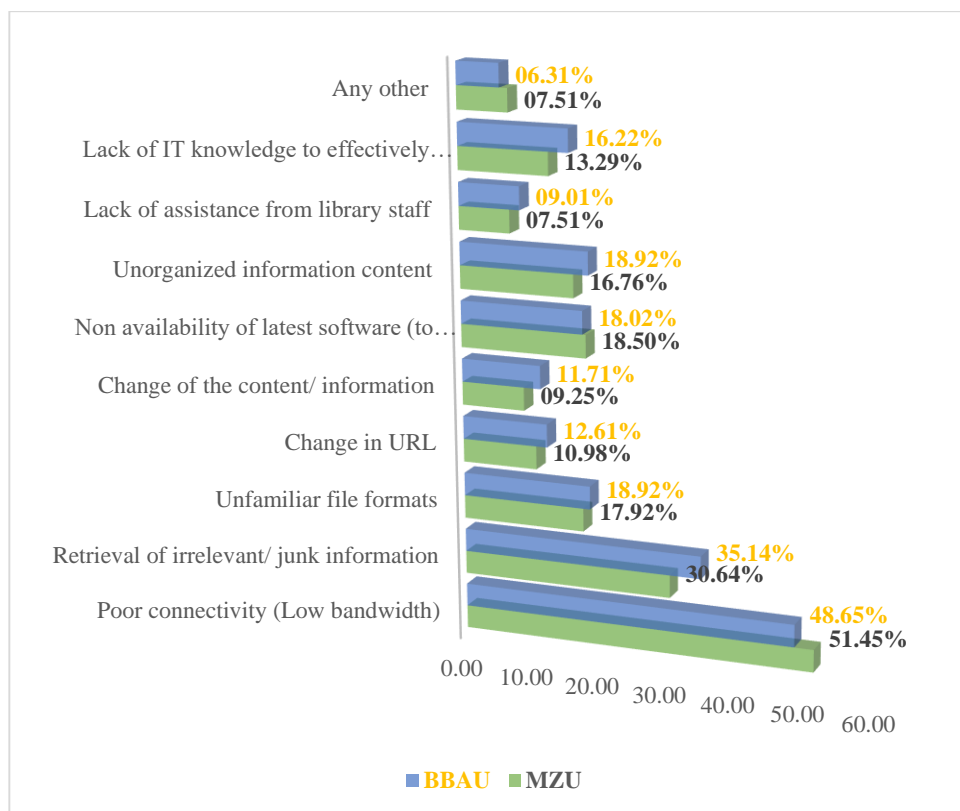


Figure-4.19: Problem Faced While Using E-Resources

The above table 4.24 and figure 4.19 also display the university-wise break up of problems faced by faculty members of both universities while accessing e-resources. It observed that 89 (51.45%) of faculty members of MZU faced problem of poor

connectivity (low bandwidth) while accessing e-resources, followed by 53 (30.64%) of faculty members of MZU faced problem of retrieval of irrelevant/ junk information while accessing e-resources, 32 (18.5%) of faculty members of MZU faced problem of non-availability of latest software (to view, read and write accessed information) while accessing e-resources, 31 (17.92%) of faculty members of MZU faced problem of unfamiliar file formats while accessing e-resources, 29 (16.76%) of faculty members of MZU faced problem of unorganized information content while accessing e-resources, 23 (13.29%) of faculty members of MZU faced problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, 19 (10.98%) of faculty members of MZU faced problem of change in URL while accessing e-resources, 16 (9.25%) of faculty members of MZU faced problem of change of the content/ information while accessing e-resources, 13 (7.51%) of faculty members of MZU faced problem of lack of assistance from library staff while accessing e-resources, and 13 (7.51%) of faculty members of MZU faced other problem while accessing e-resources.

While, It observed that 54 (48.65%) of faculty members of BBAU faced problem of poor connectivity (low bandwidth) while accessing e-resources, followed by 39 (35.14%) of faculty members of BBAU faced problem of retrieval of irrelevant/ junk information while accessing e-resources, 21 (18.92%) of faculty members of BBAU faced problem of unfamiliar file formats and unorganized information content while accessing e-resources, 20 (18.02%) of faculty members of BBAU faced problem of non-availability of latest software (to view, read and write accessed information) while accessing e-resources, 18 (16.22%) of faculty members of BBAU faced problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, 14 (12.61%) of faculty members of BBAU faced problem of change in URL while accessing e-resources, 13 (11.71%) of faculty members of BBAU faced problem of change of the content/ information while accessing e-resources, 10 (9.01%) of faculty members of BBAU faced problem of lack of assistance from library staff while accessing e-resources, and 7 (6.31%) of faculty members of BBAU faced other problem while accessing e-resources.

4.27 NECESSITY OF SKILL IMPROVEMENT FOR USING E-RESOURCES

The skill required to optimize the use of e-resources goes far beyond printing. Therefore, users must secure satisfactory skills for the effective use of e-resources. Table 4.25 illustrates the necessity of skill improvement for using e-resources by the faculty members of both universities. It is found that 246 (86.62%) of respondents of both universities want to improve skills for using/ accessing e-resources and 38 (13.38%) of respondents of both universities contend that they do not.

Table- 4.25: Necessity of Skill Improvement for Using E-Resources

Respond	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	150 (86.71)	96 (86.49)	246 (86.62)
No	23 (13.29)	15 (13.51)	38 (13.38)
Total	173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

The above table 4.25 also depicts the university-wise break-up of the necessity of skill improvement for using e-resources by faculty members of both universities. It is found that 150 (86.71%) of respondents of MZU want to improve skills for using/ accessing e-resources and 23 (13.29%) of respondents of MZU contend that they do not.

While 96 (86.49%) of respondents of BBAU want to improve their skill for using/ accessing e-resources and 15 (13.51%) of respondents of BBAU contend that they do not.

4.28 PREFERRED METHOD TO IMPROVE E-RESOURCES USE SKILL

Table 4.26 demonstrates the various methods to improve e-resources use skills by the faculty members of both universities. From the table it is found that 172 (60.56%) of faculty members of both universities want to improve their skill for using e-resources by attending workshops/ seminars, followed by 161 (56.69%) of faculty members of both universities want to improve their skill for using e-resources by a discussion with experts, 154 (54.23%) of faculty members of both universities want to improve skill

for using e-resources by attending Orientation/ training programs, 127 (44.72%) of faculty members of both universities want to improve skill for using e-resources by a discussion with colleagues, 119 (41.9%) of faculty members of both universities want to improve skill for using e-resources by referring user manuals/guides, etc., 98 (34.51%) of faculty members of both universities want to improve skill for using e-resources by e-mail assistance, 8 (2.82%) of faculty members of both universities want to improve skill for using e-resources by other methods.

Table- 4.26: Preferred Method to Improve E-Resources Use Skill

Sl. No.	Preferred method	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Attending workshops/ seminars	107 (61.85)	65 (58.56)	172 (60.56)
b.	Discussion with experts	98 (56.65)	63 (56.76)	161 (56.69)
c.	Discussion with colleagues	79 (45.66)	48 (43.24)	127 (44.72)
d.	Attending Orientation/ training programs	90 (52.02)	64 (57.66)	154 (54.23)
e.	E-mail assistance	58 (33.53)	40 (36.04)	98 (34.51)
f.	Referring user manuals/guides etc.	71 (41.04)	48 (43.24)	119 (41.9)
g.	Any other	5 (2.89)	3 (2.7)	8 (2.82)

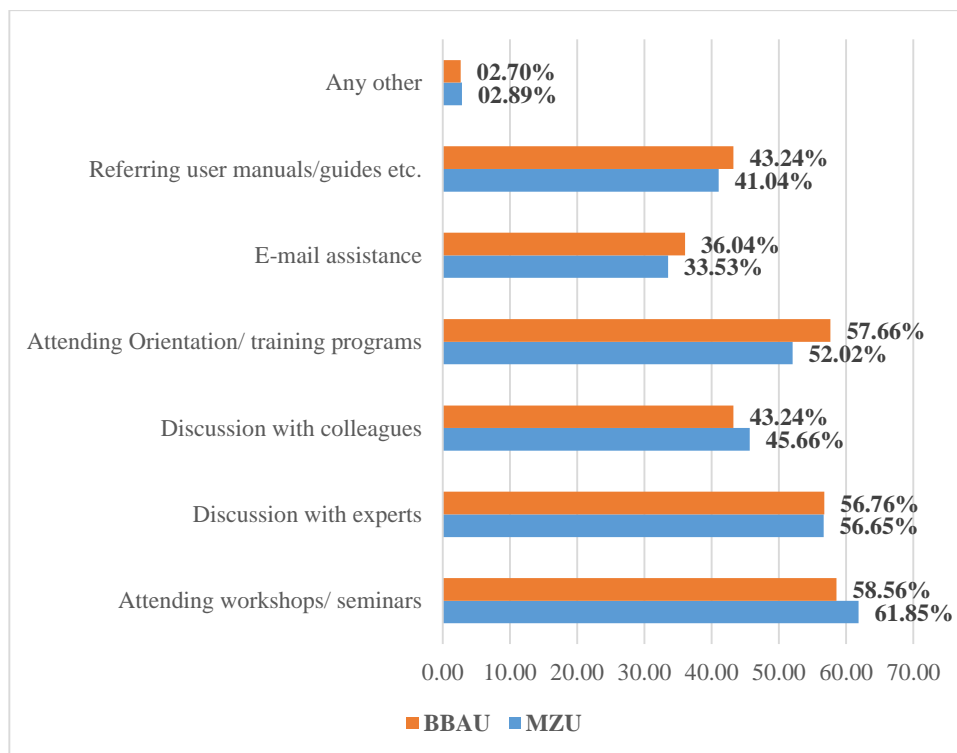


Figure-4.20: Preferred Method to Improve E-Resources Use Skill

The above table 4.26 and figure 4.20 also depict university-wise break up of preferred methods to improve e-resources use skills by the faculty members of both universities. It is found that 107 (61.85%) of faculty members of MZU want to improve skill for using e-resources by attending workshop/ seminars, followed by 98 (56.65%) of faculty members of MZU want to improve skill for using e-resources by a discussion with experts, 90 (52.02%) of faculty members of MZU want to improve skill for using e-resources by attending Orientation/ training programs, 79 (45.66%) of faculty members of MZU want to improve skill for using e-resources by a discussion with colleagues 71 (41.04%) of faculty members of MZU want to improve skill for using e-resources by referring user manuals/guides, etc., 58 (33.53%) of faculty members of MZU want to improve skill for using e-resources by e-mail assistance, 5 (2.89%) of faculty members of MZU want to improve skill for using e-resources by other methods.

While, 65 (58.56%) of faculty members of BBAU want to improve their skill for using e-resources by attending workshops/ seminars, followed by 64 (57.66%) of faculty members of BBAU want to improve their skill for using e-resources by attending Orientation/ training programs, 63 (56.76%) of faculty members of BBAU want to improve skill for using e-resources by a discussion with experts, 48 (43.24%) of

faculty members of BBAU want to improve skill for using e-resources by a discussion with colleagues and referring user manuals/guides, etc., 40 (36.04%) of faculty members of BBAU want to improve skill for using e-resources by e-mail assistance, 3 (2.70%) of faculty members of BBAU want to improve skill for using e-resources by other methods.

4.29 FACULTY VISIT TO THE LIBRARY WEBSITE

Table 4.27 shows how faculty members from both universities feel about using the library website to access e-resources. It has been found that 243 (85.56%) of faculty members of both universities visit the library website for accessing e-resources and 41 (14.44%) of faculty members of both universities assert that they do not.

Table- 4.27: Faculty Visit to the Library Website

Visit the Library Website	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	149 (86.13)	94 (84.68)	243 (85.56)
No	24 (13.87)	17 (15.32)	41 (14.44)
Total	173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

The above table 4.27 also depicts the university-wise break up of faculty members from both universities feel about using the library website to access e-resources. It has been observed that 149 (86.13%) of faculty members of MZU visit the library website for accessing e-resources and 24 (13.87%) of faculty members of MZU assert that they do not.

While 94 (84.68%) of faculty members of BBAU visit the library website for accessing e-resources and 17 (15.32%) of faculty members of BBAU assert that they do not.

4.30 LIBRARY WEBSITE SERVE AS A MEDIA FOR REQUIRED INFORMATION

Table 4.28 expresses the opinion of faculty members from both universities to feel that the library website serves as a media for required information while accessing e-resources. It has been found that 233 (82.04%) of faculty members of both universities

are opinion that the library website serves as a medium for their required information and 51 (17.96%) of faculty members of both universities assert that they do not.

Table- 4.28: Library Website Serves as a Media for Required Information

Opinion	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	142 (82.08)	91 (81.98)	233 (82.04)
No	31 (17.92)	20 (18.02)	51 (17.96)
Total	173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

The above table 4.28 also depicts the university-wise break up of faculty members from both universities to feel that library websites serve as a media for required information. It has been observed that 142 (82.08%) of faculty members of MZU opinion that library websites serve as a medium for their required information and 31 (17.92%) of faculty members of MZU assert that they do not.

While 91 (81.98%) of faculty members of BBAU opinion that library websites serve as a medium for their required information and 20 (18.02%) of faculty members of BBAU assert that they do not.

4.31 USE OF E-RESOURCES AVAILABLE THROUGH INSTITUTIONAL REPOSITORY

Table 4.29 has been summarized the opinion of faculty members from both universities on to use of e-resources available through the institutional repository. It has been found that 221 (77.82%) of faculty members of both universities opinion that they use e-resources available through the institutional repository and 63 (22.18%) of faculty members of both universities assert that they do not.

Table- 4.29: Use of E-Resources Available through Institutional Repository

Respond	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	134 (77.46)	87 (78.38)	221 (77.82)
No	39 (22.54)	24 (21.62)	63 (22.18)

Total	173 (100.00)	111 (100.00)	284 (100.00)
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Note: Figure in parentheses indicate the percentage

The above table 4.29 also depicts the university-wise break up of faculty members from both universities to use of e-resources available through the institutional repository. It has been found that 134 (77.46%) of faculty members of MZU opinion that they use e-resources available through the institutional repository and 39 (22.54%) of faculty members of MZU assert that they do not.

While, 87 (78.38%) of faculty members of BBAU opinion that they use e-resources available through the institutional repository, and 24 (21.62%) of faculty members of BBAU assert that they do not.

4.32 ACCESS E-RESOURCES AVAILABLE THROUGH DIGITAL LIBRARY

Table 4.30 shows that the opinion of access to e-resources available through the digital library by the faculty members of both universities. It found that 233 (82.04%) of faculty members of both universities believe that they access e-resources available through a digital library, and 51 (17.96%) of faculty members of both universities state that they do not.

Table- 4.30: Access E-Resources Available Through Digital Library

Respond	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	142 (82.08)	91 (81.98)	233 (82.04)
No	31 (17.92)	20 (18.02)	51 (17.96)
Total	173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

The above table 4.30 also depicts the university-wise breakup of faculty members from both universities to access e-resources available through the digital library. It found that 142 (82.08%) of faculty members of MZU believe that they access e-resources available through a digital library, and 31 (17.92%) of faculty members of MZU states that they do not.

While, 91 (81.98%) of faculty members of BBAU believe that they access e-resources available through a digital library, and 20 (18.02%) of faculty members of BBAU states that they do not.

4.33 SATISFIED WITH FACILITIES PROVIDED BY UNIVERSITY LIBRARY FOR ACCESSING E-RESOURCES

Table 4.31 shows that the opinion of satisfaction with facilities provided by the university library for accessing e-resources by the faculty members of both universities. It found that 213 (75.00%) of faculty members of both universities were satisfied with facilities provided by the university library, and 71 (25.00%) of faculty members of both universities state that they do not.

Table- 4.31: Satisfaction with Facilities Provided by University Library for Accessing E-Resources

Respond	Universities		Total (%)
	MZU (%)	BBAU (%)	
Yes	130 (75.14)	83 (74.77)	213 (75.00)
No	43 (24.86)	28 (25.23)	71 (25.00)
Total	173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

The above table 4.31 also depicts university-wise break up of faculty members from both universities for satisfaction with facilities provided by the university library for accessing e-resources. It found that 130 (75.14%) of faculty members of MZU are satisfied with facilities provided by the university library, and 43 (24.86%) of faculty members of MZU states that they do not.

While, 83 (74.77%) of faculty members of BBAU are satisfied with facilities provided by the university library, and 28 (25.23%) of faculty members of BBAU states that they do not.

4.34 LEVEL OF SATISFACTION REGARDING FACILITIES AVAILABLE IN THE UNIVERSITY FOR ACCESSING E-RESOURCES

Table 4.32 shows that the level of satisfaction regarding facilities available in the university library for accessing e-resources by the faculty members of both universities. From the table, it is found that 170 (59.86%) of faculty members of both universities opined that they are ‘satisfied (75%)’ with the facilities available in the university for accessing e-resources, followed by 66 (23.24%) of faculty members of both universities opined that they are ‘moderately satisfied (50%)’ with the facilities available in the university for accessing e-resources, 28 (9.86%) of faculty members of both universities opined that they are ‘extremely satisfied (100%)’ with the facilities available in the university for accessing e-resources, and 20 (7.04%) of faculty members of both universities opined that they are ‘slightly satisfied (25%)’ with the facilities available in the university for accessing e-resources.

Table- 4.32: Level of Satisfaction Regarding Facilities Available in the University for Accessing E-Resources

Sl. No.	Respond	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	Extremely satisfied (100%)	17 (9.83)	11 (9.91)	28 (9.86)
b.	Satisfied (75%)	105 (60.69)	65 (58.56)	170 (59.86)
c.	Moderately Satisfied (50%)	39 (22.54)	27 (24.32)	66 (23.24)
d.	Slightly satisfied (25%)	12 (6.94)	8 (7.21)	20 (7.04)
Total		173 (100.00)	111 (100.00)	284 (100.00)

Note: Figure in parentheses indicate the percentage

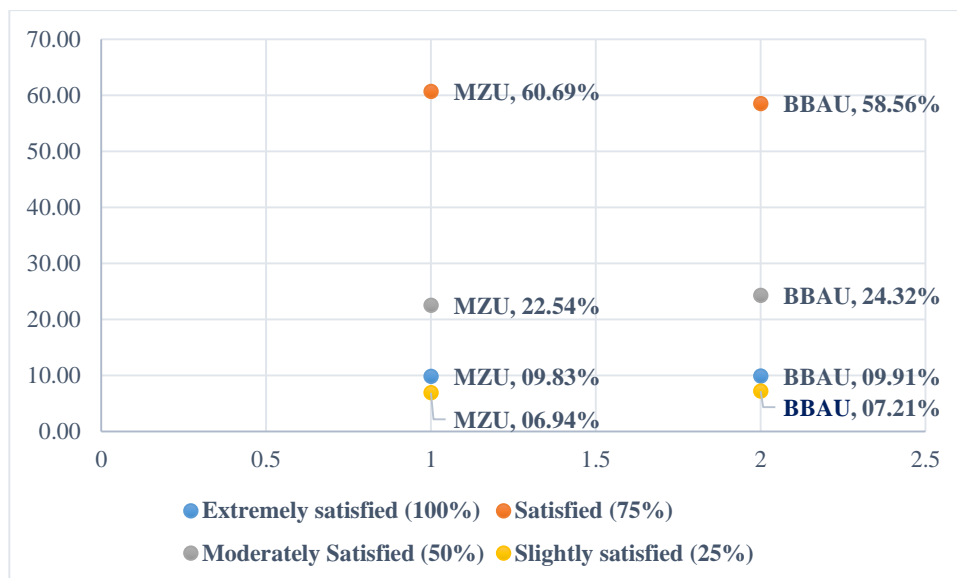


Figure-4.21: Level of Satisfaction Regarding Facilities Available in the University for Accessing E-Resources

The above table 4.32 and figure 4.21 also depict university-wise break up of faculty members from both universities for the level of satisfaction regarding facilities available in the university library for accessing e-resources. It is perceived that 105 (60.69%) of faculty members of MZU opined that they are ‘satisfied (75%)’ with the facilities available in the university for accessing e-resources, followed by 39 (22.54%) of faculty members of MZU opined that they are ‘moderately satisfied (50%)’ with the facilities available in the university for accessing e-resources, 17 (9.83%) of faculty members of MZU opined that they are ‘extremely satisfied (100%)’ with the facilities available in the university for accessing e-resources, and 12 (6.94%) of faculty members of MZU opined that they are ‘slightly satisfied (25%)’ with the facilities available in the university for accessing e-resources.

While, 65 (58.56%) of faculty members of BBAU opined that they are ‘satisfied (75%)’ with the facilities available in the university for accessing e-resources, followed by 27 (24.32%) of faculty members of BBAU opined that they are ‘moderately satisfied (50%)’ with the facilities available in the university for accessing e-resources, 11 (9.91%) of faculty members of BBAU opined that they are ‘extremely satisfied (100%)’ with the facilities available in the university for accessing e-resources, and 8 (7.21%) of faculty members of BBAU opined that they are ‘slightly satisfied (25%)’ with the facilities available in the university for accessing e-resources.

4.35 OPINIONS ON LIBRARY STAFF'S ATTITUDE TOWARD FACILITATING ACCESS TO E-RESOURCES

Table 4.33 and figure 4.22 analysed the opinion on library staff's attitude towards facilitating access to e-resources on a five-point scale of Strongly Agree (SA), Agree (A), Uncertain (U), Disagree (D), and Strongly Disagree (SD) by the faculty members of both universities. It is found that 97 (56.07%) of faculty members of MZU agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, followed by 48 (27.75%) of faculty members of MZU strongly agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, 20 (11.56%) of respondents of MZU uncertain with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, 5 (2.89%) of respondents of MZU disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, and 3 (1.73%) of respondents of MZU strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources. While, 62 (55.86%) of faculty members of BBAU agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, followed by 29 (26.13%) of faculty members of BBAU strongly agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, 17 (15.32%) of respondents of BBAU uncertain with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, 2 (1.80%) of respondents of BBAU disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, and 1 (0.90%) of respondents of BBAU strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources.

It is also found that 72 (41.62%) of faculty members of MZU agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, followed by 53 (30.64%) of respondents of MZU uncertain with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, 31 (17.92%) of faculty members of MZU strongly agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, 13 (7.51%) of respondents of

MZU disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, and 4 (2.31%) of respondents of MZU strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database.

While, 57 (51.35%) of faculty members of BBAU agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, followed by 31 (27.93%) of respondents of BBAU uncertain with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, 14 (12.61%) of faculty members of BBAU strongly agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, 8 (7.21%) of respondents of BBAU disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, and 1 (0.90%) of respondents of BBAU strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database.

It is also found that 88 (50.87%) of faculty members of MZU agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, followed by 55 (31.79%) of respondents of MZU uncertain with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, 25 (14.45%) of faculty members of MZU strongly agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, 3 (1.73%) of respondents of MZU disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, 2 (1.16%) of respondents of MZU strongly disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge.

While, 52 (46.85%) of faculty members of BBAU agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, followed by 32 (28.83%) of respondents of BBAU uncertain with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, 26 (23.42%) of faculty members of BBAU strongly agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, 1 (0.90%) of respondents of BBAU disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, and 0 (0.00%) of respondents of

BBAU strongly disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge.

It is also found that 71 (41.04%) of faculty members of MZU agree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, followed by 68 (39.31%) of respondents of MZU uncertain with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, 24 (13.87%) of faculty members of MZU strongly agree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, 7 (4.05%) of respondents of MZU disagree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, 3 (1.73%) of respondents of MZU strongly disagree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information.

While, 54 (48.65%) of faculty members of BBAU agree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, followed by 29 (26.13%) of respondents of BBAU uncertain with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, 21 (18.92%) of faculty members of BBAU strongly agree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, 5 (4.50%) of respondents of BBAU disagree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, and 2 (1.80%) of respondents of BBAU strongly disagree with the opinion that the library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information.

Table- 4.33: Opinions on Library Staff's Attitude toward Facilitating Access to E-Resources

Respond	Universities		Universities		Universities		Universities		Universities	
	MZ	BBA	MZ	BBA	MZ	BBA	MZ	BB	MZ	BB
	U	U	U	U	U	U	U	AU	U	AU
	N=	N=	N=	N=	N=	N=	N=	N=	N=	N=
	173	111	173	111	173	111	173	111	173	111
	SA		A		U		D		SD	
They take personal interest and are polite as well as courteous in facilitating access to e-resources	48 (27.75)	29 (26.13)	97 (56.07)	62 (55.86)	20 (11.56)	17 (15.32)	5 (2.89)	2 (1.8)	3 (1.73)	1 (0.9)
Demonstrate and teach how to use CD-ROM, database	31 (17.92)	14 (12.61)	72 (41.62)	57 (51.35)	53 (30.64)	31 (27.93)	13 (7.51)	8 (7.21)	4 (2.31)	1 (0.9)

/ online database										
They are well trained in accessing e-resources and are up to date in their knowledge.	25 (14.45)	26 (23.42)	88 (50.87)	52 (46.85)	55 (31.79)	32 (28.83)	3 (1.73)	1 (0.9)	2 (1.16)	0 (0)
Library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve	24 (13.87)	21 (18.92)	71 (41.04)	54 (48.65)	68 (39.31)	29 (26.13)	7 (4.05)	5 (4.5)	3 (1.73)	2 (1.8)

informat ion										
<i>SA- Strongly Agree, A- Agree, U-Uncertain, D- Disagree, SD-Strongly Disagree</i>										
Note: Figure in parentheses indicate percentage										

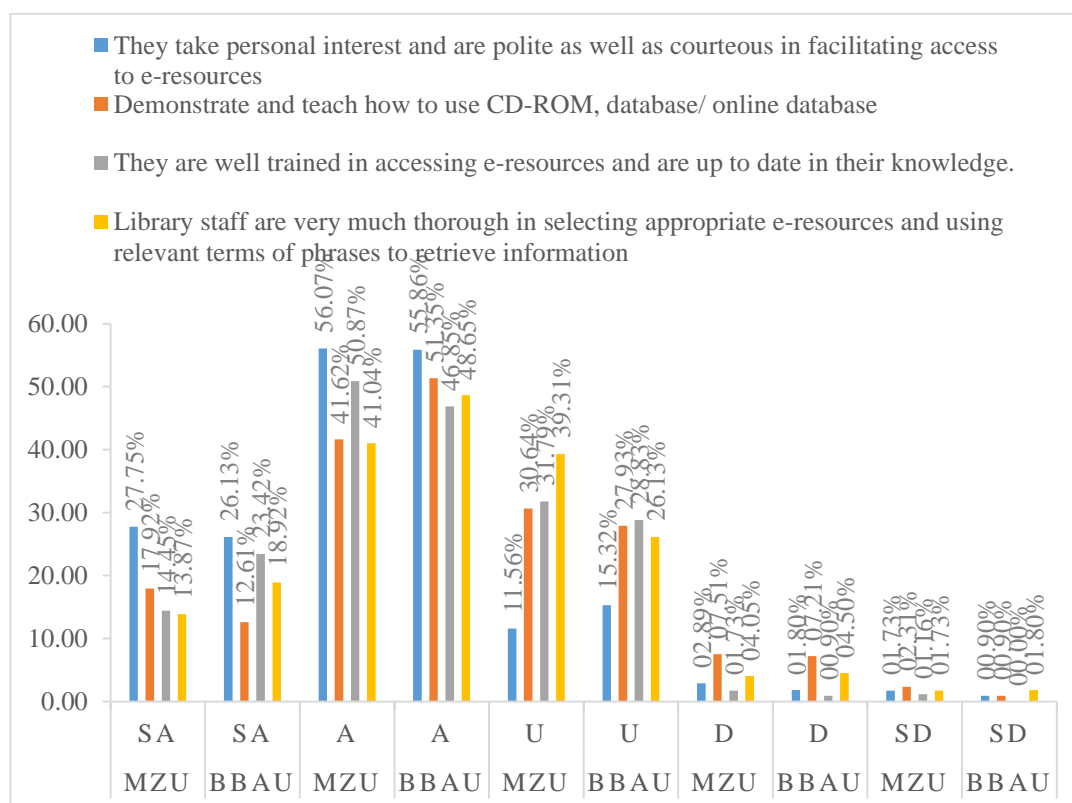


Figure-4.22: Opinions on Library Staff's Attitude toward Facilitating Access to E-Resources

4.36 RESPONDENTS RATING OF THE FEATURES MOTIVATE TO USE OF E-RESOURCES

Table 4.34 and figure 4.23 depict the rating of the features that motivate to use of e-resources on a four-point scale of 'Excellent', 'Good', 'Fair', and 'Poor' by the faculty members of both universities. On the observation of table and figure it has been found that the maximum 112 (64.74%) of faculty members of MZU rate as good for their usefulness of e-resources, followed by 96 (55.49%) of faculty members of MZU rate as good for their comprehensiveness of e-resources, 95 (54.91%) of faculty members of MZU rate as good for their easy to use of e-resources, 93 (53.76%) of faculty

members of MZU rate as good for their accessibility of e-resources, 92 (53.18%) of faculty members of MZU rate as good for their flexibility of e-resources, 91 (52.6%) of faculty members of MZU rate as good for their organized information of e-resources, 90 (52.02%) of faculty members of MZU rate as good for their up-to-date information of e-resources, 85 (49.13%) of faculty members of MZU rate as good for their hypertext links of e-resources, 77 (44.51%) of faculty members of MZU rate as good for their access speed of e-resources, and 2 (1.16%) of faculty members of MZU rate as good for their other features of e-resources.

While, 73 (65.77%) of faculty members of BBAU rate as good for their usefulness of e-resources, followed by 71 (63.96%) of faculty members of BBAU rate as good for their flexibility of e-resources, 65 (58.56%) of faculty members of BBAU rate as good for their comprehensiveness of e-resources, 63 (56.76%) of faculty members of BBAU rate as good for their up-to-date information of e-resources, 59 (53.15%) of faculty members of BBAU rate as good for their access speed of e-resources, 59 (53.15%) of faculty members of BBAU rate as good for their hypertext links of e-resources, 58 (52.25%) of faculty members of BBAU rate as good for their organized information of e-resources, 57 (51.35%) of faculty members of BBAU rate as good for their accessibility of e-resources, 56 (50.45%) of faculty members of BBAU rate as good for their easy to use of e-resources, and 2 (1.80%) of faculty members of BBAU rate as good for their other features of e-resources.

65 (37.57%) of faculty members of MZU rate as excellent for their easy to use of e-resources, followed by 51 (29.48%) of faculty members of MZU rate as excellent for their up-to-date information of e-resources, 47 (27.17%) of faculty members of MZU rate as excellent for their accessibility of e-resources, 41 (23.70%) of faculty members of MZU rate as excellent for their flexibility of e-resources, 38 (21.97%) of faculty members of MZU rate as excellent for their usefulness of e-resources, 28 (16.18%) of faculty members of MZU rate as excellent for their comprehensiveness of e-resources, 26 (15.03%) of faculty members of MZU rate as excellent for their organized information of e-resources, 25 (14.45%) of faculty members of MZU rate as excellent for their access speed of e-resources, 21 (12.14%) of faculty members of MZU rate as excellent for their hypertext links of e-resources, and (0.00%) of faculty members of MZU rate as excellent for their other features of e-resources.

While, 48 (43.24%) of faculty members of BBAU rate as excellent for their easy to use of e-resources, followed by 34 (30.63%) of faculty members of BBAU rate as excellent for their accessibility of e-resources, 31 (27.93%) of faculty members of BBAU rate as excellent for their up-to-date information of e-resources, 26 (23.42%) of faculty members of BBAU rate as excellent for their usefulness of e-resources, 18 (16.22%) of faculty members of BBAU rate as excellent for their access speed of e-resources, 18 (16.22%) of faculty members of BBAU rate as excellent for their flexibility of e-resources, 17 (15.32%) of faculty members of BBAU rate as excellent for their comprehensiveness of e-resources, 15 (13.51%) of faculty members of BBAU rate as excellent for their organized information of e-resources, 10 (9.01%) of faculty members of BBAU rate as excellent for their hypertext links of e-resources, and (0.00%) of faculty members of BBAU rate as excellent for their other features of e-resources.

65 (37.57%) of faculty members of MZU rate as fair for their access speed of e-resources, followed by 54 (31.21%) of faculty members of MZU rate as fair for their hypertext links of e-resources, 47 (27.17%) of faculty members of MZU rate as fair for their organized information of e-resources, 42 (24.28%) of faculty members of MZU rate as fair for their comprehensiveness of e-resources, 37 (21.39%) of faculty members of MZU rate as fair for their flexibility of e-resources, 29 (16.76%) of faculty members of MZU rate as fair for their up-to-date information of e-resources, 28 (16.18%) of faculty members of MZU rate as fair for their accessibility of e-resources, 21 (12.14%) of faculty members of MZU rate as fair for their usefulness of e-resources, 10 (5.78%) of faculty members of MZU rate as fair for their easy to use of e-resources, and 2 (1.16%) of faculty members of MZU rate as fair for their other features of e-resources.

While, 38 (34.23%) of faculty members of BBAU rate as fair for their hypertext links of e-resources, followed by 34 (30.63%) of faculty members of BBAU rate as fair for their organized information of e-resources, 30 (27.03%) of faculty members of BBAU rate as fair for their access speed of e-resources, 26 (23.42%) of faculty members of BBAU rate as fair for their comprehensiveness of e-resources, 20 (18.02%) of faculty members of BBAU rate as fair for their flexibility of e-resources, 18 (16.22%) of faculty members of BBAU rate as fair for their accessibility of e-resources, 15 (13.51%) of faculty members of BBAU rate as fair for their up-to-date information of

e-resources, 11 (9.91%) of faculty members of BBAU rate as fair for their usefulness of e-resources, 6 (5.41%) of faculty members of BBAU rate as fair for their easy to use of e-resources, and 2 (1.80%) of faculty members of BBAU rate as fair for their other features of e-resources.

13 (7.51%) of faculty members of MZU rate as poor for their hypertext links of e-resources, followed by 9 (5.20%) of faculty members of MZU rate as poor for their organized information of e-resources, 7 (4.05%) of faculty members of MZU rate as poor for their comprehensiveness of e-resources, 6 (3.47%) of faculty members of MZU rate as poor for their access speed of e-resources, 5 (2.89%) of faculty members of MZU rate as poor for their accessibility of e-resources, 3 (1.73%) of faculty members of MZU rate as poor for their flexibility of e-resources, 3 (1.73%) of faculty members of MZU rate as poor for their easy to use of e-resources, 3 (1.73%) of faculty members of MZU rate as poor for their up-to-date information of e-resources, 2 (1.16%) of faculty members of MZU rate as poor for their usefulness of e-resources, and (0.00%) of faculty members of MZU rate as poor for their other features of e-resources.

While, 4 (3.60%) of faculty members of BBAU rate as poor for their hypertext links of e-resources, followed by 4 (3.60%) of faculty members of BBAU rate as poor for their organized information of e-resources, 4 (3.60%) of faculty members of BBAU rate as poor for their access speed of e-resources, 3 (2.70%) of faculty members of BBAU rate as poor for their comprehensiveness of e-resources, 2 (1.80%) of faculty members of BBAU rate as poor for their flexibility of e-resources, 2 (1.80%) of faculty members of BBAU rate as poor for their accessibility of e-resources, 2 (1.80%) of faculty members of BBAU rate as poor for their up-to-date information of e-resources, 1 (0.90%) of faculty members of BBAU rate as poor for their usefulness of e-resources, 1 (0.90%) of faculty members of BBAU rate as poor for their easy to use of e-resources, and (0.00%) of faculty members of BBAU rate as poor for their other features of e-resources.

Table- 4.34: Respondents Rating of the Features Motivate to Use E-Resources

Features	Universities		Universities		Universities		Universities	
	MZ	BBA	MZ	BBA	MZ	BBA	MZ	BBA
	U	U	U	U	U	U	U	U
	Excellent		Good		Fair		Poor	
Easy to use	65 (37.5 7)	48 (43.2 4)	95 (54.9 1)	56 (50.4 5)	10 (5.78)	6 (5.41)	3 (1.7 3)	1 (0.9)
Up-to-date	51 (29.4 8)	31 (27.9 3)	90 (52.0 2)	63 (56.7 6)	29 (16.7 6)	15 (13.5 1)	3 (1.7 3)	2 (1.8)
Accessibility	47 (27.1 7)	34 (30.6 3)	93 (53.7 6)	57 (51.3 5)	28 (16.1 8)	18 (16.2 2)	5 (2.8 9)	2 (1.8)
Access Speed	25 (14.4 5)	18 (16.2 2)	77 (44.5 1)	59 (53.1 5)	65 (37.5 7)	30 (27.0 3)	6 (3.4 7)	4 (3.6)
Usefulness	38 (21.9 7)	26 (23.4 2)	112 (64.7 4)	73 (65.7 7)	21 (12.1 4)	11 (9.91)	2 (1.1 6)	1 (0.9)
Hypertext links	21 (12.1 4)	10 (9.01)	85 (49.1 3)	59 (53.1 5)	54 (31.2 1)	38 (34.2 3)	13 (7.5 1)	4 (3.6)
Organized information	26 (15.0 3)	15 (13.5 1)	91 (52.6)	58 (52.2 5)	47 (27.1 7)	34 (30.6 3)	9 (5.2)	4 (3.6)
Comprehensiveness	28 (16.1 8)	17 (15.3 2)	96 (55.4 9)	65 (58.5 6)	42 (24.2 8)	26 (23.4 2)	7 (4.0 5)	3 (2.7)

Flexibility	41 (23.7)	18 (16.2)	92 (53.1)	71 (63.9)	37 (21.3)	20 (18.0)	3 (1.7)	2 (1.8)
Other	(0)	(0)	2 (1.16)	2 (1.80)	2 (1.16)	2 (1.80)	(0)	(0)

Note: Figure in parentheses indicate the percentage

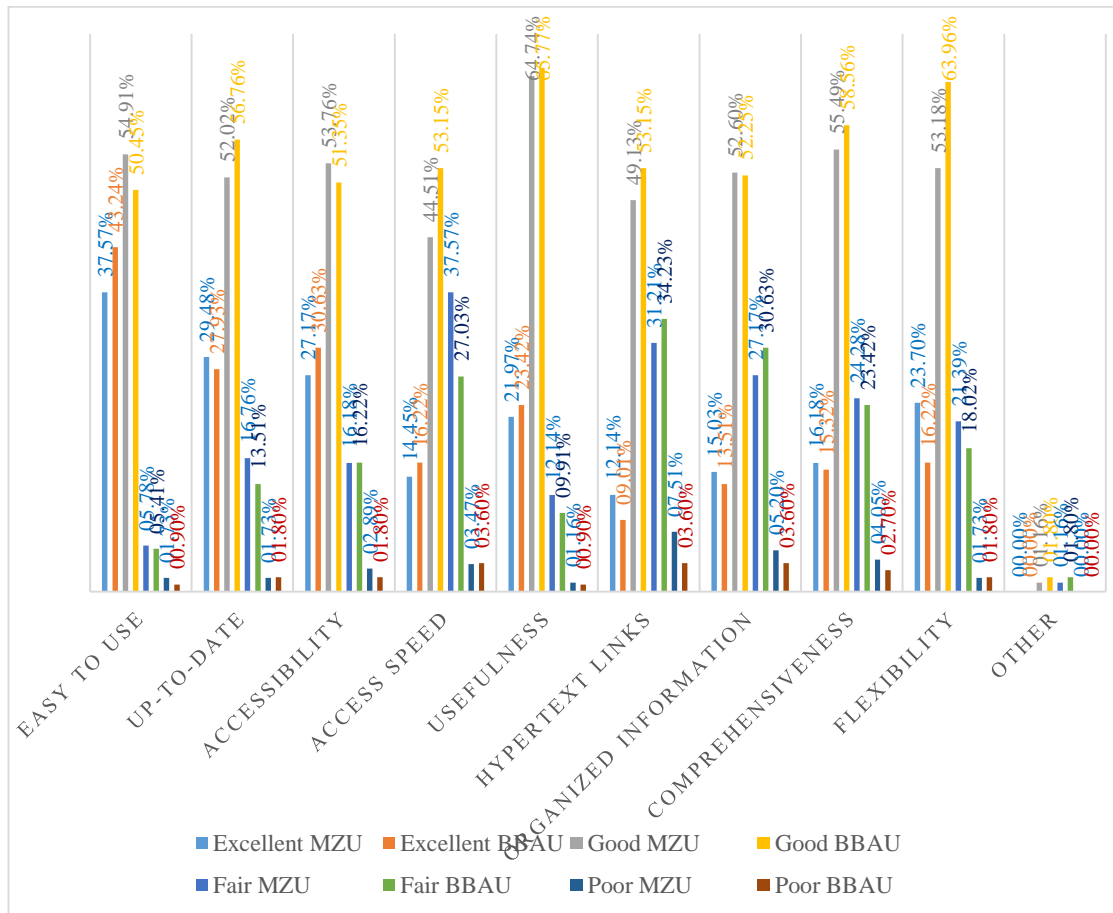


Figure-4.23: Respondents Rating of the Features Motivate to Use E-Resources

4.37 PREFERENCE OF SEARCH ENGINES TO ACCESS E-RESOURCES

Table 35 describes the preference of search engines to access e-resources by the faculty members of both universities. It has been found that all 284 (100.00%) of faculty members of both the universities use Google search engine for accessing e-resources, followed by 112 (39.44%) of faculty members of both universities use yahoo search engine for accessing e-resources, 61 (21.48%) of faculty members of both universities

use Bing search engine for accessing e-resources, 29 (10.21%) of faculty members of both universities use MSN search engine for accessing e-resources, 5 (1.76%) of faculty members of both universities use Alta Vista search engine for accessing e-resources, 4 (1.41%) of faculty members of both universities use Lycos search engine for accessing e-resources, 4 (1.41%) of faculty members of both universities use another search engine for accessing e-resources, and 2 (0.70%) of faculty members of both universities use HotBot search engine for accessing e-resources.

Table- 4.35: Preference of Search Engines to Access E-Resources

Sl. No.	Search engine	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
i.	Alta Vista	1 (0.58)	4 (3.6)	5 (1.76)
ii.	Bing	43 (24.86)	18 (16.22)	61 (21.48)
iii.	Google	173 (100)	111 (100)	284 (100.00)
iv.	Yahoo	75 (43.35)	37 (33.33)	112 (39.44)
v.	Lycos	1 (0.58)	3 (2.7)	4 (1.41)
vi.	MSN	17 (9.83)	12 (10.81)	29 (10.21)
vii.	HotBot	0 (0)	2 (1.8)	2 (0.70)
viii.	Other	3 (1.73)	1 (0.9)	4 (1.41)

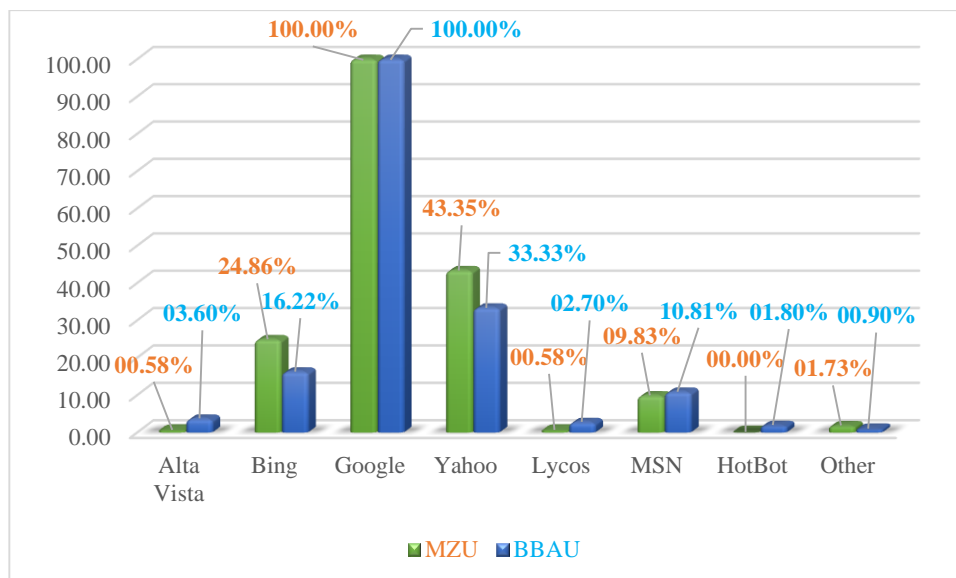


Figure-4.24: Preference of Search Engines to Access E-Resources

The above table 4.35 and figure 4.24 also depict university-wise break up of faculty members from both universities for the preference of search engines to access e-resources. It has been found that all 173 (100.00%) of faculty members of both the universities use Google search engine for accessing e-resources, followed by 75 (43.35%) of faculty members of MZU use yahoo search engine for accessing e-resources, 43 (24.86%) of faculty members of MZU use Bing search engine for accessing e-resources, 17 (9.83%) of faculty members of MZU use MSN search engine for accessing e-resources, 3 (1.73%) of faculty members of MZU use another search engine for accessing e-resources, 1 (0.58%) of faculty members of MZU use Alta Vista search engine for accessing e-resources, 1 (0.58%) of faculty members of MZU use Lycos search engine for accessing e-resources, and (0.00%) of faculty members of MZU use HotBot search engine for accessing e-resources.

While, 111 (100.00%) of faculty members of both the universities use Google search engine for accessing e-resources, followed by 37 (33.33%) of faculty members of BBAU use yahoo search engine for accessing e-resources, 18 (16.22%) of faculty members of BBAU use Bing search engine for accessing e-resources, 12 (10.81%) of faculty members of BBAU use MSN search engine for accessing e-resources, 4 (3.6%) of faculty members of BBAU use Alta Vista search engine for accessing e-resources, 3 (2.70%) of faculty members of BBAU use Lycos search engine for accessing e-resources, 2 (1.80%) of faculty members of BBAU use HotBot search engine for

accessing e-resources, and 1 (0.90%) of faculty members of BBAU use another search engine for accessing e-resources.

4.38 PREFERENCE OF FIELD BASE SEARCH METHOD TO USE OF E-RESOURCES

Table 4.36 and figure 4.25 explain the preference of filed-based search method to use e-resources by the faculty members of both universities i.e. Mizoram University and Babasaheb Bhirao Ambedkar University. On the observation of the table and figure it has been found that the maximum 112 (64.74%) of faculty members of MZU use the keyword search method to access e-resources most frequently (5), followed by 108 (62.43%) of faculty members of MZU use title search method to access e-resources most frequently (5), 84 (48.55%) of faculty members of MZU use subject search method to access e-resources most frequently (5), 76 (43.93%) of faculty members of MZU use author search method to access e-resources most frequently (5), 24 (13.87%) of faculty members of MZU use publisher search method to access e-resources most frequently (5), 8 (4.62%) of faculty members of MZU use author address search method to access e-resources most frequently (5), and 2 (1.16%) of faculty members of MZU use author address search method to access e-resources most frequently (5).

While, 62 (55.86%) of faculty members of BBAU use keyword search method to access e-resources most frequently (5), followed by 61 (54.95%) of faculty members of BBAU use title search method to access e-resources most frequently (5), 57 (51.35%) of faculty members of BBAU use author search method to access e-resources most frequently (5), 55 (49.55%) of faculty members of BBAU use subject search method to access e-resources most frequently (5), 19 (17.12%) of faculty members of BBAU use publisher search method to access e-resources most frequently (5), 3 (2.70%) of faculty members of BBAU use author address search method to access e-resources most frequently (5), and 1 (0.90%) of faculty members of BBAU use author address search method to access e-resources most frequently (5).

51 (29.48%) of faculty members of MZU use the title search method to access e-resources frequently (4), followed by 48 (27.75%) of faculty members of MZU using the subject search method to access e-resources frequently (4), 37 (21.39%) of faculty members of MZU use author search method to access e-resources frequently (4), 35 (20.23%) of faculty members of MZU use publisher search method to access e-

resources frequently (4), 33 (19.08%) of faculty members of MZU use keyword search method to access e-resources frequently (4), 17 (9.83%) of faculty members of MZU use author address search method to access e-resources frequently (4), and (0.00%) of faculty members of MZU use author address search method to access e-resources frequently (4).

While, 43 (38.74%) of faculty members of BBAU use publisher search method to access e-resources frequently (4), followed by 38 (34.23%) of faculty members of BBAU use author search method to access e-resources frequently (4), 33 (29.73%) of faculty members of BBAU use subject search method to access e-resources frequently (4), 22 (19.82%) of faculty members of BBAU use keyword search method to access e-resources frequently (4), 18 (16.22%) of faculty members of BBAU use title search method to access e-resources frequently (4), 8 (7.21%) of faculty members of BBAU use author address search method to access e-resources frequently (4), and (0.00%) of faculty members of BBAU use author address search method to access e-resources frequently (4).

53 (30.64%) of faculty members of MZU use the publisher search method to access e-resources less frequently (3), followed by 39 (22.54%) of faculty members of MZU using the author search method to access e-resources less frequently (3), 32 (18.50%) of faculty members of MZU use subject search method to access e-resources less frequently (3), 25 (14.45%) of faculty members of MZU use author address search method to access e-resources less frequently (3), 14 (8.09%) of faculty members of MZU use keyword search method to access e-resources less frequently (3), 10 (5.78%) of faculty members of MZU use title search method to access e-resources less frequently (3), and 1 (0.58%) of faculty members of MZU use author address search method to access e-resources less frequently (3).

While, 24 (21.62%) of faculty members of BBAU use the publisher search method to access e-resources less frequently (3), followed by 20 (18.02%) of faculty members of BBAU use title search method to access e-resources less frequently (3), 18 (16.22%) of faculty members of BBAU use keyword search method to access e-resources less frequently (3), 17 (15.32%) of faculty members of BBAU use subject search method to access e-resources less frequently (3), 16 (14.41%) of faculty members of BBAU use author address search method to access e-resources less frequently (3), 12

(10.81%) of faculty members of BBAU use author search method to access e-resources less frequently (3), and 1 (0.90%) of faculty members of BBAU use author address search method to access e-resources less frequently (3).

34 (19.65%) of faculty members of MZU uncertain (2) to use the publisher search method to access e-resources, followed by 31 (17.92%) of faculty members of MZU uncertain (2) to use author address search method to access e-resources, 13 (7.51%) of faculty members of MZU uncertain (2) to use author search method to access e-resources, 10 (5.78%) of faculty members of MZU uncertain (2) to use keyword search method to access e-resources, 6 (3.47%) of faculty members of MZU uncertain (2) to use subject search method to access e-resources, 1 (0.58%) of faculty members of MZU uncertain (2) to use title search method to access e-resources, and (0.00%) of faculty members of MZU uncertain (2) to use author address search method to access e-resources.

While, 27 (24.32%) of faculty members of BBAU were uncertain (2) to use author address search method to access e-resources, followed by 16 (14.41%) of faculty members of BBAU uncertain (2) to use publisher search method to access e-resources, 6 (5.41%) of faculty members of BBAU uncertain (2) to use title search method to access e-resources, 6 (5.41%) of faculty members of BBAU uncertain (2) to use keyword search method to access e-resources, 4 (3.60%) of faculty members of BBAU uncertain (2) to use subject search method to access e-resources, 1 (0.90%) of faculty members of BBAU uncertain (2) to use author search method to access e-resources, and (0.00%) of faculty members of BBAU uncertain (2) to use author address search method to access e-resources.

92 (53.18%) of faculty members of MZU do not use (1) author address search method to access e-resources, followed by 27 (15.61%) of faculty members of MZU do not use (1) publisher search method to access e-resources, 8 (4.62%) of faculty members of MZU do not use (1) author search method to access e-resources, 4 (2.31%) of faculty members of MZU do not use (1) keyword search method to access e-resources, 3 (1.73%) of faculty members of MZU do not use (1) subject search method to access e-resources, 3 (1.73%) of faculty members of MZU do not use (1) title search method to access e-resources, and (0.00%) of faculty members of MZU do not use (1) author address search method to access e-resources.

While, 57 (51.35%) of faculty members of BBAU do not use (1) author address search method to access e-resources, followed by 9 (8.11%) of faculty members of BBAU do not use (1) publisher search method to access e-resources, 6 (5.41%) of faculty members of BBAU do not use (1) title search method to access e-resources, 3 (2.70%) of faculty members of BBAU do not use (1) author search method to access e-resources, 3 (2.70%) of faculty members of BBAU do not use (1) keyword search method to access e-resources, 2 (1.80%) of faculty members of BBAU do not use (1) subject search method to access e-resources, and (0.00%) of faculty members of BBAU do not use (1) author address search method to access e-resources.

Table- 4.36: Preference of Field Base Search Method to Use of E-Resources

Search method	Universities		Universities		Universities		Universities		Universities	
	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U
	5		4		3		2		1	
Author	76 (43.93)	57 (51.35)	37 (21.39)	38 (34.23)	39 (22.54)	12 (10.81)	13 (7.51)	1 (0.9)	8 (4.62)	3 (2.7)
Title	108 (62.43)	61 (54.95)	51 (29.48)	18 (16.22)	10 (5.78)	20 (18.02)	1 (0.58)	6 (5.41)	3 (1.73)	6 (5.41)
Subject	84 (48.55)	55 (49.55)	48 (27.75)	33 (29.73)	32 (18.5)	17 (15.32)	6 (3.47)	4 (3.6)	3 (1.73)	2 (1.8)
Keywords	112 (64.74)	62 (55.86)	33 (19.08)	22 (19.82)	14 (8.09)	18 (16.22)	10 (5.78)	6 (5.41)	4 (2.31)	3 (2.7)
Publisher	24 (13.87)	19 (17.12)	35 (20.23)	43 (38.74)	53 (30.64)	24 (21.62)	34 (19.65)	16 (14.41)	27 (15.61)	9 (8.11)

Author addresses	8 (4.62%)	3 (2.7%)	17 (9.83%)	8 (7.21%)	25 (14.45%)	16 (14.41%)	31 (17.92%)	27 (24.32%)	92 (53.18%)	57 (51.35%)
Other	2 (1.16%)	1 (0.9%)	(0)	(0)	1 (0.58%)	1 (0.9%)	(0)	(0)	(0)	(0)

5- Most frequently, 4- Frequently, 3- Less frequently, 2- Uncertain, 1-Do not use

Note: Figure in parentheses indicate the percentage

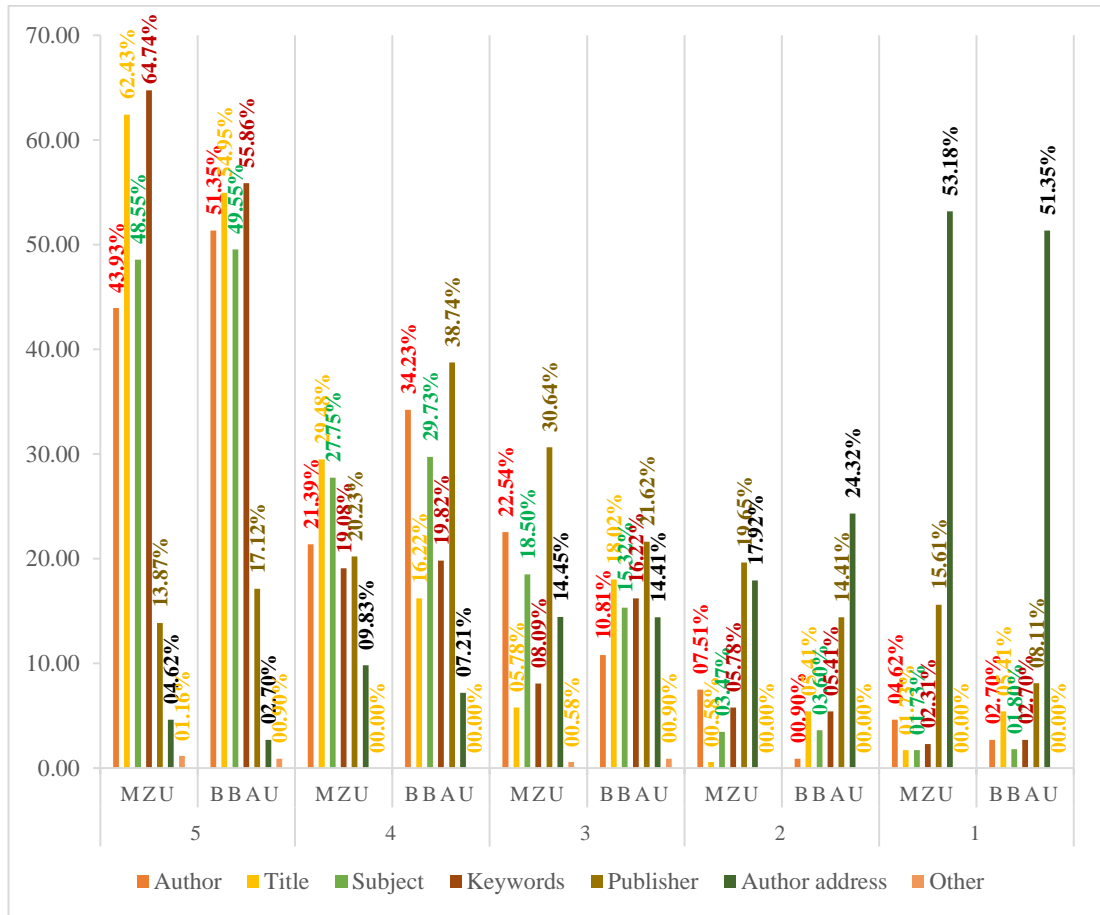


Figure-4.25: Preference of Field Base Search Method to Use of E-Resources

4.39 PREFERENCE OF ADVANCE SEARCH TECHNIQUE TO USE OF E-RESOURCES

Table 4.37 and figure 4.26 explain the preference of advanced search techniques to access e-resources by the faculty members of both universities i.e. Mizoram University and Babasaheb Bhirao Ambedkar University. On the observation of the table and figure it has been found that the maximum 90 (52.02%) of faculty members of MZU use phrase search (eg.: “Use of e-resources”) technique most frequently (5) to access e-resources, followed by 74 (42.77%) of faculty members of MZU use field-based search (eg.: “Physics”) technique most frequently (5) to access e-resources, 27 (15.61%) of faculty members of MZU use Boolean search (AND, OR, NOT) technique most frequently (5) to access e-resources, 10 (5.78%) of faculty members of MZU use Truncation/ wildcard search (and?) technique most frequently (5) to access e-resources, and (0.00%) of faculty members of MZU use other search technique most frequently (5) to access e-resources.

While, 71 (63.96%) of faculty members of BBAU use phrase search (eg.: “Use of e-resources”) technique most frequently (5) to access e-resources, followed by 62 (55.86%) of faculty members of BBAU use field-based search (eg.: “Physics”) technique most frequently (5) to access e-resources, 19 (17.12%) of faculty members of BBAU use Boolean search (AND, OR, NOT) technique most frequently (5) to access e-resources, 6 (5.41%) of faculty members of BBAU use Truncation/ wildcard search (and?) technique most frequently (5) to access e-resources, and (0.00%) of faculty members of BBAU use other search technique most frequently (5) to access e-resources.

55 (31.79%) of faculty members of MZU use field-based search (eg.: “Physics”) technique frequently (4) to access e-resources, followed by 43 (24.86%) of faculty members of MZU use phrase search (eg.: “Use of e-resources”) technique frequently (4) to access e-resources, 26 (15.03%) of faculty members of MZU use Boolean search (AND, OR, NOT) technique frequently (4) to access e-resources, 18 (10.40%) of faculty members of MZU use Truncation/ wildcard search (and?) technique frequently (4) to access e-resources, and (0.00%) of faculty members of MZU use other search technique frequently (4) to access e-resources.

While, 25 (22.52%) of faculty members of BBAU use field-based search (eg.: “Physics”) technique frequently (4) to access e-resources, followed by 22 (19.82%) of faculty members of BBAU use phrase search (eg.: “Use of e-resources”) technique frequently (4) to access e-resources, 14 (12.61%) of faculty members of BBAU use Boolean search (AND, OR, NOT) technique frequently (4) to access e-resources, 12 (10.81%) of faculty members of BBAU use Truncation/ wildcard search (and?) technique frequently (4) to access e-resources, and (0.00%) of faculty members of BBAU use other search technique frequently (4) to access e-resources.

28 (16.18%) of faculty members of MZU use the Boolean search (AND, OR, NOT) technique less frequently (3) to access e-resources, followed by 23 (13.29%) of faculty members of MZU using Truncation/ wildcard search (and?) technique less frequently (3) to access e-resources, 20 (11.56%) of faculty members of MZU use field-based search (eg.: “Physics”) technique less frequently (3) to access e-resources, 15 (8.67%) of faculty members of MZU use phrase search (eg.: “Use of e-resources”) technique less frequently (3) to access e-resources, and 2 (1.16%) of faculty members of MZU use other search technique less frequently (3) to access e-resources.

While, 19 (17.12%) of faculty members of BBAU use Boolean search (AND, OR, NOT) technique less frequently (3) to access e-resources, followed by 15 (13.51%) of faculty members of BBAU use Truncation/ wildcard search (and?) technique less frequently (3) to access e-resources, 13 (11.71%) of faculty members of BBAU use field-based search (eg.: “Physics”) technique less frequently (3) to access e-resources, 12 (10.81%) of faculty members of BBAU use phrase search (eg.: “Use of e-resources”) technique less frequently (3) to access e-resources, and 1 (0.90%) of faculty members of BBAU use other search technique less frequently (3) to access e-resources.

31 (17.92%) of faculty members of MZU uncertain (2) to use Truncation/ wildcard search (and?) technique to access e-resources, followed by 24 (13.87%) of faculty members of MZU uncertain (2) to use Boolean search (AND, OR, NOT) technique to access e-resources, 10 (5.78%) of faculty members of MZU uncertain (2) to use phrase search (eg.: “Use of e-resources”) technique to access e-resources, 8 (4.62%) of faculty members of MZU uncertain (2) to use field-based search (eg.: “Physics”) technique to

access e-resources, and (0.00%) of faculty members of MZU uncertain (2) to use other search technique to access e-resources.

While, 15 (13.51%) of faculty members of BBAU uncertain (2) to use Boolean search (AND, OR, NOT) technique to access e-resources, followed by 13 (11.71%) of faculty members of BBAU uncertain (2) to use Truncation/ wildcard search (and?) technique to access e-resources, 3 (2.70%) of faculty members of BBAU uncertain (2) to use field-based search (eg.: “Physics”) technique to access e-resources, 3 (2.70%) of faculty members of BBAU uncertain (2) to use phrase search (eg.: “Use of e-resources”) technique to access e-resources, and (0.00%) of faculty members of BBAU uncertain (2) to use other search technique to access e-resources.

91 (52.60%) of faculty members of MZU do not use (1) Truncation/ wildcard search (and?) technique to access e-resources, followed by 68 (39.31%) of faculty members of MZU do not use (1) Boolean search (AND, OR, NOT) technique to access e-resources, 16 (9.25%) of faculty members of MZU do not use (1) field-based search (eg.: “Physics”) technique to access e-resources, 15 (8.67%) of faculty members of MZU do not use (1) phrase search (eg.: “Use of e-resources”) technique to access e-resources, and 2 (1.16%) of faculty members of MZU do not use (1) other search technique to access e-resources.

While, 65 (58.56%) of faculty members of BBAU do not use (1) Truncation/ wildcard search (and?) technique to access e-resources, followed by 44 (39.64%) of faculty members of BBAU do not use (1) Boolean search (AND, OR, NOT) technique to access e-resources, 8 (7.21%) of faculty members of BBAU do not use (1) field-based search (eg.: “Physics”) technique to access e-resources, 3 (2.70%) of faculty members of BBAU do not use (1) phrase search (eg.: “Use of e-resources”) technique to access e-resources, and (0.00%) of faculty members of BBAU do not use (1) other search technique to access e-resources.

Table- 4.37: Preference of Advance Search Technique to Use of E-Resources

Search Technique	Universities		Universities		Universities		Universities		Universities	
	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U	MZ U	BBA U
	5		4		3		2		1	
Boolean search (AND, OR, NOT)	27 (15.6 1)	19 (17.1 2)	26 (15.0 3)	14 (12.6 1)	28 (16.1 8)	19 (17.1 2)	24 (13.8 7)	15 (13.5 1)	68 (39.3 1)	44 (39.6 4)
Truncation/ wildcard search (* and?)	10 (5.78)	6 (5.41)	18 (10.4)	12 (10.8 1)	23 (13.2 9)	15 (13.5 1)	31 (17.9 2)	13 (11.7 1)	91 (52.6)	65 (58.5 6)
Field based search (eg.: “Physics”)	74 (42.7 7)	62 (55.8 6)	55 (31.7 9)	25 (22.5 2)	20 (11.5 6)	13 (11.7 1)	8 (4.62)	3 (2.70)	16 (9.25)	8 (7.21)
Phrase search (eg.: “Use of e-resources”)	90 (52.0 2)	71 (63.9 6)	43 (24.8 6)	22 (19.8 2)	15 (8.67)	12 (10.8 1)	10 (5.78)	3 (2.70)	15 (8.67)	3 (2.70)
Other	(0)	(0)	(0)	(0)	2 (1.16)	1 (0.90)	(0)	(0)	2 (1.16)	(0)
<i>5- Most frequently, 4- Frequently, 3- Less frequently, 2- Uncertain, 1-Do not use</i>										

Note: Figure in parentheses indicate the percentage

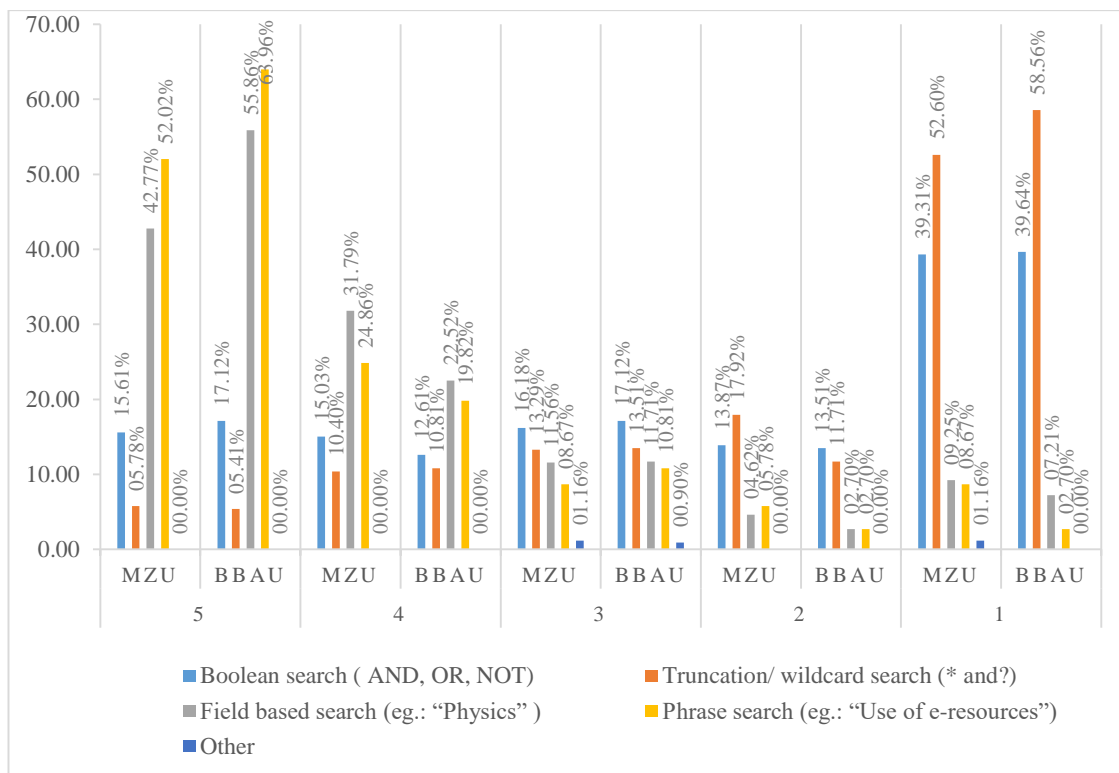


Figure-4.26: Preference of Advance Search Technique to Use of E-Resources

4.40 DIFFICULTIES FACE IN ACCESSING E-RESOURCES THROUGH ONLINE SEARCH MODE

Respondents of both the universities encounter a number of difficulties face in accessing e-resources through online search mode. Table 4.38 expresses the difficulties faced in accessing e-resources through online search mode by the faculty members of both universities. From the table it is found that 149 (52.46%) of faculty members of both universities facing difficulties in slow access speed while accessing e-resources through online mode, followed by 107 (37.68%) of faculty members of both universities facing difficulties in too much time consuming for searching the information while accessing e-resources through online mode, 105 (36.97%) of faculty members of both universities facing difficulties in unorganized elements/contents in a search page while accessing e-resources through online mode, 74 (26.06%) of faculty members of both universities facing difficulties in unfamiliarity with the search methods while accessing e-resources through online mode, 69 (24.30%) of faculty members of both universities facing difficulties in lack of any online help while accessing e-resources through online mode, and 2 (0.70%) of faculty

members of both universities facing difficulties in other search modes while accessing e-resources through online mode.

Table- 4.38: Difficulties Face in Accessing E-Resources through Online Search Mode

Sl. No.	Online access	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	Lack of any online help	41 (23.7)	28 (25.23)	69 (24.3)
b.	Unfamiliarity with the search methods	47 (27.17)	27 (24.32)	74 (26.06)
c.	Unorganized elements/contents in a search page	61 (35.26)	44 (39.64)	105 (36.97)
d.	Too much time consuming for searching the information	62 (35.84)	45 (40.54)	107 (37.68)
e.	Speed of access is slow	89 (51.45)	60 (54.05)	149 (52.46)
f.	Other	1 (0.58)	1 (0.9)	2 (0.7)

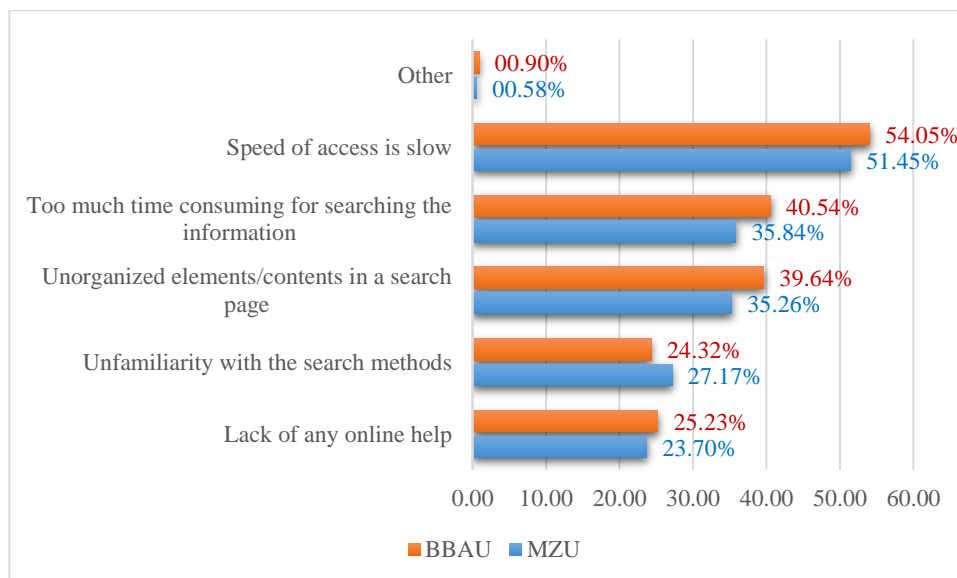


Figure-4.27: Difficulties Face in Accessing E-Resources through Online Search Mode

The above table 4.38 and figure 4.27 also depict university-wise break up of difficulties face in accessing e-resources through online search mode by faculty members of both universities. It has been found that 89 (51.45%) of faculty members of MZU facing difficulties in slow access speed while accessing e-resources through online mode, followed by 62 (35.84%) of faculty members of MZU facing difficulties in too much time consuming for searching the information while accessing e-resources through online mode, 61 (35.26%) of faculty members of MZU facing difficulties in unorganized elements/contents in a search page while accessing e-resources through online mode, 47 (27.17%) of faculty members of MZU facing difficulties in unfamiliarity with the search methods while accessing e-resources through online mode, 41 (23.70%) of faculty members of MZU facing difficulties in lack of any online help while accessing e-resources through online mode, and 1 (0.58%) of faculty members of MZU facing difficulties in other search modes while accessing e-resources through online mode.

While, 60 (54.05%) of faculty members of BBAU faced difficulties in slow access speed while accessing e-resources through online mode, followed by 45 (40.54%) of faculty members of BBAU facing difficulties in too much time consuming for searching the information while accessing e-resources through online mode, 44 (39.64%) of faculty members of BBAU facing difficulties in unorganized elements/contents in a search page while accessing e-resources through online mode,

28 (25.23%) of faculty members of BBAU facing difficulties in lack of any online help while accessing e-resources through online mode, 27 (24.32%) of faculty members of BBAU facing difficulties in unfamiliarity with the search methods while accessing e-resources through online mode, and 1 (0.90%) of faculty members of BBAU facing difficulties in other search modes while accessing e-resources through online mode.

4.41 OPINION ON THE USE OF ELECTRONIC FORMAT OVER PRINT FORMAT

Table 4.39 shows the opinion of the faculty members of both universities on the use of electronic format over print format and it has been found that the highest 253 (89.08%) of faculty members of both universities preferred electronic format for accessing required information over print format and only 31 (10.92%) of faculty members of both universities use print format over electronic format.

Table- 4.39: Opinion on the Use of Electronic Format over Print Format

Sl. No.	Respond	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	Yes	154 (89.02)	99 (89.19)	253 (89.08)
b.	No	19 (10.98)	12 (10.81)	31 (10.92)
Total		173 (100.00)	111 (100.00)	284 (100.00)

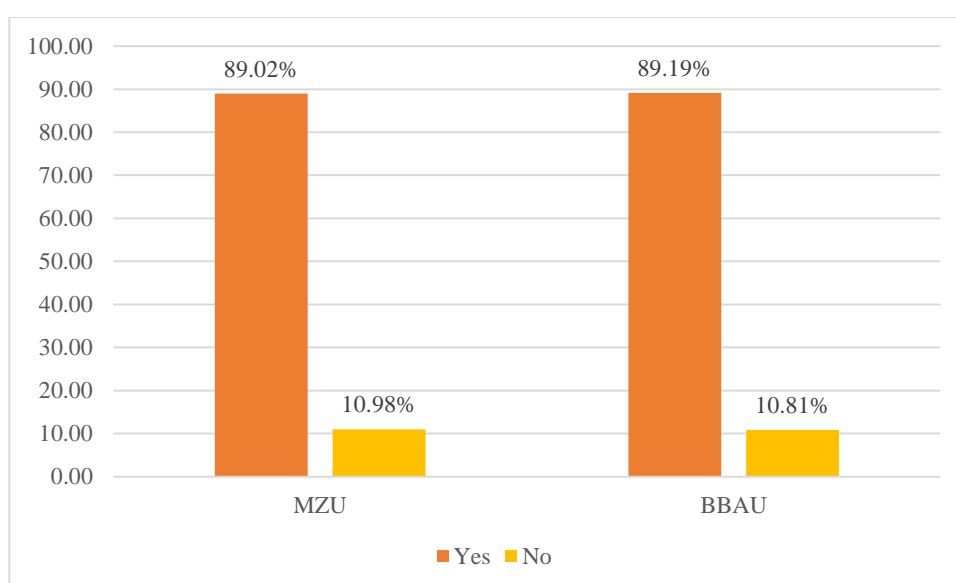


Figure-4.28: Opinion on the Use of Electronic Format over Print Format

The above table 4.39 and figure 4.28 also depict university-wise break up of opinion on the use of electronic format over print format by faculty members of both universities. On the observation of the table and figure it has been found that the highest 154 (89.02%) of faculty members of MZU preferred electronic format for accessing required information over print format and only 19 (10.98%) of faculty members of MZU use print format over electronic format.

While, 99 (89.19%) of faculty members of BBAU preferred electronic format for accessing required information over print format, and only 12 (10.81%) of faculty members of BBAU use print format over electronic format.

4.42 PREFERRED FORMATS OF INFORMATION RESOURCES

Table 4.40 shows the preferred formats of information resources by the faculty members of both universities. It has been found that 192 (67.61%) of faculty members of both universities prefer both print and electronic formats of information resources, followed by 66 (23.24%) of faculty members of both universities prefer only electronic formats of information resources and 26 (9.15%) of faculty members of both universities prefer only print formats of information resources.

Table- 4.40: Preferred Formats of Information Resources

Sl. No.	Prefer formats	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	Print formats	17 (9.83)	9 (8.11)	26 (9.15)
b.	Electronic formats	41 (23.7)	25 (22.52)	66 (23.24)
c.	Both print and electronic formats	115 (66.47)	77 (69.37)	192 (67.61)
Total		173 (100.00)	111 (100.00)	284 (100.00)

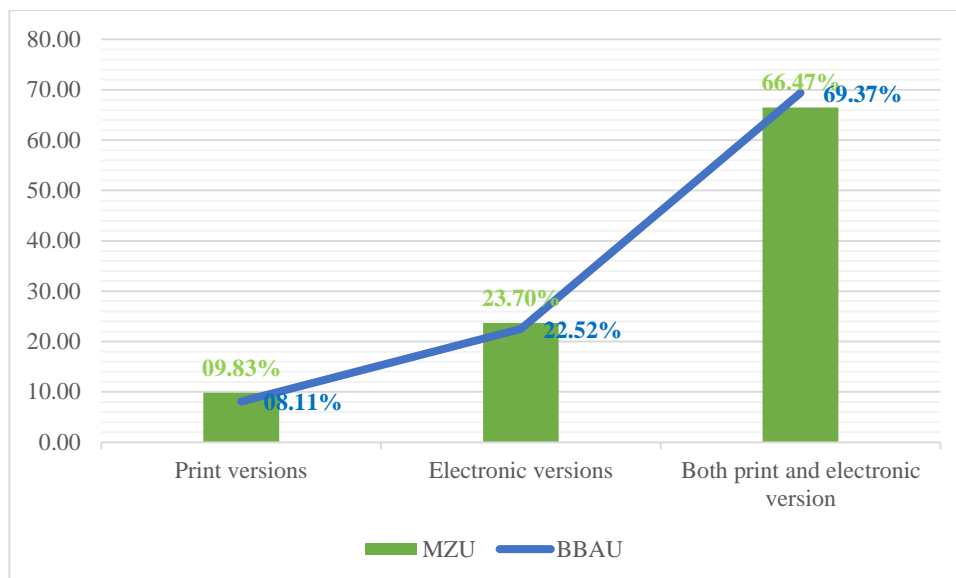


Figure-4.29: Preferred Formats of Information Resources

The above table 4.40 and figure 4.29 also depict university-wise break up of preferred formats of information resources by faculty members of both universities. From the table and figure it has been observed that the maximum 115 (66.47%) of faculty members of MZU prefer both print and electronic formats of information resources, followed by 41 (23.70%) of faculty members of MZU prefer only electronic formats of information resources and 17 (9.83%) of faculty members of MZU prefer only print formats of information resources.

While, 77 (69.37%) of faculty members of BBAU prefer both print and formats of information resources, followed by 25 (22.52%) of faculty members of BBAU prefer only electronic formats of information resources and 9 (8.11%) of faculty members of BBAU prefer only print formats of information resources.

4.43 ATTITUDE OF USING E-RESOURCES AS COMPARED TO PRINT DOCUMENTS

Table 4.41 portrays the opinion, using e-resources in comparison to print documents by the faculty members of both the universities. In regard to comparisons of e-resources with print resources, the study revealed that the majority 274 (96.48%) of respondents of both universities said that e-resources are more flexible to search for required information than print form, followed by 271 (95.42%) of respondents of both universities said that e-resources are easy to use for searching required information than print form, 264 (92.96%) of respondents of both universities said that e-resources

are easy to handle of required information than print form, 262 (92.25%) of respondents of both universities said that e-resources are more preferred to search required information than print form, 260 (91.55%) of respondents of both universities said that e-resources are more informative for required information than print form, 258 (90.85%) of respondents of both universities said that e-resources are less expensive for search required information than print form, 256 (90.14%) of respondents of both universities said that e-resources are more effective to found required information than print form, 255 (89.79%) of respondents of both universities said that e-resources are time saving to search required information than print form, 29 (10.21%) of respondents of both universities said that e-resources are time consuming to search required information than print form, 28 (9.86%) of respondents of both universities said that e-resources are less effective to search required information than print form, 26 (9.15%) of respondents of both universities said that e-resources are more expensive for search required information than print form, 24 (8.45%) of respondents of both universities said that e-resources are less informative to search required information than print form, 22 (7.75%) of respondents of both universities said that e-resources are less preferred to search required information than print form, 20 (7.04%) of respondents of both universities said that e-resources are more complicated to handle information than print form, 13 (4.58%) of respondents of both universities said that e-resources are more complicated to use required information than print form, and 10 (3.52%) of respondents of both universities said that e-resources are less flexible to search required information than print form.

Table- 4.41: Attitude of Using E-Resources as Compared to Print Documents

Sl. No.	Variables	Universities		Total 1 (%) N= 284	Variables	Universities		Total 1 (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111			MZU (%) N= 173	BBAU (%) N= 111	
i.	Time saving	152 (87.86)	103 (92.79)	255 (89.79)	Time consuming	21 (12.14)	8 (7.21)	29 (10.21)
ii.	More informative	158 (91.33)	102 (91.89)	260 (91.55)	Less informative	15 (8.67)	9 (8.11)	24 (8.45)
iii.	More expensive	11 (6.36)	15 (13.51)	26 (9.15)	Less expensive	162 (93.64)	96 (86.49)	258 (90.85)
iv.	Easy to use	167 (96.53)	104 (93.69)	271 (95.42)	Complicated	6 (3.47)	7 (6.31)	13 (4.58)
v.	More preferred	160 (92.49)	102 (91.89)	262 (92.25)	Less preferred	13 (7.51)	9 (8.11)	22 (7.75)
vi.	More flexible	168 (97.11)	106 (95.5)	274 (96.48)	Less flexible	5 (2.89)	5 (4.5)	10 (3.52)
vii.	Easy to handle	164 (94.8)	100 (90.09)	264 (92.96)	Complicated	9 (5.2)	11 (9.91)	20 (7.04)
viii.	More effective	158 (91.33)	98 (88.29)	256 (90.14)	Less effective	15 (8.67)	13 (11.71)	28 (9.86)

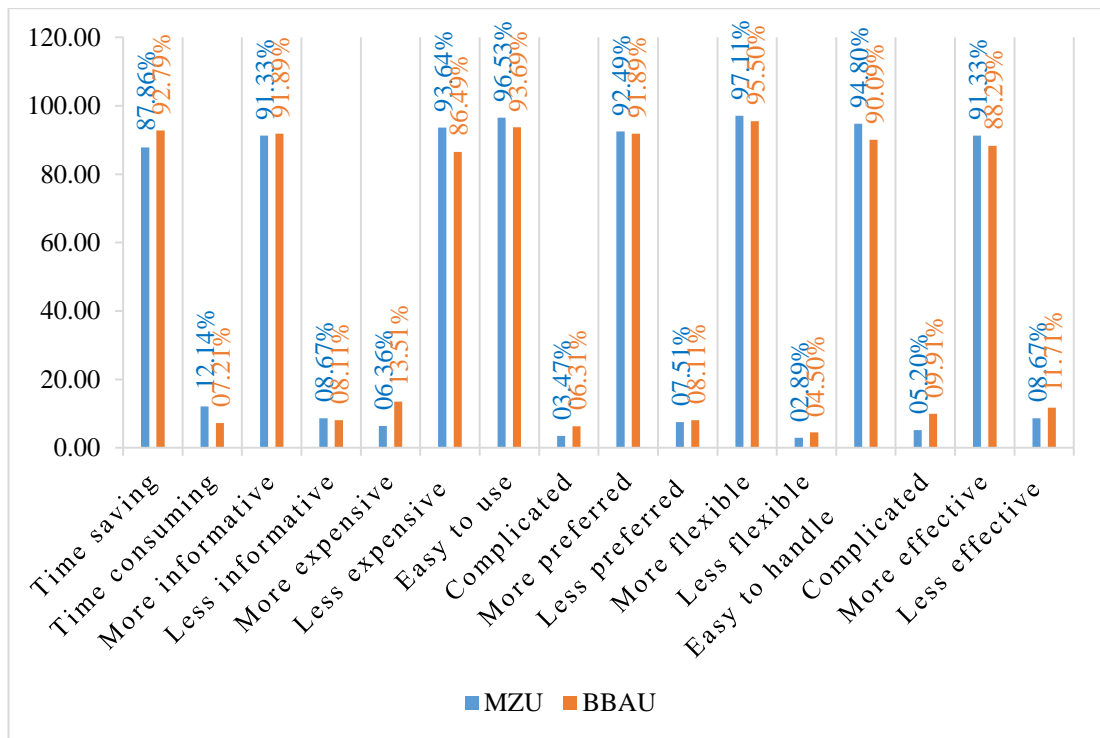


Figure-4.30: Attitude of Using E-Resources as Compared to Print Documents

The above table 4.41 and figure 4.30 also depict university-wise break up of opinion, using e-resources in comparison to print documents by the faculty members of both universities. It has been found that the majority 168 (97.11%) of respondents of MZU said that e-resources are more flexible to search for required information than print form, followed by 167 (96.53%) of respondents of MZU said that e-resources are easy to use for searching required information than print form, 164 (94.80%) of respondents of MZU said that e-resources are easy to handle of required information than print form, 162 (93.64%) of respondents of MZU said that e-resources are less expensive for search required information than print form, 160 (92.49%) of respondents of MZU said that e-resources are more preferred to search required information than print form, 158 (91.33%) of respondents of MZU said that e-resources are more informative for required information than print form, 158 (91.33%) of respondents of MZU said that e-resources are more effective to found required information than print form, 152 (87.86%) of respondents of MZU said that e-resources are time saving to search required information than print form, 21 (12.14%) of respondents of MZU said that e-resources are time consuming to search required information than print form, 15 (8.67%) of respondents of MZU said that e-resources are less informative to search required information than print form, 15 (8.67%) of respondents of MZU said that e-

resources are less effective to search required information than print form, 13 (7.51%) of respondents of MZU said that e-resources are less preferred to search required information than print form, 11 (6.36%) of respondents of MZU said that e-resources are more expensive for search required information than print form, 9 (5.20%) of respondents of MZU said that e-resources are more complicated to handle information than print form, 6 (3.47%) of respondents of MZU said that e-resources are more complicated to use required information than print form, and 5 (2.89%) of respondents of MZU said that e-resources are less flexible to search required information than print form.

While, 106 (95.50%) of respondents of BBAU said that e-resources are more flexible to search for required information than print form, followed by 104 (93.69%) of respondents of BBAU said that e-resources are easy to use for searching required information than print form, 103 (92.7%) of respondents of BBAU said that e-resources are time saving to search required information than print form, 102 (91.89%) of respondents of BBAU said that e-resources are more informative for required information than print form, 102 (91.89%) of respondents of BBAU said that e-resources are more preferred to search required information than print form, 100 (90.09%) of respondents of BBAU said that e-resources are easy to handle of required information than print form, 98 (88.29%) of respondents of BBAU said that e-resources are more effective to found required information than print form, 96 (86.49%) of respondents of BBAU said that e-resources are less expensive for search required information than print form, 15 (13.51%) of respondents of BBAU said that e-resources are more expensive for search required information than print form, 13 (11.71%) of respondents of BBAU said that e-resources are less effective to search required information than print form, 11 (9.91%) of respondents of BBAU said that e-resources are more complicated to use required information than print form, 9 (8.11%) of respondents of BBAU said that e-resources are less informative to search required information than print form, 9 (8.11%) of respondents of BBAU said that e-resources are less preferred to search required information than print form, 8 (7.21%) of respondents of BBAU said that e-resources are time consuming to search required information than print form, 7 (6.31%) of respondents of BBAU said that e-resources are more complicated to handle information than print form, and 5 (4.50%) of

respondents of BBAU said that e-resources are less flexible to search required information than print form.

4.44 PREFERRED FILE FORMAT BY THE RESPONDENTS

There are various file formats are available for citing documents. Table 4.42 shows the different file formats that can retrieve, view, access, and store data. The study revealed that the majority 282 (99.30%) of respondents of both universities prefer PDF file format to review, retrieve and use e-resources, followed by 140 (49.30%) of respondents of both universities prefer PPT file format to review, retrieve and use e-resources, 135 (47.54%) of respondents of both universities prefer MS-Word (Rich Text Format) file format to review, retrieve and use e-resources, 73 (25.70%) of respondents of both universities prefer HTML file format to review, retrieve and use e-resources, and 10 (3.52%) of respondents of both universities prefer other file formats to review, retrieve and use e-resources.

Table- 4.42: Preferred File Format

Sl. No.	File format	Universities		Total (%) N= 284
		MZU (%) N= 173	BBAU (%) N= 111	
a.	PDF	171 (98.84)	111 (100.00)	282 (99.3)
b.	HTML	42 (24.28)	31 (27.93)	73 (25.7)
c.	MS-Word (Rich Text Format)	81 (46.82)	54 (48.65)	135 (47.54)
d.	PPT	82 (47.4)	58 (52.25)	140 (49.3)
e.	Other	6 (3.47)	4 (3.6)	10 (3.52)

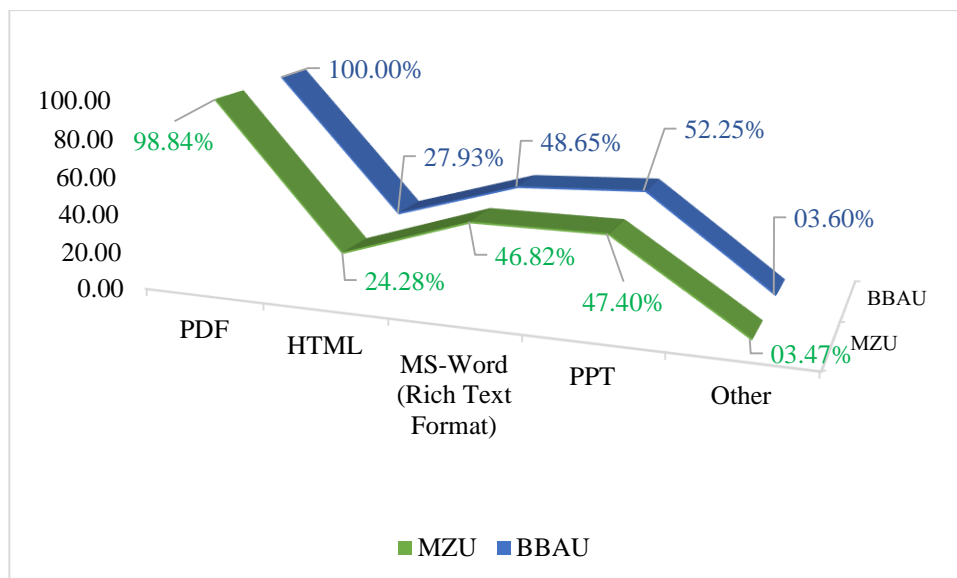


Figure-4.31: Preferred File Format

The above table 4.42 and figure 4.31 also depict university-wise break up of preference of different file formats by the faculty members of both universities. It has been found that the majority 171 (98.84%) of respondents of MZU prefer PDF file format to review, retrieve and use e-resources, followed by 82 (47.40%) of respondents of MZU prefer PPT file format to review, retrieve and use e-resources, 81 (46.82%) of respondents of MZU prefer MS-Word (Rich Text Format) file format to review, retrieve and use e-resources, 42 (24.28%) of respondents of MZU prefer HTML file format to review, retrieve and use e-resources, and 6 (3.47%) of respondents of MZU prefer other file formats to review, retrieve and use e-resources.

Where, 111 (100%) of respondents of BBAU prefer PDF file format to review, retrieve and use e-resources, followed by 58 (52.25%) of respondents of BBAU prefer PPT file format to review, retrieve and use e-resources, 54 (48.65%) of respondents of BBAU prefer MS-Word (Rich Text Format) file format to review, retrieve and use e-resources, 31 (27.93%) of respondents of BBAU prefer HTML file format to review, retrieve and use e-resources, and 4 (3.60%) of respondents of BBAU prefer other file formats to review, retrieve and use e-resources.

4.45 STORAGE MEDIUM PREFERRED BY THE RESPONDENTS

Table 4.43 shows the different storage mediums that data can be stored and retrieved easily by the respondents of both universities. The study reveals that the maximum 264 (92.96%) of faculty members of both universities prefer computer/ laptop as a storage medium for storing e-resources, followed by 209 (73.59%) of faculty members of both universities prefer pen drive as a storage medium for storing e-resources, 150 (52.82%) of faculty members of both universities prefer portable hard disk as a storage medium for storing e-resources, 65 (22.89%) of faculty members of both universities prefer memory card as a storage medium for storing e-resources, 52 (18.31%) of faculty members of both universities prefer compact disk as a storage medium for storing e-resources, 17 (5.99%) of faculty members of both universities prefer DVD as a storage medium for storing e-resources, and 14 (4.93%) of faculty members of both universities prefer another device as a storage medium for storing e-resources.

Table- 4.43: Preferred Storage Medium

Sl. No.	Storage media	Universities		Total (%) <i>N= 284</i>
		MZU (%) <i>N= 173</i>	BBAU (%) <i>N= 111</i>	
a.	Pen Drive	125 (72.25)	84 (75.68)	209 (73.59)
b.	Computer/ Laptop	161 (93.06)	103 (92.79)	264 (92.96)
c.	Compact Disk	31 (17.92)	21 (18.92)	52 (18.31)
d.	DVD	9 (5.20)	8 (7.21)	17 (5.99)
e.	Portable Hard Disk	98 (56.65)	52 (46.85)	150 (52.82)
f.	Memory Card	39 (22.54)	26 (23.42)	65 (22.89)

g.	Other	7 (4.05)	7 (6.31)	14 (4.93)
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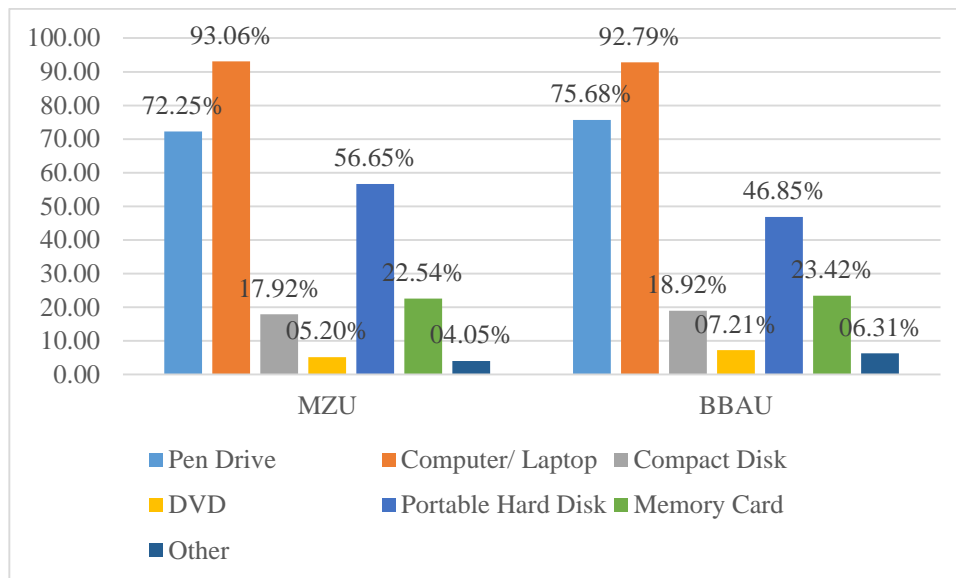


Figure-4.32: Preferred Storage Medium

The above table 4.43 and figure 4.32 also depict university-wise break up of preference of different storage mediums that data can be stored and retrieved easily by the faculty members of both universities. It has been found that the majority 161 (93.06%) of faculty members of MZU prefer computer/ laptop as a storage medium for storing e-resources, followed by 125 (72.25%) of faculty members of MZU prefer pen drive as a storage medium for storing e-resources, 98 (56.65%) of faculty members of MZU prefer portable hard disk as a storage medium for storing e-resources, 39 (22.54%) of faculty members of MZU prefer memory card as a storage medium for storing e-resources, 31 (17.92%) of faculty members of MZU prefer compact disk as a storage medium for storing e-resources, 9 (5.20%) of faculty members of MZU prefer DVD as a storage medium for storing e-resources, and 7 (4.05%) of faculty members of MZU prefer another device as a storage medium for storing e-resources.

While, 103 (92.79%) of faculty members of BBAU prefer computer/ laptop as a storage medium for storing e-resources, followed by 84 (75.68%) of faculty members of BBAU prefer pen drive as a storage medium for storing e-resources, 52 (46.85%) of faculty members of BBAU prefer portable hard disk as a storage medium for storing e-resources, 26 (23.42%) of faculty members of BBAU prefer memory card as a

storage medium for storing e-resources, 21 (18.92%) of faculty members of BBAU prefer compact disk as a storage medium for storing e-resources, 8 (7.21%) of faculty members of BBAU prefer DVD as a storage medium for storing e-resources, and 7 (6.31%) of faculty members of BBAU prefer other devices as a storage medium for storing e-resources.

4.46 PREFERRED READING METHOD OF E-RESOURCES BY THE RESPONDENTS

Table 4.44 shows that the preferred reading method of e-resources by the respondents of both universities. The study reveals that the majority 209 (73.59%) of faculty members of both universities preferred direct reading from the computer screen of e-resources, 184 (64.79%) of faculty members of both universities preferred to save the material in portable devices for further reading of e-resources, 163 (57.39%) of faculty members of both universities preferred to print the resource and read of e-resources, 77 (27.11%) of faculty members of both universities preferred direct reading from the computer screen, save the material in portable devices for further reading, print the resource and read, and e-book reader to read of e-resources, 56 (19.72%) of faculty members of both universities preferred e-book reader to read of e-resources, and only 2 (0.70%) of faculty members of both universities preferred another method to read of e-resources.

Table- 4.44: Preferred Reading Method of E-Resources

Sl. No.	Preferred method of reading	Universities		Total (%) <i>N= 284</i>
		MZU (%) <i>N= 173</i>	BBAU (%) <i>N= 111</i>	
a.	Direct reading from the computer screen	118 (68.21)	91 (81.98)	209 (73.59)
b.	Save the material in portable devices for further reading	109 (63.01)	75 (67.57)	184 (64.79)
c.	Print the resource and read	98 (56.65)	65 (58.56)	163 (57.39)

d.	e-book reader	33 (19.08)	23 (20.72)	56 (19.72)
e.	All the above	45 (26.01)	32 (28.83)	77 (27.11)
f.	Other	1 (0.58)	1 (0.9)	2 (0.7)

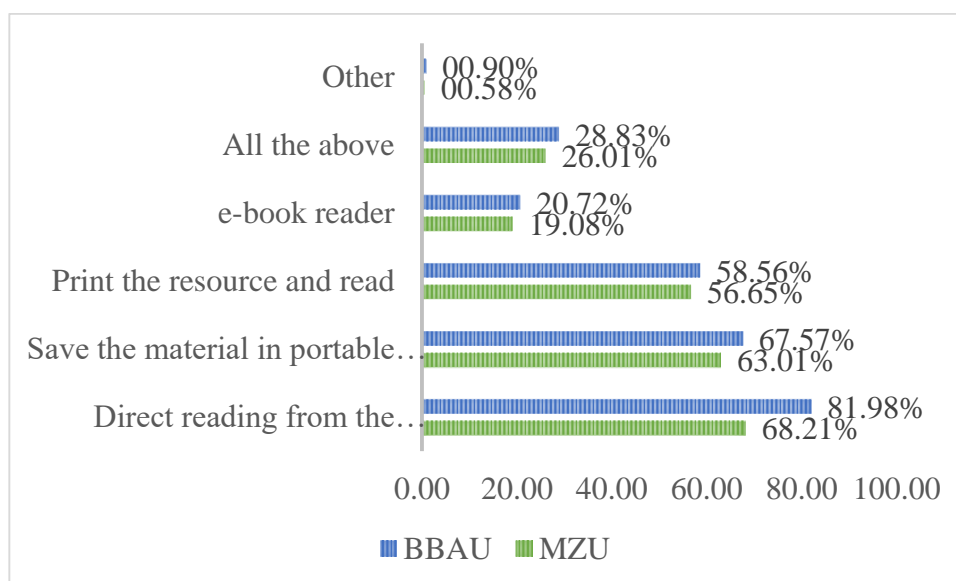


Figure-4.33: Preferred Reading Method of E-Resources

The above table 4.44 and figure 4.33 also depict university-wise breakup of the preferred reading method of e-resources by the respondents of both universities. It has been found that 118 (68.21%) of faculty members of MZU preferred direct reading from the computer screen of e-resources, 109 (63.01%) of faculty members of MZU preferred to save the material in portable devices for further reading of e-resources, 98 (56.65%) of faculty members of MZU preferred to print the resource and read of e-resources, 45 (26.01%) of faculty members of MZU preferred direct reading from the computer screen, save the material in portable devices for further reading, print the resource and read, and e-book reader to read of e-resources, 33 (19.08%) of faculty members of MZU preferred e-book reader to read of e-resources, and only 1 (0.58%) of faculty members of MZU preferred another method to read of e-resources.

While, 91 (81.98%) of faculty members of BBAU preferred direct reading from the computer screen of e-resources, 75 (67.57%) of faculty members of BBAU preferred

to save the material in portable devices for further reading of e-resources, 65 (58.56%) of faculty members of BBAU preferred to print the resource and read of e-resources, 32 (28.83%) of faculty members of BBAU preferred direct reading from the computer screen, save the material in portable devices for further reading, print the resource and read, and e-book reader to read of e-resources, 23 (20.72%) of faculty members of BBAU preferred e-book reader to read of e-resources, and only 1 (0.90%) of faculty members of BBAU preferred another method to read of e-resources.

4.47 DEGREE OF SATISFACTION IN USING E-RESOURCES BY THE RESPONDENTS

Table 4.45 shows that the degree of satisfaction in using e-resources by the faculty members of both universities. From the table, it is found that 191 (67.25%) of faculty members of both universities opined that they are ‘satisfied (75%)’ with the usage of e-resources, followed by 49 (17.25%) of faculty members of both universities opined that they are ‘moderately satisfied (50%)’ with the usage of e-resources, 39 (13.73%) of faculty members of both universities opined that they are ‘extremely satisfied (100%)’ with the usage of e-resources, 3 (1.06%) of faculty members of both universities opined that they are ‘not satisfied’ with the usage of e-resources, and 2 (0.70%) of faculty members of both universities opined that they are ‘slightly satisfied (25%)’ with the usage of e-resources.

Table- 4.45: Degree of Satisfaction in Using E-Resources

Sl. No.	Degree of satisfaction	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	Extremely satisfied (100%)	23 (13.29)	16 (14.41)	39 (13.73)
b.	Satisfied (75%)	119 (68.79)	72 (64.86)	191 (67.25)
c.	Moderately Satisfied (50%)	28 (16.18)	21 (18.92)	49 (17.25)
d.	Slightly satisfied (25%)	2 (1.16)	0 (0)	2 (0.7)
e.	Not satisfied	1 (0.58)	2 (1.8)	3 (1.06)
Total		173 (100.00)	111 (100.00)	284 (100.00)

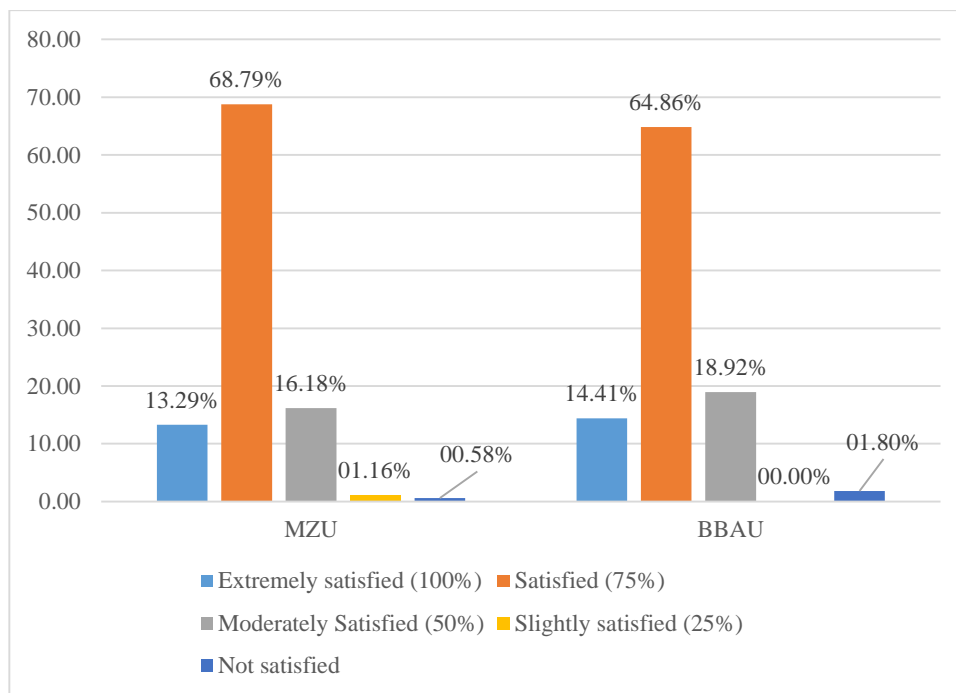


Figure-4.34: Degree of Satisfaction in Using E-Resources

The above table 4.45 and figure 4.34 also depict university-wise breakup of the degree of satisfaction in using e-resources by the respondents of both universities. It has been found that 119 (68.79%) of faculty members of MZU opined that they are ‘satisfied (75%)’ with the usage of e-resources, followed by 28 (16.18%) of faculty members of MZU opined that they are ‘moderately satisfied (50%)’ with the usage of e-resources, 23 (13.29%) of faculty members of MZU opined that they are ‘extremely satisfied (100%)’ with the usage of e-resources, 2 (1.16%) of faculty members of MZU opined that they are ‘slightly satisfied (25%)’ with the usage of e-resources, and 1 (0.58%) of faculty members of MZU opined that they are ‘not satisfied’ with the usage of e-resources.

While 72 (64.86%) of faculty members of BBAU opined that they are ‘satisfied (75%)’ with the usage of e-resources, followed by 21 (18.92%) of faculty members of BBAU opined that they are ‘moderately satisfied (50%)’ with the usage of e-resources, 16 (14.41%) of faculty members of BBAU opined that they are ‘extremely satisfied (100%)’ with the usage of e-resources, and 2 (1.80%) of faculty members of BBAU opined that they are ‘not satisfied’ with the usage of e-resources.

4.48 EXTENT OF DEPENDENCY ON E-RESOURCES PROVIDED BY THE UNIVERSITY LIBRARY

Table 4.46 shows that the extent of dependency on e-resources provided by the university library to the faculty members of both universities. It has been found that 171 (60.21%) of faculty members of both universities depend on e-resources provided by the university library to a moderate extent, followed by 52 (18.31%) of faculty members of both universities depend on e-resources provided by the university library to a great extent, 50 (17.61%) of faculty members of both universities depend on e-resources provided by the university library to a little extent, and 11 (3.87%) of faculty members of both universities did not depend on e-resources provided by the university library.

Table- 4.46: Extent of Dependency on E-Resources Provided by the University Library

Sl. No.	Extent of dependency	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	To a greater extent	31 (17.92)	21 (18.92)	52 (18.31)
b.	To moderate extent	104 (60.12)	67 (60.36)	171 (60.21)
c.	To a little extent	31 (17.92)	19 (17.12)	50 (17.61)
d.	Not at all	7 (4.05)	4 (3.6)	11 (3.87)
Total		173 (100.00)	111 (100.00)	284 (100.00)

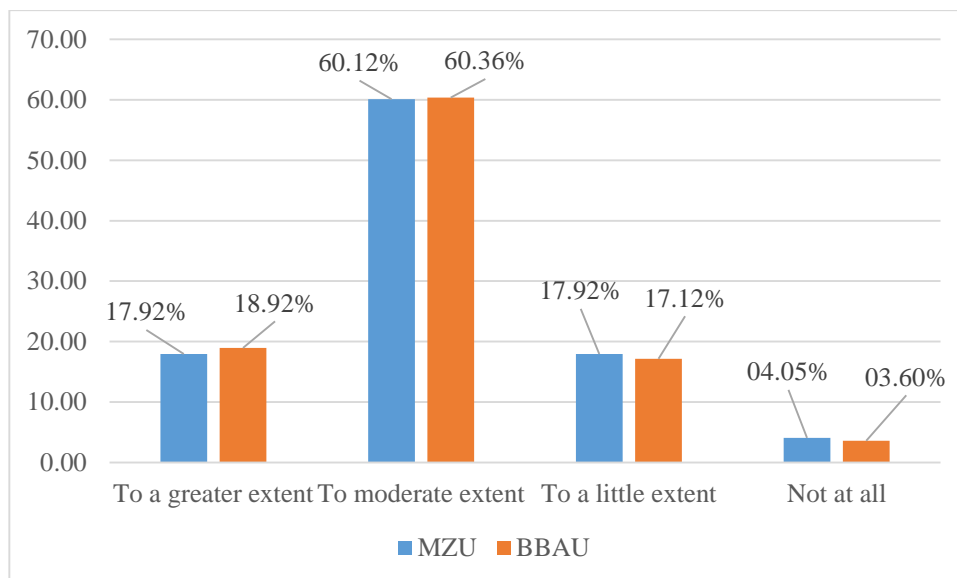


Figure-4.35: Extent of Dependency on E-Resources Provided by the University Library

The above table 4.46 and figure 4.35 also depict university-wise breakup of the extent of dependency on e-resources provided by the university library. It has been found that 104 (60.12%) of faculty members of MZU depend on e-resources provided by the university library to a moderate extent, followed by 31 (17.92%) of faculty members of MZU depend on e-resources provided by the university library to a great extent, 31 (17.92%) of faculty members of MZU depend on e-resources provided by the university library to a little extent, and 7 (4.05%) of faculty members of MZU did not depend on e-resources provided by the university library.

While, 67 (60.36%) of faculty members of BBAU depend on e-resources provided by the university library to a moderate extent, followed by 21 (18.92%) of faculty members of BBAU depend on e-resources provided by the university library to a great extent, 19 (17.12%) of faculty members of BBAU depend on e-resources provided by the university library to a little extent, and 4 (3.60%) of faculty members of BBAU did not depend on e-resources provided by the university library.

4.49 OPINION ON SUFFICIENT TRAINING PROVIDED BY THE LIBRARY STAFF TO USE E-RESOURCES

Table 4.47 shows that the opinion on sufficient training provided by the library staff to use e-resources for the respondents of both universities. It has been shown that 124 (43.66%) of faculty members of both universities agree that library staff provides sufficient training to use e-resources, followed by 112 (39.44%) of faculty members of both universities gave no opinion for sufficient training provided by library staff to use of e-resources, and 48 (16.90%) of faculty members of both universities disagree that library staff provides sufficient training to use of e-resources.

Table- 4.47: Opinion on Sufficient Training Provided by the Library Staff to Use E-Resources

Sl. No.	Response	Universities		Total (%)
		MZU (%)	BBAU (%)	
a.	Agree	73 (42.2)	51 (45.95)	124 (43.66)
b.	Disagree	31 (17.92)	17 (15.32)	48 (16.90)
c.	No opinion	69 (39.88)	43 (38.74)	112 (39.44)
Total		173 (100.00)	111 (100.00)	284 (100.00)

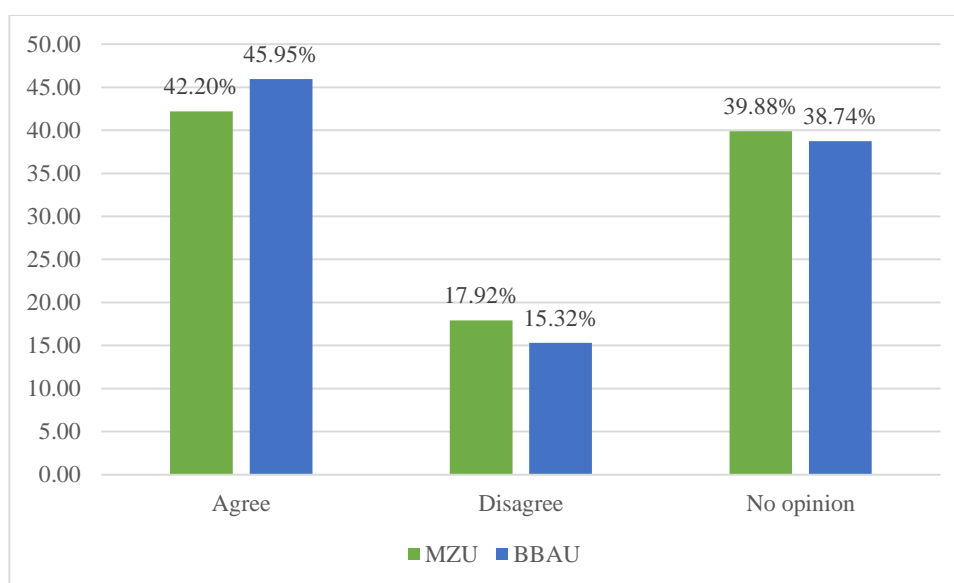


Figure-4.36: Opinion on Sufficient Training Provided by the Library Staff to Use E-Resources

The above table 4.47 and figure 4.36 also depict university-wise breakup of opinion on sufficient training provided by the library staff to use e-resources for the respondents of both universities. It has been found that 73 (42.20%) of faculty members of MZU agree that library staff provides sufficient training to use e-resources, followed by 69 (39.88%) of faculty members of MZU gave no opinion for sufficient training provided by library staff to use e-resources, and 31 (17.92%) of faculty members of MZU disagree that library staff provides sufficient training to use of e-resources.

While, 51 (45.95%) of faculty members of BBAU agree that library staff provides sufficient training to use e-resources, followed by 43 (38.74%) of faculty members of BBAU gave no opinion for sufficient training provided by library staff to use of e-resources, and 17 (15.32%) of faculty members of BBAU disagree that library staff provides sufficient training to use of e-resources.

CHAPTER 5
FINDINGS, CONCLUSION, AND
SUGGESTION

5. INTRODUCTION

The findings of the study demonstrate that the majority of the respondents of both universities use e-resources for teaching and research, despite the fact that the majority of the respondents of both universities are dissatisfied with the university library resources and services. Faculty members of both universities have benefited from the use of e-resources since the output has enhanced their teaching performance and research quality. E-resources offer numerous benefits, including convenience in terms of time and location, timeliness, ability to search immediately, links to more reading, and ability to share knowledge. The usage of library e-resources for academic purposes would boost academic productivity, develop technology abilities, and minimise nervousness when doing research and learning activities.

5.1 FINDINGS ACCORDING TO THE OBJECTIVES OF THE STUDY

1. TO COMPARE THE AWARENESS AND USE OF E-RESOURCES AMONG FACULTY MEMBERS IN BOTH UNIVERSITIES.

1. To search the e-resources for their academic requirements, they rely on the internet and use it frequently. It has been found that all the faculty members of both universities are aware and use the internet to access the e-resources and services for the fulfilment of their academic requirements.

2. The majority of (94.22%) of the respondents of MZU were aware of e-resources that are provided by the university library. While the rest (5.78%) of the respondent of MZU were not aware. However, in BBAU a large number (96.40%) of respondents were aware of e-resources which are provided by the university library, while the rest (3.60%) of respondents of BBAU were not aware. Thus, it is clear that a large number of faculty members of both universities were aware of e-resources which are provided by the library. (Table: 4.12)

3. It has been found that (95.95%) of faculty members of MZU use e-resources and only (4.05%) of faculty members of MZU do not use e-resources. However, in BBAU all (100%) of faculty members were using e-resources. Thus it has been clear that a large number of the respondents of both universities were use e-resources. (Table: 4.13)

4. A large number (93.06%) of faculty members of MZU use e-journal to access required information, followed by (85.55%) use e-books, (75.72%) use e-teaching materials, (68.79%) use e-thesis and dissertation, (64.16%) use e-reference resources (dictionaries, encyclopaedias, etc.), (58.38%) use e-tutorials, (53.18%) use e-conference proceedings, (47.98%) use e-databases, (44.51%) use institution repository, (45.09%) use e-technical reports, (39.88%) use blogs/ wikis, (34.10%) use subject gateways, (28.32%) use e- patents/ e-standards, (26.01%) use e-drawings, and designs, and only (2.89%) of faculty members of MZU use other e-resources. However in BBAU (94.59%) of faculty members use e-journal to access required information, followed by (86.49%) use e-books, (78.38%) use e-teaching materials, (70.27%) use e-thesis and dissertation, (67.57%) use e-reference resources (dictionaries, encyclopaedias etc.), (59.46%) use e-tutorials, (57.66%) use e-conference proceedings, (51.35%) use e-databases, (48.65%) use institution repository (46.85%) use e-technical reports, (39.64%) use blogs/ wikis, (38.74%) use subject gateways, (33.33%) use e- patents/ e-standards, (28.83%) use e-drawings and designs, and only (2.70%) of faculty members of BBAU use other e-resources. (Table: 4.14)

5. It has been found that the respondents of both universities are highly aware of e-resources and databases provided by the E-ShodhSindhu. The maximum (60.12%) of faculty members of MZU are aware and use Springer Link, followed by (56.07%) are aware and use Taylor and Francis, (46.24%) are aware and use JSTORE, (43.93%) are aware and use Scopus, (37.57%) are aware and use Elsevier's Science Direct, (35.84%) are aware and use Web of Science, (34.68%) are aware and use Emerald Insight Full Text, (27.17%) are aware and use Oxford University Press, (23.12%) are aware and use Nature, (16.76%) are aware and use IEEE/ IEE Electronic Library Online, (16.18%) are aware and use Annual Reviews, (13.87%) are aware and use Web of Science Lease Access, (9.83%) are aware and use ProQuest Science, (9.83%) are aware and use Indian Standards, (8.09%) are aware and use American Chemical Society, (8.09%) are aware and use J-Gate Consortia, (7.51%) are aware and use Institute for Studies in Industrial Development (ISID) Database, (6.94%) are aware and use ACM Digital Library, (6.94%) are aware and use Project Muse, (6.94%) are aware and use ciFinder Scholar (6.36%) are aware and use ASME Journals Online, (4.62%) are aware and use ASTM Standards, (4.05%) are aware and use American Physical Society, (4.05%) are aware and use ASCE Journals, (2.89%) are aware and

use other resources, (2.31%) are aware and use Asian CERC Insight, (2.31%) are aware and use Institute of Physics, (1.73%) are aware and use COMPENDEX on Ei Village, (1.73%) are aware and use INSPEC or Ei Village, (1.73%) are aware and use ABI/INFORM Complete, (1.16%) are aware and use MathsSciNet, (1.16%) are aware and use ACCESS Engineering, (1.16%) are aware and use Euromonitor GMID, and only (0.58%) of faculty members of MZU are aware and use EBSCO's Business Sources Premiers. However, in BBAU (78.38%) of faculty members are aware and use JSTORE, followed by (62.16%) are aware and use Springer Link, (56.76%) are aware and use Taylor and Francis, (43.24%) are aware and use Scopus, (37.84%) are aware and use Elsevier's Science Direct, (33.33%) are aware and use Web of Science, (27.03%) are aware and use Nature, (25.23%) are aware and use Oxford University Press, (24.32%) are aware and use Annual Reviews, (18.92%) are aware and use IEEE/IEE Electronic Library Online, (12.61%) are aware and use Emerald Insight Full Text, (12.61%) are aware and use ProQuest Science, (12.61%) are aware and use I-Scholar, (11.71%) are aware and use Web of Science Lease Access, (10.81%) are aware and use American Chemical Society, (10.81%) are aware and use J-Gate Consortia, (10.81%) are aware and use ACM Digital Library, (10.81%) are aware and use Manupatra, (9.01%) are aware and use Indian Standards, (8.11%) are aware and use Institute for Studies in Industrial Development (ISID) Database, (7.21%) are aware and use Project Muse, (7.21%) are aware and use ciFinderScholar, (6.31%) are aware and use ASME Journals Online, (4.5%) are aware and use ASTM Standards, (4.5%) are aware and use American Physical Society, (4.5%) are aware and use ASCE Journals, (2.7%) are aware and use other resources, (2.7%) are aware and use Asian CERC Insight, (2.7%) are aware and use COMPENDEX on Ei Village, (2.7%) are aware and use EBSCO's Business Sources Premiers, (1.8%) are aware and use Institute of Physics, (1.8%) are aware and use INSPEC or Ei Village, (1.8%) are aware and use MathsSciNet, (0.9%) are aware and use ABI/INFORM Complete, (0.9%) are aware and use ACCESS Engineering, (0.9%) are aware and use Euromonitor GMID, and only (0.9%) of respondents of BBAU are aware and use CRIS INFAC Ind. Information. It has been also found that the maximum respondents of both universities use Springer Link, JSTORE, and Taylor and Francis databases which are provided by the Libraries and BBAU have reached a collection of e-resources and databases in comparison to MZU. (Table: 4.17)

6. It has been found that the respondents of both universities are aware of the use of e-resources from various sources. The maximum number (63.01%) of respondents of MZU become aware and use of e-resources by personal communication with friends, subject experts, and resource persons, followed by (62.43%) become aware and use of e-resources by cited in report/ journals/ conference papers, (57.80%) become aware and use of e-resources by bibliographical database searching (Indexing and Abstracting databases), (52.02%) become aware and use of e-resources by e-mail alerts from publishers/ distributors, etc., (43.35%) become aware and use of e-resources by chance, by browsing or looking for materials, (40.46%) become aware and use of e-resources by announcements in journals, (20.23%) become aware and use of e-resources referred by the librarian, and (2.89%) of faculty members of MZU become aware and use of e-resources by other ways. However, the maximum number (64.86%) of respondents of BBAU become aware and use of e-resources by personal communication with friends, subject experts, and resource persons, followed by (63.96%) become aware and use of e-resources by cited in reports/ journals/ conference papers, (56.76%) become aware and use of e-resources by bibliographical database searching (Indexing and Abstracting databases), (50.45%) become aware and use of e-resources by e-mail alerts from publishers/ distributors, etc., (43.24%) become aware and use of e-resources by chance, by browsing or looking for materials, (38.74%) become aware and use of e-resources by announcements in journals, (21.62%) become aware and use of e-resources referred by the librarian, and (2.70%) of faculty members of BBAU become aware and use of e-resources by other ways. (Table: 4.18)

7. A large number (91.91%) of respondents of MZU are learning to use e-resources by self-learning, followed by (45.09%) are learning to use e-resources by attending courses, training, workshops, and seminars, (41.62%) are learning to use e-resources by guidance from other colleagues, (30.06%) are learning to use of e-resources by trial and error method, (15.61%) are learning to use of e-resources by guidance from computing staff/ technicians, (8.09%) are learning to use of e-resources by guidance from library staff, and (2.31%) of respondents of MZU are learning to use of e-resources by other sources. However, a maximum of (90.09%) of respondents of BBAU are learning to use e-resources by self-learning, followed by (46.85%) are learn to use e-resources by attending courses, training, workshops, and seminars, (36.94%) are learning to use e-resources by guidance from other colleagues, (29.73%) are

learning to use of e-resources by trial and error method, (18.92%) are learning to use of e-resources by guidance from computing staff/ technicians, (10.81%) are learning to use of e-resources by guidance from library staff, and (2.70%) of respondents of BBAU are learning to use of e-resources by other sources. (Table: 4.19)

8. The majority (77.46%) of the respondents of MZU are using e-resources through institutional repository while the rest (22.54%) of respondents are not using e-resources through the institutional repository. However, in BBAU a large number (78.38%) of respondents are using e-resources through an instructional repository while the rest (21.62%) of respondents are not using e-resources through the institutional repository. Thus, it is found that a large number of the faculty members of both universities are using e-resources through the institutional repositories. (Table: 4.29)

9. Highest number (82.08%) of faculty members of MZU believe that they access e-resources available through a digital library, and (17.92%) states that they do not. While, (81.98%) of faculty members of BBAU believe that they access e-resources available through a digital library, and (18.02%) states that they do not. (Table: 4.30)

10. Regarding format used by the respondents between electronic and print highest number (89.02%) of faculty members of MZU use electronic resources over print resources, while only (10.98%) are not used e-resources they use print resources. Whereas (89.19%) of faculty members of BBAU use electronic resources over print resources and (10.81%) are not used e-resources they use print resources. (Table: 4.39)

2. TO STUDY THE FREQUENCY, TIME SPENT, AND PURPOSE OF USE OF E-RESOURCES AMONG FACULTY MEMBERS.

1. The majority (68.79%) of faculty members of MZU spent time to use of internet more than three hours to access e-resources and information services, and the rest (31.21%) of faculty members spent time using of internet more than three hours to access e-resources and information services. However, (66.67%) of faculty members of BBAU spent time to use of internet more than three hours to access e-resources and information services, and the rest (33.33%) of faculty members spent time using of internet more than three hours to access e-resources and information services. It found that most of the faculty members use the internet always to search for their required information. (Table: 4.7)

2. There are various purposes to use the internet for online resources, the highest number (97.11%) of respondents of MZU access the internet for reading/ writing research papers, research proposals, and projects, followed by (94.8%) for data communication (sending and receiving E-Mail, FTP, etc.), (93.06%) for accessing teaching materials, (85.55%) for accessing/reading subscribed information resources (e-journals, e- databases, etc.), (83.24%) for accessing /reading general information resources (news, etc.), (64.16%) for downloading software, (64.16%) for voice/ video communication (IP phone, Skype, etc.), (56.07%) to access audio/ visual materials, (54.91%) for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), (48.55%) for entertainment/ recreational (adds, games, movies, songs, etc.), (30.06%) to access OPAC/ EPAC/Web OPAC, and (9.25%) for another purpose to fulfil their information requirements. While (96.4%) of faculty members of BBAU access the internet for reading/ writing research papers, research proposals, and projects, followed by (94.59%) for data communication (sending and receiving E-Mail, FTP, etc.), (90.99%) for accessing teaching materials, (86.49%) for accessing/reading subscribed information resources (e-journals, e-databases, etc.), (84.68%) for accessing /reading general information resources (news, etc.), (63.06%) for downloading software, (61.26%) for voice/ video communication (IP phone, Skype, etc.), (60.36%) to access audio/ visual materials, (54.05%) for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), (47.75%) for entertainment/ recreational (adds, games, movies, songs, etc.), (31.53%) to access OPAC/ EPAC/Web OPAC, and (9.01%) of faculty members of BBAU access internet for other purposes to fulfil their information requirements. It is clear that maximum faculty members of both universities access the internet for the fulfilment of academic purposes. (Table: 4.9)

3. The majority (60.12%) of faculty members of MZU use e-journal daily, followed by (20.18%) use more than twice a week, (12.14%) use once in a week, and (6.94%) use more than twice in a month. However, (65.77%) of faculty members of BBAU use e-journals daily, followed by (21.62%) use more than twice in a week, (8.11%) use e-journals once in a week, and (4.5%) use more than twice in a month. (Table: 4.15)

4. Highest number (39.88%) of respondents of MZU use e-book daily, followed by (30.06%) use more than twice a week, (20.23%) use once in a week, (7.51%) use more than twice in a month, and (2.31%) use once in a month. While (35.14%) of faculty

members of BBAU use daily, followed by (32.43%) use more than twice in a week, (25.23%) use once in a week, (5.41%) use more than twice in a month, and (1.8%) use once in a month. (Table: 4.15)

5. Highest number (13.87%) of respondents of MZU use e-technical reports more than twice a week, followed by (15.61%) use once in a week, (6.36%) use daily, (5.20%) use more than twice in a month, and (4.62%) use once in a month. While (16.22%) of faculty members of BBAU use e-technical reports once in a week, followed by (11.71%) use more than twice in a week, (9.01%) use daily, (5.41%) use more than twice in a month, and (5.41%) use once in a month. (Table: 4.15)

6. Highest number (36.42%) of respondents of MZU use e-conference proceedings daily and also more than twice in a week, (12.72%) use once in a week, (6.36%) use more than twice in a month, and (8.09%) once in a month. While, (36.04%) of faculty members of BBAU use daily, followed by (27.93%) use more than twice in a week, (15.32%) use once in a week, (10.81%) use e-conference proceedings more than twice in a month, and (9.91%) of respondents of BBAU use e-conference proceedings once in a month. (Table: 4.15)

7. Highest number (4.05%) of respondents of MZU use e-drawings and designs daily, followed by (5.78%) use e-drawings and designs more than twice a week, (4.62%) use e-drawings and designs once in a week, (5.78%) use e-drawings and designs more than twice in a month, and (5.78%) of respondents of MZU use e-drawings and designs once in a month. While (4.50%) of faculty members of BBAU use e-drawings and designs daily, followed by (4.50%) use more than twice in a week, (4.50%) use once in a week, (7.21%) use more than twice in a month, (7.21%) once in a month. (Table: 4.15)

8. Highest number (64.16%) of respondents of MZU use e-teaching materials daily, followed by (21.39%) use more than twice a week, (8.67%) use once in a week, (5.20%) use more than twice in a month, and (0.58%) use once in a month. While (68.47%) of faculty members of BBAU use e-teaching materials daily, followed by (17.12%) use more than twice in a week, and (9.91%) use once in a week, (4.50%) use more than twice in a month. (Table: 4.15)

9. Highest number (5.78%) of respondents of MZU use e-patents, e-standards daily, followed by (5.2%) use more than twice a week, (7.51%) use once in a week, (12.14%) use more than twice in a month, (32.95%) use once in a month. While (7.21%) of faculty members of BBAU use e-patents, e-standards daily, followed by (6.31%) use more than twice in a week, (10.81%) use once in a week, (2.70%) use more than twice in a month, and (25.23%) use once in a month. (Table: 4.15)

10. Highest number (46.82%) of faculty members of MZU use e-tutorials more than twice a week, followed by (24.28%) use daily, (8.09%) use once in a week, (8.09%) use more than twice in a month, and (2.89%) use once in a month. While (22.52%) use more than twice in a week, followed by (13.51%) use daily, (9.91%) use once in a week, (9.01%) use more than twice in a month, (3.60%) use once in a month. (Table: 4.15)

11. The majority (30.06%) of respondents of MZU use e-databases more than twice in a month, followed by (24.86%) use e-databases once in a week, (14.45%) use them once in a month, (13.29%) use e-databases daily, and (10.4%) use e-databases more than twice a week. While (14.41%) of faculty members of BBAU use e-databases once in a week, followed by (13.51%) use e-databases daily, (10.81%) use more than twice in a week, (10.81%) use e-databases more than twice in a month, and (3.60%) use e-databases once in a month. (Table: 4.15)

12. Highest number (25.43%) of respondents of MZU use e-thesis and dissertations daily, followed by (25.43%) use e-thesis and dissertations more than twice in a week, (20.81%) use e-thesis and dissertations once in a week, (19.65%) use e-thesis and dissertations more than twice in a month, and (8.67%) use e-thesis and dissertations once in a month. While (29.73%) of faculty members of BBAU use e-thesis and dissertations more than twice in a month, followed by (25.23%) use e-thesis and dissertations once in a week, (20.72%) use e-thesis and dissertations daily, (17.12%) use e-thesis and dissertations more than twice in a week, and (7.21%) use e-thesis and dissertations once in a month. (Table: 4.15)

13. Highest number (36.42%) of respondents of MZU use subject gateways once in a week, followed by (24.28%) use subject gateways more than twice a week, (14.45%) use subject gateways more than twice in a month, (12.72%) use subject gateways once in a month, and (12.14%) use subject gateways daily. While (14.41%) of faculty

members of BBAU use subject gateways once in a week, followed by (8.11%) use subject gateways more than twice in a week, (7.21%) use subject gateways once in a month, (5.41%) use subject gateways daily, and 2.70%) use subject gateways more than twice in a month. (Table: 4.15)

14. Highest number (13.29%) of respondents of MZU use Blogs, Wikis once in a week, followed by (9.25%) use Blogs, Wikis more than twice a week, (8.09%) use Blogs, Wikis daily, (6.94%) use Blogs, Wikis more than twice in a month, and (3.47%) use Blogs, Wikis once in a month. While (12.61%) of faculty members of BBAU use Blogs, Wikis once in a week, followed by (8.11%) use Blogs, Wikis daily, (8.11%) use Blogs, Wikis more than twice in a week, (7.21%) use Blogs, Wikis more than twice in a month, (4.50%) use Blogs, Wikis once in a month. (Table: 4.15)

15. Highest number (35.26%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a week, followed by (30.06%) use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice a week, (21.39%) use e-reference resources (Dictionaries, encyclopaedias, etc.) daily, (8.09%) use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a month, and (5.20%) use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a month. While (34.23%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) daily, followed by (34.23%) use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a week, (18.92%) use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a week, (8.11%) use e-reference resources (Dictionaries, encyclopaedias, etc.) more than twice in a month, (4.50%) use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a month. (Table: 4.15)

16. Highest number (29.48%) of respondents of MZU use institutional repository once in a week, followed by (25.43%) use institutional repository once in a month, (21.39%) use institutional repository more than twice a week, (15.61%) use institutional repository more than twice in a month, and (8.09%) use institutional repository daily. While (13.51%) of respondents of BBAU use institutional repository once in a month, followed by (10.81%) use institutional repository once in a week, (9.91%) use institutional repository daily, (7.21%) use institutional repository more than twice in a

week, and (7.21%) use institutional repository more than twice in a month. (Table: 4.15)

17. Highest number (42.77%) of faculty members of MZU have experience in using e-resources above 10 years, followed by (20.23%) who have experience in using e-resources between 5-7 years, (18.50%) have experience in using e-resources between 8-10 years, (13.87%) have experience in using e-resources between 2-4 years, and (4.62%) have experience in using e-resources less than one year. While, (45.05%) of faculty members of BBAU have experience in using e-resources above 10 years, followed by (19.82%) have experience in using e-resources between 8-10 years, (18.92%) have experience in using e-resources between 5-7 years, (12.61%) have experience in using e-resources between 2-4 years, and (3.60%) have experience in using e-resources less than one year. (Table: 4.20)

18. Highest number (94.80%) of faculty members of MZU use e-resources for the purpose of reading/ writing research papers, followed by (85.55%) use e-resources for the purpose of reading/ writing research proposals, reports, and projects, (82.08%) use e-resources for the purpose of preparing/ accessing teaching materials, (75.72%) use e-resources for the purpose of preparation for seminars, conference, and workshop, (63.01%) use e-resources for the purpose of curriculum design, (54.91%) use e-resources for the purpose of basic scientific and technical information, (52.02%) use e-resources to collect general information, (42.77%) use e-resources for the purpose of access audio/ visual materials, (24.28%) use e-resources for the purpose of drawings, designs, graphs and patents, and only (0.58%) use e-resources for other purposes. However, Highest number (93.69%) of faculty members of BBAU use e-resources for the purpose of reading/ writing research papers, followed by (83.78%) use e-resources for the purpose of reading/ writing research proposals, reports, and projects, (81.98%) use e-resources for the purpose of preparing/ accessing teaching materials, (72.97%) use e-resources for the purpose of preparation for seminars, conference, and workshop, (65.77%) use e-resources for the purpose of curriculum design, (58.56%) use e-resources for the purpose of basic scientific and technical information, (53.15%) use e-resources to collect general information, (50.45%) use e-resources for the purpose of access audio/ visual materials, (28.83%) use e-resources for the purpose of drawings, designs, graphs and patents, and only (0.90%) use e-resources for other purposes. (Table: 4.21)

19. A maximum number (64.74%) of faculty members of MZU are using keyword search method to access e-resources most frequently, followed by (62.43%) are using title search method to access e-resources most frequently, (48.55%) are using subject search method to access e-resources most frequently, (43.93%) are using author search method to access e-resources most frequently, (13.87%) are using publisher search method to access e-resources most frequently, (4.62%) are using author address search method to access e-resources most frequently, and (1.16%) are using author address search method to access e-resources most frequently. While (55.86%) of faculty members of BBAU are using keyword search method to access e-resources most frequently, followed by (54.95%) are using title search method to access e-resources most frequently, (51.35%) are using author search method to access e-resources most frequently, (49.55%) are using subject search method to access e-resources most frequently, (17.12%) are using publisher search method to access e-resources most frequently, (2.70%) are using author address search method to access e-resources most frequently, and (0.90%) are using author address search method to access e-resources most frequently. (Table: 4.36)

20. The majority (29.48%) of faculty members of MZU using the title search method to access e-resources frequently, followed by (27.75%) are using the subject search method to access e-resources frequently, (21.39%) are using the author search method to access e-resources frequently, (20.23%) are using publisher search method to access e-resources frequently, (19.08%) are using keyword search method to access e-resources frequently, and (9.83%) are using author address search method to access e-resources frequently. While, (38.74%) of faculty members of BBAU are using publisher search method to access e-resources frequently, followed by (34.23%) are using author search method to access e-resources frequently, (29.73%) are using subject search method to access e-resources frequently, (19.82%) are using keyword search method to access e-resources frequently, (16.22%) are using title search method to access e-resources frequently, and (7.21%) are using author address search method to access e-resources frequently. (Table: 4.36)

21. Highest number (30.64%) of faculty members of MZU are using publisher search method to access e-resources less frequently, followed by (22.54%) are using author search method to access e-resources less frequently, (18.50%) are using subject search method to access e-resources less frequently, (14.45%) are using author address search

method to access e-resources less frequently, (8.09%) are using keyword search method to access e-resources less frequently, (5.78%) are using title search method to access e-resources less frequently, and (0.58%) are using author address search method to access e-resources less frequently. While, (21.62%) of faculty members of BBAU are using publisher search method to access e-resources less frequently, followed by (18.02%) are using title search method to access e-resources less frequently, (16.22%) are using keyword search method to access e-resources less frequently, (15.32%) are using subject search method to access e-resources less frequently, (14.41%) are using author address search method to access e-resources less frequently, (10.81%) are using author search method to access e-resources less frequently, and (0.90%) are using author address search method to access e-resources less frequently. (Table: 4.36)

22. Highest number (19.65%) of faculty members of MZU are uncertain about using publisher search method to access e-resources, followed by (17.92%) are uncertain to using author address search method to access e-resources, (7.51%) are uncertain to using author search method to access e-resources, (5.78%) are uncertain to using keyword search method to access e-resources, (3.47%) are uncertain to using subject search method to access e-resources, and (0.58%) are uncertain to using title search method to access e-resources. While, (24.32%) of faculty members of BBAU are uncertain about using the author address search method to access e-resources, followed by (14.41%) are uncertain about using the publisher search method to access e-resources, (5.41%) are uncertain about using the title search method to access e-resources, (5.41%) are uncertain to using keyword search method to access e-resources, (3.60%) are uncertain to using subject search method to access e-resources, and (0.90%) are uncertain to using author search method to access e-resources. (Table: 4.36)

23. Highest number (53.18%) of faculty members of MZU do not use the author address search method to access e-resources, followed by (15.61%) who do not use the publisher search method to access e-resources, (4.62%) are do not using the author search method to access e-resources, (2.31%) are do not using keyword search method to access e-resources, (1.73%) are do not using subject search method to access e-resources, and (1.73%) are do not using title search method to access e-resources. While, (51.35%) of faculty members of BBAU do not use the author address search method to access e-resources, followed by (8.11%) are do not using the publisher

search method to access e-resources, (5.41%) are do not using the title search method to access e-resources, (2.70%) are do not using author search method to access e-resources, (2.70%) are do not using keyword search method to access e-resources, and (1.80%) are do not using subject search method to access e-resources. (Table: 4.36)

3. TO FIND OUT THE EXTENT OF USE OF E-RESOURCES AMONG FACULTY MEMBERS.

1. Highest number (60.12%) of faculty members of MZU depend on e-resources provided by the university library to a moderate extent, followed by (17.92%) depend on e-resources to a great extent, (17.92%) depend on e-resources to a little extent, and (4.05%) did not depend on e-resources provided by the university library. While, (60.36%) of faculty members of BBAU depend on e-resources provided by the university library to a moderate extent, followed by (18.92%) depend on e-resources provided to a great extent, (17.12%) depend on e-resources to a little extent, and (3.60%) did not depend on e-resources provided by the university library. (Table: 4.46)

2. Most (86.13%) of the faculty members of MZU visit the library website for accessing e-resources and the rest (13.87%) do not visit the library website. While, (84.68%) of faculty members of BBAU visit the library website for accessing e-resources, and rest (15.32%) are not visit the library website. (Table: 4.27)

3. The majority (82.08%) of the faculty members of MZU opinion that library websites serve as a medium for their required information and (17.92%) assert that they do not. While, (81.98%) of faculty members of BBAU opinion that library websites serve as a medium for their required information and (18.02%) assert that they do not. (Table: 4.28)

4. The maximum (64.74%) of faculty members of MZU rate as good for their usefulness of e-resources, followed by (55.49%) rate as good for their comprehensiveness of e-resources, (54.91%) rate as good for their easy to use of e-resources, (53.76%) rate as good for their accessibility of e-resources, (53.18%) rate as good for their flexibility of e-resources, (52.60%) rate as good for their organized information of e-resources, (52.02%) rate as good for their up-to-date information of e-resources, (49.13%) rate as good for their hypertext links of e-resources, (44.51%) rate as good for their access speed of e-resources, and (1.16%) rated as good for their other features of e-resources. However, (65.77%) of faculty members of BBAU rate

as good for their usefulness of e-resources, followed by (63.96%) rate as good for their flexibility of e-resources, (58.56%) rate as good for their comprehensiveness of e-resources, (56.76%) rate as good for their up-to-date information of e-resources, (53.15%) rate as good for their access speed of e-resources, (53.15%) rate as good for their hypertext links of e-resources, (52.25%) rate as good for their organized information of e-resources, (51.35%) rate as good for their accessibility of e-resources, (50.45%) rate as good for their easy to use of e-resources, and (1.80%) rated as good for their other features of e-resources. (Table: 4.34)

5. The majority (37.57%) of the faculty members of MZU rate as excellent for their easy to use of e-resources, followed by (29.48%) rate as excellent for their up-to-date information of e-resources, (27.17%) rate as excellent for their accessibility of e-resources, (23.70%) rate as excellent for their flexibility of e-resources, (21.97%) rate as excellent for their usefulness of e-resources, (16.18%) rate as excellent for their comprehensiveness of e-resources, (15.03%) rate as excellent for their organized information of e-resources, (14.45%) rate as excellent for their access speed of e-resources, and (12.14%) rated as excellent for their hypertext links of e-resources. While, (43.24%) of faculty members of BBAU rate as excellent for their easy to use of e-resources, followed by (30.63%) rate as excellent for their accessibility of e-resources, (27.93%) rate as excellent for their up-to-date information of e-resources, (23.42%) rate as excellent for their usefulness of e-resources, (16.22%) rate as excellent for their access speed of e-resources, (16.22%) rate as excellent for their flexibility of e-resources, (15.32%) rate as excellent for their comprehensiveness of e-resources, (13.51%) rate as excellent for their organized information of e-resources, and (9.01%) rated as excellent for their hypertext links of e-resources. (Table: 4.34)

6. Highest number (37.57%) of faculty members of MZU rate as fair for their access speed of e-resources, followed by (31.21%) rated as fair for their hypertext links of e-resources, (27.17%) rate as fair for their organized information of e-resources, (24.28%) rate as fair for their comprehensiveness of e-resources, (21.39%) rate as fair for their flexibility of e-resources, (16.76%) rate as fair for their up-to-date information of e-resources, (16.18%) rate as fair for their accessibility of e-resources, (12.14%) rate as fair for their usefulness of e-resources, (5.78%) rate as fair for their easy to use of e-resources, and (1.16%) rated as fair for their other features of e-resources. While, (34.23%) of faculty members of BBAU rate as fair for their hypertext links of e-

resources, followed by (30.63%) rated as fair for their organized information of e-resources, (27.03%) rate as fair for their access speed of e-resources, (23.42%) rate as fair for their comprehensiveness of e-resources, (18.02%) rate as fair for their flexibility of e-resources, (16.22%) rate as fair for their accessibility of e-resources, (13.51%) rate as fair for their up-to-date information of e-resources, (9.91%) rate as fair for their usefulness of e-resources, (5.41%) rate as fair for their easy to use of e-resources, and (1.80%) rated as fair for their other features of e-resources. (Table: 4.34)

7. Highest number (7.51%) of faculty members of MZU rate as poor for their hypertext links of e-resources, followed by (5.20%) rated as poor for their organized information of e-resources, (4.05%) rated as poor for their comprehensiveness of e-resources, (3.47%) rated as poor for their access speed of e-resources, (2.89%) rated as poor for their accessibility of e-resources, (1.73%) rated as poor for their flexibility of e-resources, (1.73%) rated as poor for their easy to use of e-resources, (1.73%) rated as poor for their up-to-date information of e-resources, and (1.16%) rated as poor for their usefulness of e-resources. While, (3.60%) of faculty members of BBAU rate as poor for their hypertext links of e-resources, followed by (3.60%) rated as poor for their organized information of e-resources, (3.60%) rated as poor for their access speed of e-resources, (2.70%) rated as poor for their comprehensiveness of e-resources, (1.80%) rated as poor for their flexibility of e-resources, (1.80%) rated as poor for their accessibility of e-resources, (1.80%) rated as poor for their up-to-date information of e-resources, (0.90%) rated as poor for their usefulness of e-resources, and (0.90%) rated as poor for their easy to use of e-resources. (Table: 4.34)

4. TO FIND OUT THE LEVEL OF SATISFACTION TOWARDS THE USE OF E-RESOURCES AMONG FACULTY MEMBERS.

1. The majority (75.14%) of the faculty members of MZU satisfied with facilities provided by the university library, and (24.86%) are not satisfied. While, (74.77%) of faculty members of BBAU are satisfied with the facilities provided by the university library, and (25.23%) are not satisfied. (Table: 4.31)

2. Highest number (60.69%) of faculty members of MZU opined that they are satisfied with the facilities available in the university for accessing e-resources, followed by (22.54%) opined that they are moderately satisfied, (9.83%) opined that they are extremely satisfied, and (6.94%) opined that they are slightly satisfied with the

facilities available in the university for accessing e-resources. While, (58.56%) of faculty members of BBAU opined that they are satisfied with the facilities available in the university for accessing e-resources, followed by (24.32%) opined that they are moderately satisfied, (9.91%) opined that they are extremely satisfied, and (7.21%) opined that they are slightly satisfied with the facilities available in the university for accessing e-resources. (Table: 4.32)

3. The majority (56.07%) of the faculty members of MZU agree with the opinion that library staff take a personal interest and are polite as well as courteous in facilitating access to e-resources, followed by (27.75%) strongly agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, (11.56%) uncertain with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, (2.89%) disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, and (1.73%) strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources. While, (55.86%) of faculty members of BBAU agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, followed by (26.13%) strongly agree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, (15.32%) uncertain with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, (1.80%) disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources, and (0.90%) strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources. (Table: 4.33)

4. The majority (41.62%) of the faculty members of MZU agree with the opinion that library staff demonstrates and teach how to use CD-ROM, database/ online database, followed by (30.64%) uncertain with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, (17.92%) strongly agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, (7.51%) disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, and (2.31%) strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database. While,

(51.35%) of faculty members of BBAU agree with the opinion that library staff demonstrate and teach how to use CD-ROM, database/ online database, followed by (27.93%) uncertain with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, (12.61%) strongly agree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, (7.21%) disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database, and (0.90%) strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database. . (Table: 4.33)

5. It is found that (50.87%) of faculty members of MZU agree with the opinion that library staff are well trained in accessing e-resources and are up to date in their knowledge, followed by (31.79%) uncertain with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, (14.45%) strongly agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, (1.73%) disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, and (1.16%) strongly disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge. While, (46.85%) of faculty members of BBAU agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, followed by (28.83%) uncertain with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, (23.42%) strongly agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, and (0.90%) disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge. (Table: 4.33)

6. Highest number (41.04%) of faculty members of MZU agree with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, followed by (39.31%) uncertain with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, (13.87%) strongly agree with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, (4.05%) disagree with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, and (1.73%) strongly disagree

with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information. While, (48.65%) of faculty members of BBAU agree with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, followed by (26.13%) uncertain with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, (18.92%) strongly agree with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, (4.50%) disagree with the opinion that they are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, and (1.80%) strongly disagree with the opinion that is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information. (Table: 4.33)

8. The majority (68.79%) of the faculty members of MZU opined that they are satisfied with the usage of e-resources, followed by (16.18%) opined that they are moderately satisfied with the usage of e-resources, (13.29%) opined that they are extremely satisfied with the usage of e-resources, (1.16%) opined that they are slightly satisfied with the usage of e-resources, and (0.58%) opined that they are not satisfied with the usage of e-resources. While, (64.86%) of faculty members of BBAU opined that they are satisfied with the usage of e-resources, followed by (18.92%) opined that they are moderately satisfied with the usage of e-resources, (14.41%) opined that they are extremely satisfied with the usage of e-resources, and (1.80%) opined that they are not satisfied with the usage of e-resources. (Table: 4.45)

5. TO IDENTIFY THE PROBLEMS AND PROSPECTS FOR IMPROVING THE USE OF E-RESOURCES AMONG FACULTY MEMBERS.

1. The majority (76.88%) of faculty members of MZU facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by (43.35%) are facing problems of server down while accessing the internet, (34.10%) are facing problems of slow processing of computer/ machine while accessing the internet, (25.43%) are facing problems for lack of authenticity/ reliability of resources while accessing the internet, (21.39%) are facing problems of frequent power failure while accessing the internet, (19.08%) are facing problems for getting unsynchronized information while accessing the internet, (6.94%) are facing problems of changes in

URL while accessing the internet, and (6.94%) are facing problems in other things while accessing the internet. However (75.68%) of faculty members of BBAU are facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by (43.24%) are facing problems of server down while accessing the internet, (34.23%) are facing problems of slow processing of computer/ machine while accessing the internet, (28.83%) are facing problems for lack of authenticity/ reliability of resources while accessing the internet, (18.92%) are facing problems of frequent power failure while accessing the internet, (19.82%) are facing problems for getting unsynchronized information while accessing the internet, (9.01%) are facing problems of changes in URL while accessing the internet, and (8.11%) are facing problems in other things while accessing the internet. (Table: 4.11)

2. Highest number (65.90%) of faculty members of MZU faced problems while using/ accessing e-resources and (34.10%) of faculty members of MZU did not face any problem. While, (64.86%) of faculty members of BBAU faced problems while using/ accessing e-resources, and (35.14%) of faculty members of BBAU did not face any problem. (Table: 4.23)

3. The majority (51.45%) of faculty members of MZU faced the problem of poor connectivity (low bandwidth) while accessing e-resources, followed by (30.64%) are faced the problem of retrieval of irrelevant/ junk information while accessing e-resources, (18.5%) are faced the problem of non-availability of the latest software (to view, read and write accessed information) while accessing e-resources, (17.92%) are faced the problem of unfamiliar file formats while accessing e-resources, (16.76%) are faced the problem of unorganized information content while accessing e-resources, (13.29%) are faced the problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, (10.98%) are faced the problem of change in URL while accessing e-resources, (9.25%) are faced the problem of change of the content/ information while accessing e-resources, (7.51%) are faced the problem of lack of assistance from library staff while accessing e-resources, and (7.51%) are faced other problem while accessing e-resources. While, (48.65%) of faculty members of BBAU faced the problem of poor connectivity (low bandwidth) while accessing e-resources, followed by (35.14%) are faced the problem of retrieval of irrelevant/ junk information while accessing e-resources, (18.92%) have faced the problem of unfamiliar file formats and unorganized information content while accessing e-

resources, (18.02%) have faced the problem of non-availability of the latest software (to view, read and write accessed information) while accessing e-resources, (16.22%) have faced the problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, (12.61%) have faced the problem of change in URL while accessing e-resources, (11.71%) have faced the problem of change of the content/ information while accessing e-resources, (9.01%) have faced the problem of lack of assistance from library staff while accessing e-resources, and (6.31%) are faced other problem while accessing e-resources. (Table: 4.24)

4. Highest number (51.45%) of faculty members of MZU facing difficulties in slow access speed while accessing e-resources through online mode, followed by (35.84%) are facing difficulties in too much time consuming for searching the information while accessing e-resources through online mode, (35.26%) are facing difficulties in unorganized elements/contents in a search page while accessing e-resources through online mode, (27.17%) are facing difficulties in unfamiliarity with the search methods while accessing e-resources through online mode, (23.70%) are facing difficulties in lack of any online help while accessing e-resources through online mode, and (0.58%) are facing difficulties in other search modes while accessing e-resources through online mode. While, (54.05%) of faculty members of BBAU facing difficulties in slow access speed while accessing e-resources through online mode, followed by (40.54%) are facing difficulties in too much time consuming for searching the information while accessing e-resources through online mode, (39.64%) are facing difficulties in unorganized elements/contents in a search page while accessing e-resources through online mode, (25.23%) are facing difficulties in lack of any online help while accessing e-resources through online mode, (24.32%) are facing difficulties in unfamiliarity with the search methods while accessing e-resources through online mode, (0.90%) are facing difficulties in other search modes while accessing e-resources through online mode. (Table: 4.38)

5. The majority (95.38%) of the faculty members of MZU motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by (89.6%) motivated to use the internet for online submission of papers to Journals/ Conferences/ Seminars, etc., (83.82%) motivated to use the internet to easy access to information resources, (74.57%) motivated to use the internet to know about latest rules, and regulations related to academic activities, (71.68%) motivated to use

the internet for 24X7 access of resources, (61.85%) motivated to use the internet because the internet provides faster communication for social networking, (61.27%) motivated to use the internet for user-friendly search engines, and (7.51%) motivated to use the internet for other factors. While (93.69%) of faculty members of BBAU were motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by (87.39%) motivated to use the internet for online submission of papers to Journals/ Conferences/ Seminars, etc., (83.78%) motivated to use the internet to easy access to information resources, (74.77%) motivated to use the internet to know about latest rules, and regulations related to academic activities, (69.37%) motivated to use the internet for 24X7 access of resources, (61.26%) motivated to use the internet because the internet provides faster communication for social networking, (60.36%) motivated to use the internet for user-friendly search engines, and (7.21%) motivated to use the internet for other factors. (Table: 4.10)

6. Highest number (82.66%) of faculty members of MZU are benefited from using e-resources for access to up-to-date information, followed by (80.35%) are benefited from using e-resources for time-saving, (76.88%) are benefited from using e-resources for a better source of information, (74.57%) are benefited from using e-resources for improvement in the quality of professional work, (69.94%) are benefited using e-resources for 24×7 access, (65.32%) are benefited using e-resources for easy portability, (54.34%) are benefited using e-resources for information available in various formats as per the need, and (2.89%) are using e-resources for other benefits. While, (81.08%) of faculty members of BBAU are benefited from using e-resources for access to up-to-date information, followed (80.18%) are benefited from using e-resources for time-saving, (72.97%) are benefited from using e-resources for a better source of information, (72.97%) are benefited from using e-resources for 24×7 access, (71.17%) are benefited using e-resources for improvement in the quality of professional work, (68.47%) are benefited using e-resources for easy portability, (55.86%) are benefited using e-resources for information available in various formats as per the need, and 3.60% are using e-resources for other benefits. (Table: 4.22)

7. Highest number (86.71%) of respondents of MZU want to improve their skill for using/ accessing e-resources and (13.29%) contend that they do not. While, (86.49%)

of respondents of BBAU want to improve skills for using/ accessing e-resources and (13.51%) contend that they do not. (Table: 4.25)

8. The majority(61.85%) of faculty members of MZU want to improve skill for using e-resources by attending workshops/ seminars, followed by (56.65%) want to improve skill for using e-resources by a discussion with experts, (52.02%) want to improve skill for using e-resources by attending Orientation/ training programs, (45.66%) want to improve skill for using e-resources by a discussion with colleagues (41.04%) want to improve skill for using e-resources by referring user manuals/guides, etc., (33.53%) want to improve skill for using e-resources by e-mail assistance, (2.89%) want to improve skill for using e-resources by other methods. While, (58.56%) of faculty members of BBAU want to improve their skill for using e-resources by attending workshops/ seminars, followed by (57.66%) want to improve their skill for using e-resources by attending Orientation/ training programs, (56.76%) want to improve their skill for using e-resources by a discussion with experts, (43.24%) want to improve skill for using e-resources by a discussion with colleagues and referring user manuals/guides, etc., (36.04%) want to improve skill for using e-resources by e-mail assistance, (2.70%) want to improve skill for using e-resources by other methods. (Table: 4.26)

9. Highest number (42.20%) of faculty members of MZU agree that library staff provides sufficient training to use e-resources, followed by (39.88%) who gave no opinion for sufficient training provided by library staff to use e-resources, and (17.92%) have disagreed that library staff provides sufficient training to use of e-resources. While, (45.95%) of faculty members of BBAU agree that library staff provides sufficient training to use e-resources, followed by (38.74%) gave no opinion for sufficient training provided by library staff to use e-resources, and (15.32%) have disagreed that library staff provides sufficient training to use of e-resources. (Table: 4.47)

5.2 GENERAL FINDINGS

1. Highest number (71.10%) of respondents of MZU are assistant professors, (21.97%) are professors, and (6.94%) are associate professors. Whereas, (80.18%) of respondents of BBAU are assistant professors, (16.22%) are professors, and (3.60%) are associate professors. (Table: 4.2)

2. Highest number (82.88%) male and (17.12%) female respondents were from BBAU. However, (76.30%) male and (23.70%) female respondents were from MZU. (Table: 4.3)

3. Highest number (87.28%) of faculty members of MZU were having a Ph.D. degree, followed by (8.67%) were have a master degree, and only (4.05%) had M.Phil. /D.Phil. degree in the study. While, (92.79%) of faculty members of BBAU were having a Ph.D. degree, followed by (4.50%) were have a master degree and only (2.70%) had M.Phil./D.Phil. degree in the study. (Table: 4.4)

4. Highest number (49.13%) of faculty members of MZU come under the age group of 36-45 years, followed by (21.39%) belonging to 26-35 years age group, (19.82%) fall under 46-55 years age group, and (9.83%) belong to 56-65 years age group. Whereas, (53.15%) of faculty members of BBAU fall under 36-45 years age group, followed by (20.72%) comes under 46-55 years age group, (19.82%) belong to 26-35 years age group, and (6.31%) come under 56-65 years age group. (Table: 4.5)

5. Highest number (75.14%) of faculty members of MZU have more than 13 years of experience of use of the internet for accessing online resources, followed by (19.62%) have 9-13 years of experience of use of the internet, (4.26%) have 5-8 years of experience, and (0.58%) have 1-4 years of experience. However, (78.38%) of faculty members of BBAU have more than 13 years of experience of use of the internet for accessing online resources, followed by (18.92%) have 9-13 years of experience, and (2.70%) have 5-8 years of experience of use of the internet for accessing online resources. (Table: 4.6)

6. Highest number (98.84%) of faculty members of MZU who have access internet through their respective department, followed by (79.77%) have to access the internet from residence, (8.67%) from other places, (6.94%) from the computer lab, and (5.78%) from the library. Whereas, (99.10%) of faculty members of BBAU have

access internet through their respective department, followed by (76.58%) have to access the internet from residence, (11.71%) from other places, (9.01%) from the computer lab, and (7.21%) from the library. (Table: 4.8)

7. Highest number (88.44%) of faculty members of MZU are accessing e-journals from the department, followed by (41.62%) from residence, (10.4%) from the library, (1.73%) from the computer lab., and (0.58%) from other places. While (91.89%) of faculty members of BBAU are accessing e-journals from the department, followed by (41.44%) from residence, (12.61%) from the library, (0.9%) from computer Lab., and (0.9%) from other places. (Table: 4.16)

8. Highest number (84.97%) of faculty members of MZU are accessing e-books from the department, followed by (30.64%) from residence, (6.36%) from the library, (2.31%) from the Computer Lab., and (0.58%) from other places. While, (80.18%) of faculty members of BBAU are accessing e-books from the department, followed by (36.94%) from residence, (8.11%) from the library, (0.9%) from computer Lab., and from other places. (Table: 4.16)

9. Highest number (42.77%) of respondents of MZU are accessing e-technical reports from the department, followed by (21.97%) from residence, (1.73%) from the library, (1.16%) from the computer lab., and (0.58%) from other places. While (45.05%) of faculty members of BBAU are accessing e-technical reports from the department, followed by (21.62%) from residence, (2.7%) from the library, (0.9%) from the computer lab., and from other places. (Table: 4.16)

10. Highest number (71.1%) of respondents of MZU are accessing e-conference proceedings from the department, followed by (24.28%) from the residence, (2.89%) from the library, (1.16%) from the computer lab., and (0.58%) from other places. While (68.47%) of faculty members of BBAU are accessing e-conference proceedings from the department, followed by (24.32%) from residence, (5.41%) from the library, (0.9%) from the computer lab., and from other places. (Table: 4.16)

11. Highest number (24.86%) of faculty members of MZU are accessing e-drawings and designs from the department, followed by (16.76%) from the residence, (1.16%) from the library, (0.58%) from the computer lab., and from other places. While (29.73%) of faculty members of BBAU are e-drawings and designs from the

department, followed by (18.02%) from the residence, (1.80%) from the library, and (0.90%) from other places. (Table: 4.16)

12. Highest number (80.35%) of faculty members of MZU are accessing e-teaching materials from the department, followed by (32.95%) from residence, (2.89%) from the library, and (0.58%) from other places. While (71.17%) of faculty members of BBAU are accessing e-teaching materials from the department, followed by (34.23%) from the residence, (5.41%) from the library, (0.90%) from the computer lab., and from other places. (Table: 4.16)

13. Highest number (27.75%) of respondents of MZU are accessing e-patents, e-standards from the department, followed by (13.87%) from the residence, (5.20%) from the library, (0.58%) from the computer lab., and from other places. While (32.43%) of faculty members of BBAU are accessing e-patents, e-standards from the department, followed by (16.22%) from the residence, (6.31%) from the library, and (0.90%) from other places. (Table: 4.16)

14. Highest number (68.21%) of respondents of MZU are accessing e-tutorials from the department, followed by (30.64%) from residence, (4.62%) from the library, (1.16%) from the computer lab., and (0.58%) from other places. While (63.96%) of faculty members of BBAU are accessing e-tutorials from the department, followed by (28.83%) from residence, (5.41%) from the library, (0.90%) from the computer lab., and from other places. (Table: 4.16)

15. Highest number (46.82%) of faculty members of MZU are accessing e-databases from the department, followed by (17.34%) from the residence, (1.73%) from the library, (0.58%) from the computer lab., and from other places. While (45.95%) of faculty members of BBAU are accessing e-databases from the department, followed by (20.72%) from the residence, (4.50%) from the library, and (0.90%) from other places. (Table: 4.16)

16. Highest number (81.50%) of faculty members of MZU are accessing e-thesis and dissertations from the department, followed by (29.48%) from residence, (12.14%) from the library, (0.58%) from the computer lab., and from other places. While (67.57%) of faculty members of BBAU are accessing e-thesis and dissertations from the department, followed by (30.63%) from residence, (9.01%) from the library, (0.90%) from the computer lab., and from other places. (Table: 4.16)

17. Highest number (32.37%) of faculty members of MZU are accessing subject gateways from the department, followed by (14.45%) from residence, (1.73%) from the library, (0.58%) from the computer lab., and from other places. While (44.14%) of faculty members of BBAU are accessing subject gateways from the department, followed by (25.23%) from the residence, (2.70%) from the library, and (4.50%) from other places. (Table: 4.16)

18. Highest number (34.10%) of faculty members of MZU are accessing Blogs, Wikis from the department, followed by (25.43%) from the residence, (3.47%) from the library, (0.58%) from the computer lab., and from other places. While (32.43%) of faculty members of BBAU are accessing Blogs, Wikis from the department, followed by (25.23%) from the residence, (4.50%) from the library, and (0.90%) from other places. (Table: 4.16)

19. Highest number (60.12%) of faculty members of MZU are accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the department, followed by (32.95%) from residence, (5.78%) from the library, and (1.16%) from the computer lab. While (63.96%) of faculty members of BBAU are accessing e-reference resources (Dictionaries, encyclopaedias, etc.) from the department, followed by (31.53%) from the residence, and from the computer lab., (2.70%) from the library, and (0.90%) from other places. (Table: 4.16)

20. Highest number (46.82%) of faculty members of MZU are accessing institution repository from the department, followed by (20.23%) from residence, (4.62%) from the library, (1.16%) from the computer lab., and (0.58%) from other places. While (61.26%) of faculty members of BBAU are accessing institution repository from the department, followed by (19.82%) from residence, (5.41%) from the library, (0.90%) from the computer lab., and from other places. (Table: 4.16)

21. All (100.00%) of faculty members of MZU are using Google search engine for accessing e-resources, followed by (43.35%) are using the yahoo search engine, (24.86%) are using Bing search engine, (9.83%) are using MSN search engine, (1.73%) are using another search engine, (0.58%) are using Alta Vista and Lycos search engine. While, all (100.00%) of faculty members of BBAU use Google search engine for accessing e-resources, followed by (33.33%) are using the yahoo search engine, (16.22%) are using Bing search engine, (10.81%) are using MSN search

engine, (3.6%) are using Alta Vista search engine, (2.70%) are using Lycos search engine, (1.80%) are using HotBot search engine, and (0.90%) are using another search engine. (Table: 4.35)

22. The maximum number (52.02%) of faculty members of MZU are using phrase search (eg.: “Use of e-resources”) technique most frequently to access e-resources, followed by (42.77%) are using field-based search (eg.: “Physics”) technique most frequently, (15.61%) are using Boolean search (AND, OR, NOT) technique most frequently, and (5.78%) are using Truncation/ wildcard search (and?) technique most frequently. While, (63.96%) of faculty members of BBAU are using phrase search (eg.: “Use of e-resources”) technique most frequently to access e-resources, followed by (55.86%) are using field-based search (eg.: “Physics”) technique most, (17.12%) are using Boolean search (AND, OR, NOT) technique most frequently, and (5.41%) are using Truncation/ wildcard search (and) technique most frequently. (Table: 4.37)

23. Highest number (31.79%) of faculty members of MZU are using field-based search (eg.: “Physics”) technique frequently to access e-resources, followed by (24.86%) are using phrase search (eg.: “Use of e-resources”) technique frequently, (15.03%) are using Boolean search (AND, OR, NOT) technique frequently, and (10.40%) are using Truncation/ wildcard search (and?) technique frequently. While, (22.52%) of faculty members of BBAU are using field-based search (eg.: “Physics”) technique frequently to access e-resources, followed by (19.82%) are using phrase search (eg.: “Use of e-resources”) technique frequently, (12.61%) are using Boolean search (AND, OR, NOT) technique frequently, and (10.81%) are using Truncation/ wildcard search (and?) technique frequently. (Table: 4.37)

24. Highest number (16.18%) of faculty members of MZU are using Boolean search (AND, OR, NOT) technique less frequently to access e-resources, followed by (13.29%) are using Truncation/ wildcard search (and?) technique less frequently, (11.56%) are using field-based search (eg.: “Physics”) technique less frequently, (8.67%) are using phrase search (eg.: “Use of e-resources”) technique less frequently, and (1.16%) are using other search technique less frequently. While, (17.12%) of faculty members of BBAU are using Boolean search (AND, OR, NOT) technique less frequently to access e-resources, followed by (13.51%) are using Truncation/ wildcard search (and?) technique less frequently, (11.71%) are using field-based search (eg.:

“Physics”) technique less frequently, (10.81%) are using phrase search (eg.: “Use of e-resources”) technique less frequently, and (0.90%) are using other search technique less frequently. (Table: 4.37)

25. Highest number (17.92%) of faculty members of MZU are uncertain about using Truncation/ wildcard search (and?) technique to access e-resources, followed by (13.87%) are uncertain to using Boolean search (AND, OR, NOT) technique, (5.78%) are uncertain to using phrase search (eg.: “Use of e-resources”) technique, and (4.62%) are uncertain to using field-based search (eg.: “Physics”) technique. While, (13.51%) of faculty members of BBAU are uncertain about using the Boolean search (AND, OR, NOT) technique to access e-resources, followed by (11.71%) are uncertain to using the Truncation/ wildcard search (and) technique, (2.70%) are uncertain to using field-based search (eg.: “Physics”) technique and (2.70%) are uncertain to using phrase search (eg.: “Use of e-resources”) technique. (Table: 4.37)

26. Highest number (52.60%) of faculty members of MZU do not use the Truncation/ wildcard search (and?) technique to access e-resources, followed by (39.31%) are do not use Boolean search (AND, OR, NOT) technique, (9.25%) are do not using field-based search (eg.: “Physics”) technique, (8.67%) are do not using phrase search (eg.: “Use of e-resources”) technique, and (1.16%) are do not using other search technique to access e-resources. While, (58.56%) of faculty members of BBAU do not use the Truncation/ wildcard search (and?) technique to access e-resources, followed by (39.64%) are do not using Boolean search (AND, OR, NOT) technique, (7.21%) are do not using field-based search (eg.: “Physics”) technique, and (2.70%) are do not using phrase search (eg.: “Use of e-resources”) technique. (Table: 4.37)

27. Highest number (66.47%) of faculty members of MZU prefer both print and electronic formats of information resources, followed by (23.70%) prefer only electronic formats and (9.83%) prefer only print formats. While, (69.37%) of faculty members of BBAU prefer both print and formats of information resources, followed by (22.52%) prefer only electronic formats and (8.11%) prefer only print formats. (Table: 4.40)

28. The majority (97.11%) of the respondents of MZU are said that e-resources are more flexible to search for required information than print form, followed by (96.53%) are said that e-resources are easy to use than print form, (94.80%) are said that e-

resources are easy to handle of required information than print form, (93.64%) are said that e-resources are less expensive than print form, (92.49%) are said that e-resources are more preferred than print form, (91.33%) are said that e-resources are more informative than print form, (91.33%) are said that e-resources are more effective than print form, (87.86%) are said that e-resources are time saving than print form, (12.14%) are said that e-resources are time consuming than print form, (8.67%) are said that e-resources are less informative than print form, (8.67%) are said that e-resources are less effective than print form, (7.51%) are said that e-resources are less preferred than print form, (6.36%) are said that e-resources are more expensive than print form, (5.20%) are said that e-resources are more complicated to handle than print form, (3.47%) are said that e-resources are more complicated to use than print form, and (2.89%) are said that e-resources are less flexible than print form. While, (95.50%) of respondents of BBAU are said that e-resources are more flexible to search for required information than print form, followed by (93.69%) are said that e-resources are easy to use than print form, (92.7%) are said that e-resources are time saving than print form, (91.89%) are said that e-resources are more informative than print form, (91.89%) are said that e-resources are more preferred than print form, (90.09%) are said that e-resources are easy to handle than print form, (88.29%) are said that e-resources are more effective than print form, (86.49%) are said that e-resources are less expensive than print form, (13.51%) are said that e-resources are more expensive than print form, (11.71%) are said that e-resources are less effective than print form, (9.91%) are said that e-resources are more complicated to use than print form, (8.11%) are said that e-resources are less informative than print form, (8.11%) are said that e-resources are less preferred than print form, (7.21%) are said that e-resources are time consuming than print form, (6.31%) are said that e-resources are more complicated to handle information than print form, and (4.50%) are said that e-resources are less flexible than print form. (Table: 4.41)

29. The majority (98.84%) of the respondents of MZU prefer PDF file format to review, retrieve and use e-resources, followed by (47.40%) prefer PPT file format, (46.82%) prefer MS-Word (Rich Text Format) file format, (24.28%) prefer HTML file format, and (3.47%) prefer other file formats. Where, (100%) of the respondents of BBAU prefer PDF file format to review, retrieve and use e-resources, followed by (52.25%) prefer PPT file format, (48.65%) prefer MS-Word (Rich Text Format) file

format, (27.93%) prefer HTML file format, and (3.60%) prefer other file formats. (Table: 4.42)

30. The majority (93.06%) of the faculty members of MZU prefer computer/ laptop as a storage medium for storing e-resources, followed by (72.25%) prefer pen drive as a storage medium, (56.65%) prefer portable hard disk as a storage medium, (22.54%) prefer memory card as a storage medium, (17.92%) prefer compact disk as a storage medium, (5.20%) prefer DVD as a storage medium, and (4.05%) prefer other devices as a storage medium for storing e-resources. While, (92.79%) of the faculty members of BBAU prefer computer/ laptop as a storage medium for storing e-resources, followed by (75.68%) prefer pen drive as a storage medium, (46.85%) prefer portable hard disk as a storage medium, (23.42%) prefer memory card as a storage medium, (18.92%) prefer compact disk as a storage medium, (7.21%) prefer DVD as a storage medium, and (6.31%) prefer other devices as a storage medium for storing e-resources. (Table: 4.43)

31. Highest number (68.21%) of faculty members of MZU preferred direct reading from the computer screen of e-resources, followed by (63.01%) who preferred to save the material in portable devices for further reading, (56.65%) preferred to print the resource and read, (26.01%) preferred direct reading from the computer screen, save the material in portable devices for further reading, print the resource and read, and e-book reader to read of e-resources, (19.08%) preferred e-book reader to read of e-resources, and only (0.58%) preferred other methods to read of e-resources. While, (81.98%) of faculty members of BBAU preferred direct reading from the computer screen of e-resources, followed by (67.57%) preferred to save the material in portable devices for further reading of e-resources, (58.56%) preferred to print the resource and read of e-resources, (28.83%) preferred direct reading from the computer screen, save the material in portable devices for further reading, print the resource and read, and e-book reader to read of e-resources, (20.72%) preferred e-book reader to read of e-resources, and only (0.90%) preferred other methods to read of e-resources. (Table: 4.44)

5.3 CONCLUSION

The popularity and utilisation of e-resources have expanded worldwide. With the help of e-resources, users can promote research and innovation, as well as the discovery and creation of new research fields. The information searchers use e-resources for keeping up-to-date in their fields. Users generally prefer to access online resources such as online databases, journals, and networks, which provide up-to-date worldwide information and they believe that these resources are easier to access and search for teaching, learning, and research purpose.

The usage of e-resources is increasing at both university libraries under study, which are obtaining essential journals and offering a wide choice of e-resources that faculty members use because of their superior characteristics to print resources. To ensure that e-resources are used effectively, there is a need for frequent technological expertise training programmes for faculty members on the latest changes in technology collection and their ease of accessibility, user orientation programmes, MOOC (Massive Online Open Course) as nowadays, online lecture series are thought by experts in various subjects and, as a result, e-resources will be used more effectively.

The study aims to find out the use of e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University and compare the various factors of use of e-resources to fulfil the objectives of the study. It is found that the maximum respondents were assistant professors in both universities, the highest numbers of respondents were male and a large number of faculty members were between 36-45 years age group.

In the use of the internet, all the respondents of both universities have frequently used the internet and have more than 13 years of experience. The highest respondents of both universities access the internet from their respective departments. The purpose of faculty members of both universities was to use the internet for sending mail and for reading/ writing research papers and projects and they were motivated to use the internet to update self-knowledge.

In the use and awareness of e-resources and services, the highest number of faculty members were used and aware, the highest number of the respondents of both universities were using e-journals and e-books most frequently, the highest number of faculty members of both universities use e-resources and services provided by E-

ShodhSindhu, highest faculty members of both universities were aware of to use e-resources by personal communication with friends, subject experts, e-mail alerts, by chance and by resource persons. The highest respondents of both universities learn to use by self-learning method. The maximum respondents of both universities have more than 10 years of experience.

The purpose of using e-resources by the faculty members of both universities was reading writing research papers, proposals, and projects, etc. and the benefits of using e-resources are saving time, up to date information. The poor internet connectivity was the major problem stated by the respondents of both universities while accessing e-resources. The maximum number of the respondents of both universities want to improve their skills in the use of e-resources and prefer attending workshops/seminars to improve their skills. The maximum number of faculty members of both universities use the institutional repository and digital library to access e-resources. The maximum number of faculty members of both universities is satisfied with the facilities provided by the library. The maximum respondents were facing problems of the slow speed of accessing or e-resources.

The highest number of respondents from both universities were using an electronic format of resources and using both print and electronic formats of information resources. The maximum number of faculty members of both universities stated that e-resources were time-saving, more informative, less expensive, easy to use, more preferred, more flexible, easy to handle, and more effective in the comparison of print resources. The maximum number of faculty members of both universities were using PDF format to use e-resources and prefer direct reading from the computer screen. The maximum number of faculty members of both universities were highly satisfied with e-resources while using.

This study provided insight into the use of e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University. The data was collected through a well-structured questionnaire, which involved several aspects of the usage of e-resources such as awareness of e-resources, frequency of usage, place of access, the purpose of usage, benefits, learn to use, problems, need of skill improvement, training/orientation need, the preferred mode of training, the attitude of library staff, level of satisfaction, rating of e-resources, factors of the search engine,

preferred search engine, search methods, difficulties face while accessing e-resources, preferred file format, preferred storage devices, degree of satisfaction and methods of reading e-resources to use e-resources by the faculty members of both universities.

The general attitude of faculty members of both universities towards the use of e-resources was found highly positive. It was clear within the high extent of users, the high frequency of utilization, and the great significance of the use of e-resources. Although the use of e-resources in both universities under study is well established, there is still a need to increase the utilization of e-resources. If other factors are desirable, such as internet speed or access to e-resources from outside the university campus, the frequency of use of e-resources may be higher. Encouraging the use of the services at the library can be increased by assisting them in finding and downloading required information to use e-resources. Another finding is that the majority of the faculty members of both universities prefer both print and electronic resources, as a result, the library should continue to provide in both formats like electronic and print formats and screen-based reading habit is evolving for reading e-resources.

5.4 SUGGESTIONS

Based on data analysis and findings of the study, the following suggestions are given to improve the use of e-resources among the faculty members of both universities i.e. Mizoram University and Babasaheb Bhimrao Ambedkar University.

- 1.** More informative, user-friendly, and well-organised library website that makes it easy to access the e-resources should be offered.
- 2.** The central library may provide access and updated content of e-resources and services to the faculty members as well as students at regular intervals for research and development.
- 3.** The university network and internet services must be strengthened by increasing bandwidth to improve the quick accessibility of available e-resources.
- 4.** It is necessary to subscribe to more e-resources of various disciplines, besides the E-ShodhSindhu consortium.
- 5.** Effective use of existing e-resources the central library needs to organise several user orientation programmes for faculty members.

6. The faculty members should be trained to use advanced search techniques to found relevant information.
7. To make greater use of widely available e-resources, the central library may organise seminars, workshops, and orientation programmes for faculty members regularly to keep them up-to-date with the latest technologies.
8. The library budget should be increased to allow for the purchase of the most up-to-date e-resources, services, and databases.
9. More promotion of library services and products, such as bulletin board services, current awareness services for posting messages, announcements, and publishing new and existing e-resources via the library website.
10. Implementing social networks to communicate with faculty members to learn how to use e-resources, such as e-mail, discussion groups, blogs, etc.
11. To effective retrieval of information it is strongly recommended that the search engine provide content-based e-resources search capabilities.
12. The library staff should create a database of e-mail of all the faculty members to notify them as soon as the new e-resources and services are subscribed or available in the library via e-mail.
13. The library should establish a server in the library to offer library resources and services to its users provide accessibility of e-resources off-campus automatically.

5.5 FUTURE AREA FOR RESEARCH

Researchers could be done in the following areas of research for the improvement of e-resources use in all levels of teaching and from the output of the present study, the following areas are suggested for further research.

1. The present study involved the use of e-resources by faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University, future studies can concentrate on faculty members or other users belonging to central universities.
2. A study could be repeated with research scholars and students to find the effective use of e-resources.

- 3.** A comparative study could be done on faculty members in other universities and colleges.
- 4.** A study could be done on the utilisation of e-resources regularly to enable improved collection development on a cost-effective basis.
- 5.** It is preferable to conduct a longitudinal study to investigate the evolving patterns and trends.
- 6.** The same study can be done in different ways, for getting a better picture of using e-resources by the faculty members.

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1. <https://www.loc.gov/acq/devpol/electronicresources.pdf> (access on 15-03-2021)
2. <https://www.dundee.ac.uk/library/resources/typesofresource> (access on 16-03-2021)
3. <https://mzu.edu.in/about-the-university/> (access on 20-03-2021)
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5. <http://www.bbau.ac.in/new/index.aspx> (access on 20-03-2021)
6. <http://www.bbau.ac.in/new/AboutUs.aspx> (access on 20-03-2021)

APPENDIX- I

Questionnaire for Faculty Members

Respected Sir/Madam,

I am pursuing Ph.D. in Library & Information Science, Mizoram University, Aizawl in the area of “Use of e-resources by faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University: A comparative study” under the guidance of **Prof. S.N. Singh**. You are kindly requested to fill up the questionnaire. I insure you that the information given by you will be kept confidential and use for academic purpose only.

Thanking You

Sunil Kumar Yadav

Ph.D. Scholar

Dept. of Lib. & Inf. Sci.

Mizoram University

Part-I: General Information

Note: Please indicate your response with a tick mark ‘√’ in the appropriate space.

1. **Name:**

2. **Designation:**

Assistant Professor Associate Professor Professor

3. **Name of Department:**

4. **Name of School:**

5. **Name of University:**

6. **Gender:** Male Female

7. **Educational Qualification:**

8. Age Group: in year

Below 25 26-35 36-45 46-55 56-65

Part- II: Use of Internet

9. Do you use Internet?

Yes No

9. (a) If yes, how long have you been using the Internet?

Sl. No.	Period	✓
a.	Less than 1 years	
b.	Between 1 to 4years	
c.	Between 5 to 8 years	
d.	Between 9 to 13 years	
e.	More than 13 years	

10. How much time do you spend on use of Internet in a day?

a. Less than one hours b. Between 1-2 hours
c. Between 2-3 hours d. More than 3 hours

11. Where do you use the Internet?

a. Department b. Library c. Computer Lab
d. Residence e. Cyber Café f. Other: _____

12. Purpose of using Internet?

Sl. No.	Purpose	✓
a.	For data communication (sending and receiving E-Mail, FTP etc.)	
b.	For voice/ video communication (IP phone, Skype etc.)	
c.	For reading/ writing research papers, research proposals and projects	

d.	For accessing teaching materials	
e.	For accessing /reading general information resources (news etc.)	
f.	For accessing/reading subscribed information resources (e-journals, e-databases etc.)	
g.	For blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.)	
h.	To access OPAC/ EPAC/Web OPAC	
i.	Downloading software	
j.	For entertainment/ recreational (adds, games, movies, songs etc.)	
k.	To access audio/ visual materials	
l.	Any other (Please Specify): _____	

13. What factors motivate you to use the Internet?

Sl. No.	Factors	✓
a.	To update self- knowledge in the subject with the help of available updated information	
b.	Internet provides faster communication for social networking	
c.	User friendly search engines	
d.	Online Submission of papers to Journals/ Conferences/ Seminars etc.	
e.	Easy access to information resources	
f.	24X7 access of resources	
g.	To know about latest rules, and regulations related to academic activities.	
h.	Any other (Please Specify): _____	

14. What are the problem faced while accessing Internet?

Sl. No.	Problems	✓
a.	Poor Internet connectivity (Low Speed)	
b.	Problem of frequent power failure	
c.	Slow processing of computer/machine	
d.	Server Down	
e.	Changes in URL	
f.	Lack of authenticity/ Reliability	
g.	Getting unsynchronized information	
h.	Any other (please specify): _____	

Part-III: Use of e-resources

15. Are you aware of e-resources available/ subscribed by your library? Yes No

16. Do you use e-resources? Yes No

16. (a) If yes, which of the following e-resources do you use frequently and where do you access these e-resources?

Sl. No.	Type of e-resources	Usage		Frequency of usage *					Place of accessibility				
		Yes	No	5	4	3	2	1	Lib.	Dept.	Resi.	Comp. Lab	Other
a.	E-Journals			5	4	3	2	1					
b.	E-Books			5	4	3	2	1					
c.	E-Technical Reports			5	4	3	2	1					
d.	E-Conference			5	4	3	2	1					

	Proceedings													
e.	E-Drawings and Designs			5	4	3	2	1						
f.	E-Teaching Materials			5	4	3	2	1						
g.	E- Patents, E-Standards			5	4	3	2	1						
h.	E-Tutorials			5	4	3	2	1						
i.	E- Databases			5	4	3	2	1						
j.	E- Thesis and Dissertations			5	4	3	2	1						
k.	Subject Gateways			5	4	3	2	1						
l.	Blogs, Wikis			5	4	3	2	1						
m.	E- Reference resources (Dictionaries, encyclopedias etc.)			5	4	3	2	1						
n.	Institution Repository (IR)			5	4	3	2	1						
o.	Any other (Please specify): _____ —			5	4	3	2	1						
<p><i>* Note: 5: Daily, 4: More than twice in a week, 3: Once in a week, 2: More than twice in a month, 1: Once in a month</i></p>														

17. Please tick the following e-resources, if available in your library.

E-ShodhSindhu based database/ resources

Sl. No.	Full - Text E Resources	✓	Sl. No.	Full - Text E-Resources	✓
i.	ABI/INFORM Complete		xx.	Springer Links	
ii.	ACM Digital Library		xxi.	ASTM Standards	

iii.	ACCESS Engineering		xxii.	JSTORE	
iv.	American Chemical Society		xxiii.	Oxford University Press	
v.	Institute of Physics		xxiv.	Project Muse	
vi.	American Physical Society		xxv.	Springer Link	
vii.	ASME Journals Online		xxvi.	Taylor and Francis	
viii.	ASCE Journals		Bibliographic Databases		
ix.	Annual Reviews		xxvii.	COMPENDEX on Ei Village	
x.	CRIS INFAC Ind. Information		xxviii.	INSPEC or Ei Village	
xi.	EBSCO's Business Sources Premiers		xxix.	J-Gate Consortia	
xii.	Elsevier's Science Direct		xxx.	MathsSciNet	
xiii.	Emerald Insight Full Text		xxxi.	SciFinderScholar	
xiv.	Euromonitor GMID		xxxii.	Web of Science	
xv.	IEEE/ IEE Electronic Library Online		xxxiii.	Scopus	
xvi.	Indian Standards		xxxiv.	Web of Science Lease Access	
xvii.	Asian CERC Insight		xxxv.	Institute for Studies in Industrial Development (ISID) Database	
xviii.	Nature		Other		
xix.	ProQuest		xxxvi.	I-Scholar	

	Science				
			xxxvii.	Manupatra	

18. How do you become aware regarding e-resources?

Sl. No.	Awareness Factor	✓
a.	Bibliographical Database Searching (Indexing and Abstracting Databases)	
b.	Announcements in Journals	
c.	Cited in report/ journals/conference papers	
d.	Referred by the librarian	
e.	By chance, by browsing or looking for materials	
f.	E-mail alerts form publishers/distributors etc.	
g.	By personal communication with friends, subject experts and resource persons	
h.	Any other (Please Specify): _____	

19. How did you learn to use about e-resources?

Sl. No.	Learn to use e-resources	✓
a.	Trial and error	
b.	Self-learning	
c.	Guidance from other colleagues	
d.	Guidance from library staff	
e.	Attending courses, trainings, workshops and seminars	
f.	Guidance from computing staff/Technicians	
g.	Any other (Please specify): _____	

20. How long you are using the e-resources?

Sl. No.	Frequency	✓
a.	Less than 1 years	
b.	Between 2- 4 years	
c.	Between 5- 7 years	
d.	Between 8- 10 years	
e.	Above 10 years	

21. What is your purpose of using e-resources?

Sl. No.	Purpose	✓
a.	Reading/ Writing research papers	
b.	Reading/ Writing research proposal, reports and projects	
c.	Preparing/ accessing teaching materials	
d.	For drawings, designs, graphs and patents	
e.	Curriculum design	
f.	Preparation for Seminars, conference and workshop	
g.	For basic scientific and technical information	
h.	For collecting general information	
i.	To access audio/ visual materials	
j.	Any other (Please specify): _____	

22. Please indicate the benefits of the use of e-resources which you get.

Sl. No.	Benefits	✓
a.	Time saving	
b.	Better source of information	
c.	Access to up-to-date information	
d.	Improvement in the quality of professional work	
e.	Information available in various formats as per the need.	
f.	Easy portability of e-resources	
g.	24×7 access to e-resources	

h.	Any other (Please specify): _____
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23. Do you face any problem while accessing e-resources?

 Yes

 No

23. (a) If yes, please indicate the problems:

Sl. No.	Problems	✓
a.	Poor connectivity (Low bandwidth)	
b.	Retrieval of irrelevant/ junk information	
c.	Unfamiliar file formats	
d.	Change in URL	
e.	Change of the content/ information	
f.	Non availability of latest software (to view, read and write accessed information)	
g.	Unorganized information content	
h.	Lack of assistance from library staff	
i.	Lack of IT knowledge to effectively utilize the service/ e-resources	
j.	Any other (Please Specify): _____	

24. Do you want to improve your skill in the use of e-resources?

 Yes

 No

24. (a) If yes, please indicate the method your prefer.

Sl. No.	Preferred methods	✓
a.	Attending workshops/ seminars	
b.	Discussion with experts	
c.	Discussion with colleagues	
d.	Attending Orientation/ training programs	
e.	E-mail assistance	

f.	Referring user manuals/guides etc.	
g.	Any other (Please specify): _____	

25. **Have you ever visited your library website?** Yes No

25. (a) **If yes, your library website serves as a media for your required information?** Yes No

26. **Do you access e-resources available in Institutional Repositories?** Yes No

27. **Do you access e-resources available in Digital Libraries?** Yes No

28. **Are you satisfied with facilities provided by university library for accessing e-resources?** Yes No

28. (a) **If yes, please extent your level of satisfaction regarding facilities available in university.**

a. Extremely satisfied (100%) b. Satisfied (75%)

c. Moderately Satisfied (50%) d. Slightly satisfied (25%)

29. **Please give your opinion about the attitude of library staff in expediting access to e-resources in your library. (Please tick ✓)**

Sl. No.	Library Staff expedition	SA	A	U	D	SD
i.	They take personal interest and are polite as well as courteous in facilitating access to e-resources					
ii.	Demonstrate and teach how to use CD-ROM, database/ online database					

iii.	They are well trained in accessing e-resources and are up to date in their knowledge.					
iv.	Library staff are very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information					
<i>SA- Strongly Agree, A- Agree, U-Uncertain, D- Disagree, SD-Strongly Disagree</i>						

30. How would you rate the e-resources on each of the following features? (Please tick ✓)

Sl. No.	Features	Excellent	Good	Fair	Poor
a.	Easy to use				
b.	Up-to-date				
c.	Accessibility				
d.	Access Speed				
e.	Usefulness				
f.	Hypertext links				
g.	Organized information				
h.	Comprehensiveness				
i.	Flexibility				
j.	Other				

Part-IV: Information search patterns

31. Which of the following popular search engines do you use frequently?

Sl. No.	Search Engines	✓
i.	Alta Vista	
ii.	Bing	
iii.	Google	

iv.	Yahoo	
v.	Lycos	
vi.	MSN	
vii.	HotBot	
viii.	Any other: _____	

32. Which search option do you prefer for accessing/ searching online e-resources?

a. Basic/ simple search b. Advance search c. Both

33. Give your preference in terms of searching e-resources. (Please tick ✓)

Sl. No.	Search method	5	4	3	2	1
a.	Author					
b.	Title					
c.	Subject					
d.	Keywords					
e.	Publisher					
f.	Author address					
g.	Any other (Please specify): _____					

5- Most frequently, 4- Frequently, 3- Less frequently, 2- Uncertain, 1-Do not use

34. How often do you use the following advance search facilities? (Please tick ✓)

Sl. No.	Search technique	5	4	3	2	1
a.	Boolean search (AND, OR, NOT)					
b.	Truncation/ wildcard search (* and?)					
c.	Field based search (eg.: “Physics”)					
d.	Phrase search (eg.: “Use of e-resources”)					
e.	Any other (Please specify): _____					

5- Most frequently, 4- Frequently, 3- Less frequently, 2- Uncertain, 1-Do not use

35. What are the difficulties you face in accessing e-resources through online search mode?

Sl. No.	Online access	✓
a.	Lack of any online help	
b.	Unfamiliarity with the search methods	
c.	Unorganized elements/contents in a search page	
d.	Too much time consuming for searching the information	
e.	Speed of access is slow	
f.	Any other (please specify)	

36. Which one of the following version of resources do you prefer to use?

Sl. No.	Prefer to use	✓
a.	Print versions	
b.	Electronic versions	
c.	Both print and electronic version	

37. Do you feel that e-resources have been used more than print resources? Yes No

38. In your opinion, using e-resources as compared to print documents is:

- (i) Time saving [] or Time consuming []
- (ii) More informative [] or Less informative []
- (iii) More expensive [] or Less expensive []
- (iv) Easy to use [] or Complicated []
- (v) More preferred [] or Less preferred []
- (vi) More flexible [] or Less flexible []
- (vii) Easy to handle [] or Complicated []
- (viii) More effective [] or Less effective []

39. Which file format do you prefer to access e-resources?

Sl. No.	File format	✓
a.	PDF	
b.	HTML	
c.	MS-Word (Rich Text Format)	
d.	PPT	
e.	Any other (please specify): _____	

40. Which device do you prefer to store/ save/ preserve e-resources?

Sl. No.	Storage media	✓
a.	Pen Drive	
b.	Computer/ Laptop	
c.	Compact Disk	
d.	DVD	
e.	Portable Hard Disk	
f.	Memory Card	
g.	Blue Ray Disk	
h.	Others (Please specify): _____	

41. Which method do you prefer to read e-resources?

Sl. No.	Preferred method of reading	✓
a.	Direct reading from the computer screen	
b.	Save the material in portable devices for further reading	
c.	Print the resource and read	
d.	e-book reader	
e.	All the above	
f.	Other (Please specify): _____	

42. Please mention your degree of satisfaction in using e-resources.

- a. Extremely satisfied (100%) b. Satisfied (75%)
c. Moderately Satisfied (50%) d. Slightly satisfied (25%)
e. Not satisfied

43. To what extent you depend on your university library to fulfil your information requirement.

- a. To a greater extent b. To moderate extent
c. To a little extent d. Not at all

44. Do you feel that library provides adequate training on how to use e-resources?

- a. Agree b. Disagree c. No opinion

45. Please suggest your opinions regarding improvement in basic infrastructure for accessing e-resources:

46. Please give suggestion to improve the utilization of e-resources in your university:

Signature

APPENDIX- II

Questionnaire for Librarian

Respected Sir/Madam,

I am pursuing Ph.D. in Library & Information Science, Mizoram University, Aizawl in the area of “Use of e-resources by faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University: A comparative study” under the guidance of Prof. S.N. Singh. You are kindly requested to fill up the questionnaire. I insure you that the information given by you will be kept confidential and use for academic purpose only.

Thanking You

Sunil Kumar Yadav

Ph.D. Scholar

Dept. of Lib. & Inf. Sci.

Mizoram University

Part-I: General Information

Note: Please indicate your response with a tick mark ‘√’ in the appropriate column

1. Name of University: _____

2. Name of Library: _____

3. Year of Establishment of Library: _____

4. Total number of registered users in the Library: _____

Faculty: _____ Staff: _____ Ph. D. / MPhil: _____

Part- II: Library Budget

5. Annual budgets of the library for past five years:

Years	Budget Allocation		
	Print resources	Electronic resources	Total
2014-15			
2015-16			
2016-17			
2017-18			
2018-19			

6. Source of Finance:

Sl. No.	Sources/Grants	✓
1	UGC	
2	State Government	
3	Central Government	
4	Self- Management	
5	Donations/ Endowments	
6	Overdue charges, sales of old library materials, Membership charges, Xerox etc.	
7	Any other (Please specify): _____	

7. Is allocated budget sufficient for procurement of e-resources for library?

- a. Sufficient b. Partially sufficient
- c. Not sufficient d. Can't say

Part-III: Library Collection

8. State the collection strength of the library?

Collection in Print form	Number	Collection in Electronic form	Number
Books		E- Books	
Current Periodicals		E- Journals	
Bound Volumes of periodicals		Audio-Video educational materials	
Directories		E-databases	
Newspapers clippings		Electronic Theses and Dissertations	
Theses and Dissertations		E- Conference Proceedings	
Conference Proceedings		E- Patents / E- Standards/Specifications	
Patents / Standards/		E- Drawings and Designs	

Specifications			
Drawing and Designs		CDs (provided along with books)	
Government publications		E- Technical Reports	
Technical Reports		E-Reference Resources (Dictionaries, Encyclopedias, Manuals etc.)	
Reference Books (Dictionaries, Encyclopedias etc.)		E- Course related materials (course Outline, question papers, notes, tutorials etc.)	
Course related materials (course Outline, question papers, notes, tutorials etc.)		Microforms (Microfilms, Microfiche)	
Faculty and Students generated contents like: (Project reports, Assignments, Research papers, Drawings and Designs etc.)		Faculty and Students generated contents like: (Project reports, Assignments, Research papers, E-Drawings and designs etc.)	
Any other (Please specify): _____	Any other (Please specify): _____		

9. Do you feel that existing collection of e-resources is sufficient to meet the needs of users?

 Yes

 No

10. State the preference of your library regarding collection development of resources in future?

Sl. No.	Resources	Yes	No
1.	Print only		
2.	Electronic Only		
3.	Both Print and Electronic		

Part-IV: Library Staff

11. Details of Library staff

Sl. No.	Staff	Number
1.	Professionals	
2.	Semiprofessional	
3.	Non-professional	
4.	Any other (Please Specify)	

12. What is your opinion about the efficiency of your library staff concerning to services of handling e-resources?

- a. All are efficient b. Majority are efficient
- c. Majority are moderately efficient d. Majority are not efficient

13. Do you organize in-house training programs regarding services of handling e-resources for library staff? Yes No

14. Do you depute library staff to attend training programs outside to enable them to acquire necessary knowledge and skills? Yes No

15. Does library have dedicated staff for e-resources maintenance? Yes No

Part-V: ICT Infrastructure

16. Specify the available ICT infrastructure to support library activities?

Sl. No.	ICT Infrastructure	Numbers	Sl. No.	ICT Infrastructure	Numbers
1.	Computers:		8.	E-Display Board	
	i. Server based		9.	VCD Player	
	ii. Desktop Computer		10.	FAX	

	s				
	iii. Laptops		11.	Web Cams	
2.	Printers		12.	Telephone	
3.	Scanners		13.	Microphone	
4.	Photocopier		14.	Television	
5.	LCD Projector		15.	Laser Pointers	
6.	UPS		16.	Others:	
7.	Portable Hard Disk			_____	

17. Do you think ICT infrastructure is adequate for accessing e-resources in the library?

 Yes

 No

17. (a) If yes, please indicate the extent of adequacy:

a. To a greater extent b. To moderate extent c. To a little extent

Part-VI: Internet and Networking

18. Does the library system works under networked environment?

 Yes

 No

18. (a) If yes, which type of network you have?

a. LAN

b. MAN

c. WAN

19. Please indicate the type of Internet connection.

a. Dial-up

b. Leased Line

c. V-SAT

20. Name the Internet Service Providers (ISP): _____

21. What is the Internet bandwidth in the library? _____

22. What bandwidth do you recommend if the existing is inadequate to access e-resources? _____

23. Does the library have its own server? Yes No
24. Is server maintained by library staff? Yes No
24. (a) If yes, what is the qualification of the staff? _____

Part-VII: Institutional Repository

25. Whether the institution has setup Institutional Repository.

Yes No

25. (a) If yes, is it made accessible through?

a. LAN b. MAN c. WAN

26. Does the library have a separate Digital Library?

Yes No

26. (a) If yes, numbers of faculties visiting the Digital Library per day:

Sl. No.	Faculty visiting the Digital Library	✓
a.	00 - 25	
b.	26 - 50	
c.	51 - 75	
d.	76 - 100	
e.	Above 100	

27. Does the Digital Library can be accessed through Internet?

Yes No

28. Does the Digital Library provide link to other Digital Libraries to access their e-resources?

Yes No

29. Does the Digital Library is created by the University Library?

Yes No

30. How many computers are available in the Digital Library?

31. Can the faculty have access to their accounts from the Digital Library? Yes No

32. Does the library maintain a web portal? Yes No

Part-VIII: E-resources and services

33. What are the various types of e-resources provided/accessed through your library?

Sl. No.	Types of e-resources	✓
a.	E-Journals	
b.	E- Books	
c.	E-databases	
d.	E-portals/ Subject Gateways	
e.	Electronic Theses and Dissertations	
f.	E- conference Proceedings	
g.	E-Patents/ E- Standards/Specifications	
h.	E- Drawings and Designs	
i.	E- Reports	
j.	E-Tutorials	
k.	E-Teaching materials	
l.	E-reference resources (Dictionaries, Encyclopedias, etc.)	
m.	OPAC/ Web OPAC	
n.	Audio-Video educational resources	
o.	Microfiche/ Microfilms	
p.	Faculty and Students generated contents like Project reports, Assignments, Research papers, E-Drawings, etc.	
q.	CDs (Provided along with the books)	
r.	Any other (Please specify)_____	

34. Is the University become a member of Consortium?

Yes

No

34. (a) If yes, please specify the following names/s of consortia.

a. E-ShodhSindhu b. If other (Please Specify) _____

35. Please check the following e-resources are available through consortium:

E – ShodhSindhu

Sl. No.	Full - Text E-Resources	✓
i.	ABI/INFORM Complete	
ii.	ACM Digital Library	
iii.	ACCESS Engineering	
iv.	American Chemical Society	
v.	American Institute of Physics	
vi.	American Physical Society	
vii.	ASME journals Online	
viii.	ASCE Journals	
ix.	Annual Reviews	
x.	CRIS INFAC Ind. Information	
xi.	EBSCO's Business Sources Premiers	
xii.	Elsevier's Science Direct	
xiii.	Emerald Insight Full Text	
xiv.	Euromonitor GMID	
xv.	IEEE/ IEE Electronic Library Online	
xvi.	Indian Standards	
xvii.	Asian CERC Insight	
xviii.	Nature	
xix.	ProQuest Science	
xx.	Springer Links	
xxi.	ASTM Standards	
xxii.	JSTORE	

xxiii.	Oxford University Press	
xxiv.	Project Muse	
xxv.	Springer Link	
xxvi.	Taylor and Francis	
Bibliographic Databases		
xxvii.	COMPENDEX on Ei Village	
xxviii.	INSPEC or Ei Village	
xxix.	J-Gate Consortia	
xxx.	MathsSciNet	
xxxi.	SciFinderScholar	
xxxii.	Web of Science	
xxxiii.	Scopus	
xxxiv.	Web of Science Lease Access	
xxxv.	Institute for Studies in Industrial Development (ISID) Database	
Other		
xxxvi.	I-Scholar	
xxxvii.	Manupatra	

36. Does the library sends e-mail alerts to users regarding new e-resources?

Yes No

36. (a) If yes, how frequently it sends alerts to users?

Sl. No.	Frequency	✓
a.	Daily	
b.	Weekly	
c.	Fortnightly	
d.	Monthly	
e.	Occasionally	

37. What action have been taken to promote the use of e-resources within the campus?

Sl. No.	Action	✓
i.	Provided links to library home page	
ii.	Conducted orientation/ training program for users	
iii.	Sending e-mail regarding new e-resources available to the users	
iv.	Sending printed circular regarding newly arrived e-resources.	
v.	Any other (Please specify): _____	

Part-IX: Training and user education programs

38. Have you and your staff attended any training programs in handling of e-resources?

Yes No

39. Do you organize user orientation/ training programs for use of e-resources?

Yes No

39. (a) If yes, how frequently user orientation/ training programs have been conducted?

a. Monthly b. Quarterly c. Half yearly d. Yearly

e. Any other (Please specify): _____

40. Methods follow for user education (Please indicate)

Sl. No.	Methods of user education	Yes	No
i.	Training programs/ workshops		
ii.	Lectures/ conferences methods		
iii.	Demonstrations/ Site visits		

iv.	Circulation of library handbooks, user manuals, brochures, tutorials etc. in print form		
v.	Access to library handbooks, user manuals, brochures, tutorials etc. in electronic form		
vi.	Any other (Please specify): _____ _____		

41. State the areas in which user orientation/ training programs are organized?

Sl. No.	Areas	Yes	No
i.	Use of e-resources		
ii.	Formulation of search queries and search techniques (Basic and Extended Search)		
iii.	Use of Institutional Repositories		
iv.	Searching/ Browsing resources available through consortium		
v.	Use of OPAC/ Web OPAC		
vi.	Use of computers and other electronic devices		
vii.	Software downloading and installing		
viii.	Any other (Please specify): _____ _____		

Part-X: Opinion regarding e-resources and services

42. In your opinion, who uses e-resources more?

- a. Faculties b. Research Scholars
- c. Post Graduate Students d. Graduate Students

43. In your opinion, what are the factors that influence in the collection development of e-resources and services in the library?

Sl. No.	Factors	SAA	A	MA	D	SD
a.	Demand form Users					
b.	Development in the field of ICT and its applications to library					
c.	University administration insist to acquire e-resources in library					
d.	Financial assistance from university and other bodies to build e-collections					
e.	To provide effective and advance services to users					
f.	To attract the attention of E-ShodhSindhu					
g.	Any other (Please Specify): _____					
<i>SA- Strongly agree, A- Agree, MA- Moderately agree, D- Disagree, SD- Strongly disagree</i>						

44. What are the barriers in collection building of e-resources and services in the library?

Sl. No.	Barriers	SA	A	MA	D	SD
a.	Lack of funds					
b.	Lack of skills and knowledge to use of e-resources among library users					
c.	Lack of support from university administration					
d.	Lack of ICT/ electronic infrastructure facilities					
e.	Lack of trained staff					
f.	Library staff's resistance to adopt change					
g.	Cost of e-resources is high					
h.	Any other (Please Specify): _____					

SA- Strongly agree, A- Agree, MA- Moderately agree, D- Disagree, SD- Strongly Disagree

45. If e-resources save the cost, space, labor etc. then are you planning to drop the print version?

Yes

No

46. Do you think that e-resources made available to the users are adequate?

Yes

No

56. Any other comments please specify: _____

Signature

BIO-DATA OF SUNIL KUMAR YADAV

Name : Sunil Kumar Yadav

Date of Birth : 20.06.1987

Gender : Male

Father's Name : Sri Ramashray Yadav

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Permanent Address : Vill.- Birwa,
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Symposium/Conferences

Participation:

- 1) **Yadav, S. K.,** Singh, S. N. & Verma, M. K. (2018). Inherence of Digital Resource Management in Central Library, Tezpur University: A Critical Analysis. In proceedings of *International Conference on "Digital Transformation Strategies and Trends in E-Learning: Privacy, Preservation and Policy"* organized by National Law University, Delhi to be held on 29th Nov. to 1st Dec. 2018. (pp. 301-314). ISBN: 978-93-8151-314-9
- 2) **Yadav, S. K.,** Singh, S. N. & Verma, M. K. (2018). Perceptions and Use of E-Resources by Research Scholars of Mizoram University: An Evaluative Study. In proceedings of *International Conference on "Marching Beyond the Libraries: Managerial Skills and Technological Competencies"* organized by KIIT, Bhubaneswar, to be held on 16th - 17th November, 2018. (pp. 166-178). ISBN: 978-81-9387-977-1

Journal Paper Publications:

- 1) **Yadav, S. K.**, Singh, S. N. & Verma, M. K. (2020). Use of e-Resources by Art Faculties of Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur: An Evaluation. *Library Progress (International)*, 40(1), 105-114. Available at <https://doi.org/10.5958/2320-317X.2020.00012.4> (ISSN: 2320-1052(p), 2320-317X (e))
- 2) Verma, M. K., **Yadav, S. K.**, & Singh, S. N. (2020). Contribution Trends of Library and Information Science Theses and Dissertations to Shodhganga by Central Universities of North-East: An Assessment. *Library Herald*. 58(2&3), 54-66. Available at <http://dx.doi.org/10.5958/0976-2469.2020.00023.8> (ISSN: 0024-2292(p), 0976-2469(e))
- 3) **Yadav, S. K.**, Verma, M. K., & Singh, S. N. (2020). Research Productivity of Mizoram University during 2004-2017: A Scientometric Study Based on Indian Citation Index. *DESIDOC journal of library & Information Techology*, 40(3), 169-175. <https://doi.org/10.14429/djlit.40.03.15022>. (ISSN: 0974-0643) (Index in Scopus)
- 4) **Yadav, S. K.**, Verma, M. K., & Singh, S. N. (2020). Collaborarion Trends in DESIDOC Journal of Library and Inforation Technology Publications during 2006-2017: A Study. *Gyankosh: The Jouranal of Library and Information Management*. 11(1), 9-20. (ISSN: 2229-4023(p), 2249-3182(e)).
- 5) Das, S., **Yadav, S. K.**, & Verma, M. K. (2020). Research Productivity of Mizoram University, Aizawl during 2002-2018: A Bibliometric Analysis. *The Journal of Indian Library Association (JILA)*. 56(3), 1-11. (ISSN: 2277-5145 (p), 2456-513X (e)).
- 6) **Yadav, S. K.**, Verma, M. K., & Singh, S. N. (2019). Research on e-Resources in India: A Scientometric Assessment of Publications Output on the Basis of Scopus Databse during 1993-2018. *Library Philosophy and Practice (e-journal)*. Available at <https://digitalcommons.unl.edu/libphilprac/3745>. (ISSN: 1522-0222) (Index in Scopus)
- 7) **Yadav, S. K.**, Singh, S. N. & Verma, M. K. (2019). Authorship and Collaboration Pattern in SRELS Journal of Information Management during 2008-2017: An Evaluation. *Library Philosophy and Practice (e-journal)*.

Available at <https://digitalcommons.unl.edu/libphilprac/3745>. (ISSN: 1522-0222) (Index in Scopus)

- 8) **Yadav, S. K.**, Singh, S. N. & Verma, M. K. (2018). Self-Citation Trends in SRELS Journal of Information Management (SRELS): An Evaluation. *SRELS Journal of Information Management*, 55(6), 326-329. Available at <http://dx.doi.org/10.17821/srels/2018/v55i6/132531>. (ISSN: 0972-2467(p), 0976-2477(e)).
- 9) Verma, M. K., **Yadav, S. K.**, and Singh, S N. (2018). Research Publication Pattern of Library Philosophy and Practice (ejournal): A Bibliometric Analysis during 2008-2017. *Library Philosophy and Practice (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/1836>. (ISSN: 1522-0222) (Index in Scopus)
- 10) Verma, M. K., **Yadav, S. K.**, and Singh, S N. (2017). Mapping the Contribution to Shodhganga by Central Universities of India in LIS Research: An Evaluation. *International Journal of Library Management and Services*. 4(2), 14-24. (ISSN: 2349-6347).

Workshops Attended/ Participated

- 1) National Workshop on “Trends in LIS Research: Approaches and Methods” organized by DLIS Mizoram University, Aizawl & sponsored by INFLIBNET, DRDO and ICSSR during 11th – 15th March, 2019.
- 2) National Workshop-cum-Training Program on “Research Ethics, Plagiarism and Reference Management” organized by DLIS, Mizoram University, Aizawl & sponsored by INFLIBNET Centre, Gandhinagar, Gujarat during 11th – 13th April, 2018.
- 3) National Workshop-cum-Training Program on “Compilation of Bibliography” organized by DLIS, Mizoram University, Aizawl during 30th October, 2017 – 1st November, 2017.
- 4) National Workshop on “Preservation and Conservation of Miniature and Manuscripts” organized by Bharat Kala Bhavan, Banaras Hindu University, Varanasi during 29th September, 2015 - 1st October, 2015..

Book Chapters

- 1) **Yadav, S. K.**, Verma, M. K., & Singh, S. N. (2021). Use of Bibliometric Tools to Analyse the Publication Pattern in Terms of Quantitative and Qualitative Parameters. In Sinha, M. K. (Ed.), *Managing University and Institutional Libraries in 21st Century. (A Festschrift Volume Published in Honour of Dr. P. K. Jayaswal)* (pp. 303-320). New Delhi: Shree Publishers and Distributors. ISBN: 978-81-948189-8-4
- 2) **Yadav, S. K.**, & Singh, S. N. (2019). Marketing of Library Resources, Services and Products: A Case Study of IIT Guwahati. In Verma, M. K. et al. (Eds.), *Innovative Librarianship through ICT Tools and Technology* (pp. 12-27). New Delhi: Shree Publishers and Distributors. ISBN: 978-81-8329-971-8

PARTICULARS OF THE CANDIDATE

NAME OF CANDIDATE : SUNIL KUMAR YADAV
DEGREE : Ph.D.
DEPARTMENT : Library and Information Science
TITLE OF THESIS : Use of E-Resources by Faculty Members of
Mizoram University and Babasaheb
Bhimrao Ambedkar University: A
Comparative Study

DATE OF ADMISSION : 08.08.2017

**APPROVAL OF
RESEARCH PROPOSAL**

1. DRC : 20.04.2018
2. BOARD OF STUDIES : 26.04.2018
3. SCHOOL BOARD : 02.05.2018

MZU REGISTRATION NO. : 1700213

REGISTRATION NO. &
DATE : MZU/Ph.D./1083 of 02.05.2018

EXTENSION (IF ANY) : N/A

Head

Department of Library and

Information Science

ABSTRACT

On

**USE OF E-RESOURCES BY FACULTY MEMBERS OF MIZORAM
UNIVERSITY AND BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY:
A COMPARATIVE STUDY**

SUNIL KUMAR YADAV

MZU REGISTRATION NO.: 1700213

Ph.D. REGISTRATION NO.: MZU/Ph.D./1083 of 02.05.2018



**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
MIZORAM UNIVERSITY**

1. INTRODUCTION

The advent of information and communication technology (ICT) has enhanced the availability and usage of e-resources among the academic community in recent years globally. There has been a rapid demand of the user community to get more and more information online. The development of Information and Communication Technology (ICT) changed the relevant philosophy for collection development in the context of the fourth law of library science “save the time of the reader/ staff” in which S. R. Ranganathan recognized an objective relating to the internal efficiency of the libraries. When a resource is available on the desktop it can save a trip to the library, and therefore, be perceived as saving time (Epps, 2005, p. 287). Library users’ attitude towards information is also shifting from the printed documents to electronic resources, more rapidly. The development of ICT devices, the rapid rise of electronic databases, and modern e-book technologies have altogether changed the entire scenario of informatics. The users’ attitude to information is gradually shifting from the printed documents to electronic resources and thus it has been a convenience to know the details of the availability and organization of e-resources like online journals and databases, electronic theses and dissertations (ETDs), government publications, online newspapers, etc. in the information centers. Therefore it is time for the information professionals in India to study the different key dimensions of electronic resources and successfully channel them into the inquisitive minds of users by identifying and addressing some of the issues relating to the use of e-resources.

In recent years online e-journals and important components of e-resources, have become widely popular among library users. One can access e-journals round the clock across geographical barriers, which makes e-journals universal. The e-journals get published or reach subscribers well before their print counterparts, besides their ability to reach all its subscribers simultaneously. Another important advantage of e-journals is that more than one person can access them at a time. Articles can be downloaded and printed simultaneously by more than one reader depending upon access rights and permission. Electronic journals counterbalance the missing issue problem. This is a boon for huge campuses, particularly where there are hundreds of readers with many departments (Halijwale et al., 2004, p. 82). Moreover, e-journals, CD-ROM databases, online databases, e-books, web-based resources, and a variety of other electronic resources are fast replacing the traditional resources of modern libraries (Mohamed, 2007, p. 23). The development of online materials during the last decade compelled

the discussion of why people would use an electronic version that appears to take longer to access than the print, and may not be as easy to use. The challenge, the present society faces in the 21st century is keeping pace with the rapid developments in information and communication technology, one needs to continuously upgrade their knowledge and skills. It is understood that we live in an information-rich society where the amount of information and knowledge in the present world is increasing at a tremendous pace. Information literacy is the ability to evaluate information across the range of information needed, locate, synthesize, and use the information effectively, using technology, communication networks, and electronic resources. Information literacy includes the full range of experience, and the user needs to enable the use of information literacy.

People who are not fond of reading will agree with the fact that a library is the most peaceful place on the earth. The library is like bodies of knowledge. One could find books in a library on almost all topics, like history, geography, or even science fiction. Libraries are considered as the shrine where all the relics of the ancient saints, full of true virtue, and that without delusion or imposture, are preserved. A library is like the whole world encompassed in one room. Without a library, an institution will not be complete. It is very essential to education and any problem, any query unanswered one can find it in one of the books stored in the library. Libraries are an integral part of the education system and one is incomplete without the other. A well-stocked library is an asset to any institution.

A library is a place where not only books but also magazines, journals, and newspapers are well-stocked for the benefit of the readers. Besides this one can also get the entire charts, Encyclopaedia, government gazette, etc. A reader can either read in the library or borrow the book/journal of his choice and take it home. A library is a popular place in the academic curriculum. With the growing popularity of the internet, the retrieval of information becomes faster. Because of the above facts, it is apparent that a library is a very important place in society.

Libraries are the repositories of knowledge that form an integral part of education. The primary objective of the library is to organize and provide access to information. This objective will never change but the format and methods that are used will change dramatically, providing new opportunities and challenges.

Libraries have witnessed a great metamorphosis in recent years. The print medium is increasingly giving way to the electronic form of materials. The library is an extremely

important entity in an ever-changing society and it must be responsive to the needs of society. Information Technology (IT) has changed the complexion of today's libraries. Libraries have evolved to become information providers rather than mere document providers. The shift from the traditional libraries to the digital is not merely a technological evolution but requires a change in the paradigm by which the users access and interact with information. This move from traditional to electronic libraries also alters the fundamental role of the library.

2. MIZORAM UNIVERSITY

Mizoram University was established as a Central University by an Act, 2000, it enacted by Parliament in the 51 year of the Republic of India. But it started functioning from 2nd July 2001. Before this; the University inherited from North-Eastern Hill University (NEHU) had functioned as Mizoram Campus for 24 years since 1979. At present Mizoram University comprises 8 schools of studies and 33 academic departments. There is a total of 230 teaching faculties as on 10th April 2021. The objects of the University shall be to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may seem fit, to make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry and other allied disciplines in the educational programmes in the University. Central Library is the focal point of all user community of Mizoram University. The Library caters to the educational and research needs of the academic community and its resources are consulted by scholars from all over the country. Empowering an academic community of Mizoram University with enriching collections, innovative services. In the year 2008, the whole library impacts have been made open in the machine-readable record. The mechanized bibliographic information of the 16 library property has likewise been accessible for users' looking all through the grounds through Local Area Network (LAN) intranet, utilizing Web-OPAC. Robotized dispersal framework utilizing scanner mark headway has been utilized since first December 2008 which gives necessary and affects association to the users. The library has been giving crediting and reprographic associations, Orientation Programs for starting late surrendered understudies of all the Academic Departments. Digitization of Mizoram University's own particular archives and dispersals had been searched for after on setting up an 'Institutional Repository' and the same had been energized on the intranet in May 2011. The storeroom gives free gets to a broad assortment of institutional research yields inside the grounds arrange.

3. BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY, LUCKNOW

Babasaheb Bhimrao Ambedkar University was established as a Central University by an act of parliament of India in 1994 this act is called the Babasaheb Bhimrao Ambedkar University act 1994. But University was established in 1996 and started functioning in February 1997. The objective of the University is to promote advanced knowledge by providing instructional and research facilities in branches of learning as it may deem fit, to make provisions for integrated courses in Science and key frontier areas of Technology and other allied disciplines in the educational programs of the University, to promote the study of the principle of Babasaheb Bhimrao Ambedkar worked during his life. At present University comprises 9 schools of studies and 27 academic departments. There are 159 teaching faculties (42 Professors, 14 Associate Professors, and 103 Assistant Professors) in Babasaheb Bhimrao Ambedkar University on 18th April 2021.

4. SIGNIFICANCE OF STUDY

The significance of electronic resources is for general communication, information retrieval, and instructional delivery to support teaching and research activities in higher learning institutions. Users' attitudes regarding information are slowly shifting away from printed materials and toward electronic resources. We normally refer to electronic resources as those that can be accessed by computer, such as via email, CD-ROM, or, more popularly, the World Wide Web (WWW). Electronic resources have a bright future and a lot of possibilities for attracting users. It incorporates all of the advantages of multimedia, digital coding, and the Internet. Libraries are progressively making this type of resource available to their patrons, either by purchase, subscription or by educating them about the many free electronic resources available. It allows the user to take it with them wherever they go and can be viewed on any computer, including a handheld device. It can also be downloaded immediately.

The main intention of this study is to analyse the awareness of Web browsers, satisfaction with the e-resources provided by the library, ranking of e-resources, the performance of the library, and barriers to access e-resources. The research scholars are posed to an array of electronic resources through the internet for research. They should be able to differentiate between relevant and irrelevant information and should be able to access the needed information effectively and efficiently.

5. SCOPE OF THE STUDY

The scope of the present study is limited to faculty members of Mizoram University, Aizawl, and Babasaheb Bhimrao Ambedkar University, Lucknow. These two selected universities are central universities situated in two states capital (Mizoram and Uttar Pradesh) and having a common goal in their act i.e. uplift the marginalised community of society, particular of the Scheduled Castes and the Scheduled Tribes in their respected state with special provisions in their act, passed by Parliament of India. Further, both universities are functioning for more than 20 years and the growth and development of these two universities are also similar in many ways like a number of schools, academic departments, faculties' positions, etc. Thus it is very significant to make a comparative study between a well-established central part of India University with North East India University which has some common goals and objectives. At present, there are 367 faculty members in both universities. The study will cover the total population of faculty members from Mizoram University and Babasaheb Bhimrao Ambedkar University.

6. STATEMENT OF THE PROBLEM

The University library is an important organ of the University to support and promote its teaching, research, and extension education programmes by providing literature. To achieve this, the library should have a large number of qualitative collections to serve as a source of information and be organized in such a way that they can be exploited fully, conveniently, and expeditiously by the faculty members. Simultaneously, all efforts are made to promote the use of library resources and to disseminate information from books, periodicals, reference sources, and bibliographical tools to achieve the objectives of the library effectively.

Since Mizoram University and Babasaheb Bhimrao Ambedkar University libraries are fully computerized, it is necessary to educate the faculty members for optimum use of electronic resources provided through the central library. Besides, Internet access had been provided to each teacher and research scholars in their respective departments. In this context, a scholar has been motivated to undertake this study to compare the use of electronic resources for faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University.

7. OBJECTIVES OF THE STUDY

The objectives of the study are to:

1. To compare the awareness and use of e-resources among faculty members in both universities.
2. To study the frequency, time spent, and purpose of use of e-resources among faculty members.
3. To find out the extent of use of e-resources among faculty members.
4. To find out the level of satisfaction towards the use of e-resources among faculty members.
5. To identify the problems and prospects for improving the use of e-resources among faculty members.

8. METHODOLOGY

The present study is designed to compare the use of e-resources by faculty members of Mizoram University, Aizawl, and Babasaheb Bhimrao Ambedkar University, Lucknow. Therefore, the survey method of research is being found suitable to undertake the present study. The study covered the total population of faculty members from Mizoram University and Babasaheb Bhimrao Ambedkar University. The population of the study was all 390 faculty members (consisting of 230 faculties of MZU and 160 faculties of BBAU) from both the universities and the census method of sampling was adopted for this study. For the collection of primary data from the respondents, the questionnaire method was adopted as a data collection tool.

Two structured questionnaires was framed with adequate questions related to the study. One questionnaire was circulated to faculty members to obtain required information with regards to assessment of the use of e-resources by faculty members and the second questionnaire was distributed to librarians of respective libraries to know the status of collection and services with special reference to e-resources.

The collected data was scrutinized, tabulated, and analysed for inference by using appropriate software.

9. REVIEW OF LITERATURE

The review of literature gives the glimpses of studies of e-resources usage and provides certain solid guiding lights for the present study. The review of the study is presented in the following heading such as the use of the internet, use of e-resources and information search patterns. The study is further arranged in ascending chronological order. However, this chapter deals with the changes in the use of e-

resources to provide the researcher with a better understanding of the previous studies that happened on this topic and how this study could be improved. The reviews of the study presented in the following heading such as Use of Internet, Use of e-resources, and e-resources search patterns. The study is further arranged in ascending chronological orders. However, this chapter deals with the studies on e-resources to provide the researcher with a better understanding of the previous studies that happened on this topic and how this study could be improved.

10. FINDINGS OF THE STUDY

- 1.** To search the e-resources for their academic requirements, they rely on the internet and use it frequently. It has been found that all the faculty members of both universities are aware and use the internet to access the e-resources and services for the fulfilment of their academic requirements.
- 2.** The majority (94.22%) of the respondents of MZU were aware of e-resources that are provided by the university library. While the rest (5.78%) of the respondent of MZU were not aware. However, in BBAU (96.40%) of respondents were aware and rest (3.60%) of respondents of BBAU were not aware. Thus, it is clear that a large number of faculty members of both universities were aware of e-resources which are provided by the library.
- 3.** It has been found that (95.95%) of faculty members of MZU use e-resources and only (4.05%) of faculty members do not use e-resources. However, in BBAU all (100%) of faculty members were using e-resources. Thus it has been clear that a large number of the respondents of both universities were use e-resources.
- 4.** A large number (93.06%) of faculty members of MZU use e-journal to access required information, followed by (85.55%) use e-books, (75.72%) use e-teaching materials, (68.79%) use e-thesis and dissertation, (64.16%) use e-reference resources (dictionaries, encyclopaedias etc.), (58.38%) use e-tutorials, (53.18%) use e-conference proceedings, (47.98%) use e-databases, (44.51%) use institution repository, (45.09%) use e-technical reports, (39.88%) use blogs/ wikis, (34.10%) use subject gateways, (28.32%) use e-patents/ e-standards, and (26.01%) use e-drawings and designs. However in BBAU (94.59%) faculty members use e-journal to access required information, followed by (86.49%) use e-books, (78.38%) use e-teaching

materials, (70.27%) use e-thesis and dissertation, (67.57%) use e-reference resources (dictionaries, encyclopaedias etc.), (59.46%) use e-tutorials, 57.66%) use e-conference proceedings, (51.35%) use e-databases, 48.65%) use institution repository (46.85%) use e-technical reports, (39.64%) use blogs/ wikis, (38.74%) use subject gateways, (33.33%) use e- patents/ e-standards, and (28.83%) use e-drawings and designs.

5. It has been found that the respondents of both universities are highly aware of e-resources and databases provided by the E-ShodhSindhu. The maximum (60.12%) of faculty members of MZU are aware and use Springer Link, followed by (56.07%) aware and use Taylor and Francis, (46.24%) JSTORE, (43.93%) Scopus, (37.57%) Elsevier's Science Direct, (35.84%) Web of Science, (34.68%) Emerald Insight Full Text, (27.17%) Oxford University Press, (23.12%) Nature, (16.76%) IEEE/ IEE Electronic Library Online, (16.18%) Annual Reviews, (13.87%) Web of Science Lease Access, (9.83%) ProQuest Science, (9.83%) Indian Standards, (8.09%) American Chemical Society, (8.09%) J-Gate Consortia, (7.51%) Institute for Studies in Industrial Development (ISID) Database, (6.94%) ACM Digital Library, (6.94%) of faculty members of MZU are aware and use Project Muse. However, in BBAU (78.38%) of faculty members are aware and use JSTORE, followed by (62.16%) Springer Link, (56.76%) Taylor and Francis, (43.24%) Scopus, (37.84%) Elsevier's Science Direct, (33.33%) Web of Science, (27.03%) Nature, (25.23%) Oxford University Press, (24.32%) Annual Reviews, (18.92%) IEEE/ IEE Electronic Library Online, (12.61%) Emerald Insight Full Text, (12.61%) ProQuest Science, (12.61%) I-Scholar, (11.71%) Web of Science Lease Access, (10.81%) American Chemical Society, (10.81%) J-Gate Consortia, (10.81%) ACM Digital Library, (10.81%) Manupatra, (9.01%) Indian Standards, (8.11%) Institute for Studies in Industrial Development (ISID) Database, (7.21%) Project Muse, (7.21%) ciFinderScholar, (6.31%) of respondents of BBAU are aware and use ASME Journals Online. It has been also found that the maximum respondents of both universities use Springer Link, JSTORE, and Taylor and Francis databases which are provided by the Libraries and BBAU have reached a collection of e-resources and databases in comparison to MZU.

6. It has been found that the respondents of both universities are aware of the use of e-resources from various sources. The maximum (63.01%) of respondents of MZU become aware and use of e-resources by personal communication with friends, subject experts, and resource persons, followed by (62.43%) cited in report/ journals/ conference papers, (57.80%) bibliographical database searching (Indexing and Abstracting databases), (52.02%) e-mail alerts from publishers/ distributors, etc., (43.35%) by chance, by browsing or looking for materials, (40.46%) announcements in journals, and (20.23%) become aware and use of e-resources referred by the librarian. However, the maximum (64.86%) of respondents of BBAU become aware and use of e-resources by personal communication with friends, subject experts, and resource persons, followed by (63.96%) cited in report/ journals/ conference papers, (56.76%) bibliographical database searching (Indexing and Abstracting databases), (50.45%) e-mail alerts from publishers/ distributors, etc., (43.24%) by chance, by browsing or looking for materials, (38.74%) announcements in journals, and 21.62%) become aware and use of e-resources referred by the librarian
7. A large number (91.91%) of respondents of MZU are learning to use e-resources by self-learning, followed by (45.09%) attending courses, training, workshops, and seminars, (41.62%) guidance from other colleagues, (30.06%) by trial and error method, (15.61%) by guidance from computing staff/ technicians, (8.09%) by guidance from library staff, and (2.31%) of respondents of MZU are learning to use of e-resources by other sources. However, a maximum of (90.09%) of respondents of BBAU are learning to use e-resources by self-learning, followed by (46.85%) by attending courses, training, workshops, and seminars, (36.94%) by guidance from other colleagues, (29.73%) by trial and error method, (18.92%) by guidance from computing staff/ technicians, (10.81%) by guidance from library staff, and (2.70%) of respondents of BBAU are learning to use of e-resources by other sources.
8. The majority (77.46%) of the respondents of MZU are using e-resources through institutional repository while the rest (22.54%) of respondents are not. However, in BBAU a large number (78.38%) of respondents are using e-resources through an instructional repository while the rest (21.62%)

respondents are not. Thus, it is found that a large number of the faculty members of both universities are using e-resources through the institutional repositories.

- 9.** The majority (82.08%) of faculty members of MZU believe that they access e-resources available through a digital library, and (17.92%) states that they do not. While, (81.98%) faculty members of BBAU believe that they access e-resources available through a digital library, and (18.02%) states that they do not.
- 10.** Regarding format used by the respondents between electronic and print highest number (89.02%) of faculty members of MZU use electronic resources over print resources, while only (10.98%) are not they use print resources. Whereas (89.19%) of faculty members of BBAU use electronic resources over print resources and (10.81%) are not used e-resources they use print resources.
- 11.** The majority (68.79%) of faculty members of MZU spent time to use of internet more than three hours to access e-resources and information services. While, (66.67%) of faculty members of BBAU spent time to use of internet more than three hours to access e-resources and information services. It found that most of the faculty members use the internet always to search for their required information.
- 12.** There are various purposes to use the internet for online resources, the Highest number (97.11%) of respondents of MZU access the internet for reading/ writing research papers, research proposals, and projects, followed by (94.8%) for data communication (sending and receiving E-Mail, FTP, etc.), (93.06%) for accessing teaching materials, (85.55%) for accessing/reading subscribed information resources (e-journals, e- databases, etc.), (83.24%) for accessing /reading general information resources (news, etc.), (64.16%) for downloading software, (64.16%) for voice/ video communication (IP phone, Skype, etc.), (56.07%) to access audio/ visual materials, (54.91%) for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), (48.55%) for entertainment/ recreational (adds, games, movies, songs, etc.), and (30.06%) to access OPAC/ EPAC/Web OPAC to fulfill their information requirements. While (96.4%) of faculty

members of BBAU access the internet for reading/ writing research papers, research proposals, and projects, followed by (94.59%) for data communication (sending and receiving E-Mail, FTP, etc.), (90.99%) for accessing teaching materials, (86.49%) for accessing/reading subscribed information resources (e-journals, e- databases, etc.), (84.68%) for accessing /reading general information resources (news, etc.), (63.06%) for downloading software, (61.26%) for voice/ video communication (IP phone, Skype, etc.), (60.36%) to access audio/ visual materials, (54.05%) for blogging/uploading content and participation in discussion forum / Social sites (Orkut, Facebook, etc.), (47.75%) for entertainment/ recreational (adds, games, movies, songs, etc.), and (31.53%) to access OPAC/ EPAC/Web OPAC to fulfill their information requirements. It is clear that maximum faculty members of both universities access the internet for the fulfilment of academic purposes.

- 13.** The majority (60.12%) of faculty members of MZU use e-journal daily, followed by (20.18%) use more than twice a week, (12.14%) use once in a week, and (6.94%) use more than twice in a month. However, (65.77%) of faculty members of BBAU use e-journals daily, followed by (21.62%) use more than twice in a week, (8.11%) use e-journals once in a week, and (4.5%) use more than twice in a month.
- 14.** Highest number (39.88%) of respondents of MZU use e-book daily, followed by (30.06%) use more than twice a week, (20.23%) use once in a week, (7.51%) use more than twice in a month, and (2.31%) use once in a month. While (35.14%) of faculty members of BBAU use daily, followed by (32.43%) use more than twice in a week, (25.23%) use once in a week, (5.41%) use more than twice in a month, and (1.8%) use once in a month.
- 15.** Highest number (13.87%) of respondents of MZU use e-technical reports more than twice a week, followed by (15.61%) use once in a week, (6.36%) use daily, (5.20%) use more than twice in a month, and (4.62%) use once in a month. While (16.22%) of faculty members of BBAU use e-technical reports once in a week, followed by (11.71%) use more than twice in a week, (9.01%) use daily, (5.41%) use more than twice in a month, and (5.41%) use once in a month.

- 16.** Highest number (36.42%) of respondents of MZU use e-conference proceedings daily and also more than twice in a week, (12.72%) use once in a week, (6.36%) use more than twice in a month, and (8.09%) once in a month. While, (36.04%) of faculty members of BBAU use daily, followed by (27.93%) use more than twice in a week, (15.32%) use once in a week, (10.81%) use e-conference proceedings more than twice in a month, and (9.91%) of respondents of BBAU use e-conference proceedings once in a month.
- 17.** The majority (4.05%) of respondents of MZU use e-drawings and designs daily, followed by (5.78%) use more than twice a week, (4.62%) use once in a week, (5.78%) more than twice in a month, and (5.78%) of respondents of MZU use e-drawings and designs once in a month. While (4.50%) of faculty members of BBAU use e-drawings and designs daily, followed by (4.50%) use more than twice in a week, (4.50%) use once in a week, (7.21%) use more than twice in a month, (7.21%) once in a month.
- 18.** Highest number (64.16%) of respondents of MZU use e-teaching materials daily, followed by (21.39%) use more than twice a week, (8.67%) use once in a week, (5.20%) use more than twice in a month, and (0.58%) use once in a month. While (68.47%) of faculty members of BBAU use e-teaching materials daily, followed by (17.12%) use more than twice in a week, and (9.91%) use once in a week, (4.50%) use more than twice in a month.
- 19.** The majority (5.78%) of respondents of MZU use e-patents, e-standards daily, followed by (5.2%) use more than twice a week, (7.51%) use once in a week, (12.14%) use more than twice in a month, (32.95%) use once in a month. While (7.21%) of faculty members of BBAU use e-patents, e-standards daily, followed by (6.31%) use more than twice in a week, (10.81%) use once in a week, (2.70%) use more than twice in a month, and (25.23%) use once in a month.
- 20.** The majority (46.82%) of faculty members of MZU use e-tutorials more than twice a week, followed by (24.28%) use daily, (8.09%) use once in a week, (8.09%) use more than twice in a month, and (2.89%) use once in a month. While (22.52%) use more than twice in a week, followed by (13.51%) use

daily, (9.91%) use once in a week, (9.01%) use more than twice in a month, (3.60%) use once in a month.

- 21.** The majority (30.06%) of respondents of MZU use e-databases more than twice in a month, followed by (24.86%) once in a week, (14.45%) once in a month, (13.29%) daily, and (10.4%) use e-databases more than twice a week. While (14.41%) of faculty members of BBAU use e-databases once in a week, followed by (13.51%) daily, (10.81%) more than twice in a week, (10.81%) use more than twice in a month, and (3.60%) use e-databases once in a month.
- 22.** The majority (25.43%) of respondents of MZU use e-thesis and dissertations daily, followed by (25.43%) more than twice in a week, (20.81%) once in a week, (19.65%) more than twice in a month, and (8.67%) use e-thesis and dissertations once in a month. While (29.73%) of faculty members of BBAU use e-thesis and dissertations more than twice in a month, followed by (25.23%) once in a week, (20.72%) daily, (17.12%) more than twice in a week, and (7.21%) use e-thesis and dissertations once in a month.
- 23.** The majority (36.42%) of respondents of MZU use subject gateways once in a week, followed by (24.28%) more than twice a week, (14.45%) more than twice in a month, (12.72%) once in a month, and (12.14%) use subject gateways daily. While (14.41%) of faculty members of BBAU use subject gateways once in a week, followed by (8.11%) more than twice in a week, (7.21%) once in a month, (5.41%) daily, and (2.70%) use subject gateways more than twice in a month.
- 24.** The majority (13.29%) of respondents of MZU use Blogs, Wikis once in a week, followed by (9.25%) more than twice a week, (8.09%) daily, (6.94%) more than twice in a month, and (3.47%) use Blogs, Wikis once in a month. While (12.61%) of faculty members of BBAU use Blogs, Wikis once in a week, followed by (8.11%) daily, (8.11%) more than twice in a week, (7.21%) more than twice in a month, (4.50%) use Blogs, Wikis once in a month.
- 25.** The majority (35.26%) of respondents of MZU use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a week, followed by (30.06%) more than twice in a week, (21.39%) daily, (8.09%) more than twice in a month, and (5.20%) once in a month. While (34.23%) of faculty members of BBAU use e-reference resources (Dictionaries, encyclopaedias, etc.) daily,

followed by (34.23%) more than twice in a week, (18.92%) once in a week, (8.11%) more than twice in a month, (4.50%) use e-reference resources (Dictionaries, encyclopaedias, etc.) once in a month.

26. The majority (29.48%) of respondents of MZU use institutional repository once in a week, followed by (25.43%) once in a month, (21.39%) more than twice a week, (15.61%) more than twice in a month, and (8.09%) use institutional repository daily. While (13.51%) of respondents of BBAU use institutional repository once in a month, followed by (10.81%) once in a week, 9.91%) daily, (7.21%) more than twice in a week, and (7.21%) use institutional repository more than twice in a month.

27. The majority (42.77%) of faculty members of MZU have experience in using e-resources above 10 years, followed by (20.23%) have experience between 5-7 years, (18.50%) have experience between 8-10 years, (13.87%) have experience between 2-4 years, and (4.62%) have experience less than one year. While, (45.05%) of faculty members of BBAU have experience in using e-resources above 10 years, followed by (19.82%) have experience between 8-10 years, (18.92%) have experience between 5-7 years, (12.61%) have experience between 2-4 years, and (3.60%) have experience in using e-resources less than one year.

28. Highest number (94.80%) of faculty members of MZU use e-resources for the purpose of reading/ writing research papers, followed by (85.55%) for reading/ writing research proposals, reports, and projects, (82.08%) for preparing/ accessing teaching materials, (75.72%) for preparation for seminars, conference, and workshop, (63.01%) for curriculum design, 54.91%) for basic scientific and technical information, (52.02%) to collect general information, (42.77%) for access audio/ visual materials, (24.28%) use e-resources for drawings, designs, graphs and patents, and only (0.58%) for other purposes. However, Highest number (93.69%) of faculty members of BBAU use e-resources for the purpose of reading/ writing research papers, followed by (83.78%) for reading/ writing research proposals, reports, and projects, (81.98%) for preparing/ accessing teaching materials, (72.97%) for preparation for seminars, conference, and workshop, (65.77%) for curriculum design, (58.56%) for basic scientific and technical information, (53.15%) to

collect general information, (50.45%) for access audio/ visual materials, (28.83%) use e-resources for the purpose of drawings, designs, graphs and patents, and only (0.90%) use e-resources for other purposes.

- 29.** A maximum of (64.74%) of faculty members of MZU are using keyword search method to access e-resources most frequently, followed by (62.43%) are using title search method most frequently, (48.55%) are using subject search method most frequently, (43.93%) are using author search method most frequently, (13.87%) are using publisher search method most frequently, (4.62%) are using author address search method most frequently, and (1.16%) are using author address search method most frequently. While, (55.86%) of faculty members of BBAU are using keyword search method to access e-resources most frequently, followed by (54.95%) are using title search method most frequently, (51.35%) are using author search method most frequently, (49.55%) are using subject search method most frequently, (17.12%) are using publisher search method most frequently, (2.70%) are using author address search method most frequently, and (0.90%) are using author address search method to access e-resources most frequently.
- 30.** The majority (29.48%) of faculty members of MZU using the title search method to access e-resources frequently, followed by (27.75%) are using the subject search method frequently, (21.39%) are using the author search method frequently, (20.23%) are using publisher search method frequently, (19.08%) are using keyword search method frequently, and (9.83%) are using author address search method frequently. While, (38.74%) of faculty members of BBAU are using publisher search method to access e-resources frequently, followed by (34.23%) are using author search method frequently, (29.73%) are using subject search method frequently, (19.82%) are using keyword search method frequently, (16.22%) are using title search method frequently, and (7.21%) are using author address search method to access e-resources frequently.
- 31.** Highest number (30.64%) of faculty members of MZU are using publisher search method to access e-resources less frequently, followed by (22.54%) are using author search method less frequently, (18.50%) are using subject search method less frequently, (14.45%) are using author address search method less

frequently, (8.09%) are using keyword search method less frequently, (5.78%) are using title search method less frequently, and (0.58%) are using author address search method to access e-resources less frequently. While, (21.62%) of faculty members of BBAU are using publisher search method to access e-resources less frequently, followed by (18.02%) are using title search method less frequently, (16.22%) are using keyword search method less frequently, (15.32%) are using subject search method less frequently, (14.41%) are using author address search method less frequently, (10.81%) are using author search method less frequently, and (0.90%) are using author address search method to access e-resources less frequently.

32. Highest number (19.65%) of faculty members of MZU are uncertain about using publisher search method to access e-resources, followed by (17.92%) are uncertain to using author address search method, (7.51%) are uncertain to using author search method, (5.78%) are uncertain to using keyword search method, (3.47%) are uncertain to using subject search method, and (0.58%) are uncertain to using title search method to access e-resources. While, (24.32%) of faculty members of BBAU are uncertain about using the author address search method to access e-resources, followed by (14.41%) are uncertain about using the publisher search method, (5.41%) are uncertain about using the title search method, (5.41%) are uncertain to using keyword search method, (3.60%) are uncertain to using subject search method, and (0.90%) are uncertain to using author search method to access e-resources.

33. Highest number (53.18%) of faculty members of MZU do not use the author address search method to access e-resources, followed by (15.61%) do not use the publisher search method, (4.62%) do not use the author search method, (2.31%) do not use keyword search method, (1.73%) do not use subject search, and (1.73%) are do not using title search method to access e-resources. While, (51.35%) of faculty members of BBAU do not use the author address search method to access e-resources, followed by (8.11%) do not use the publisher search method, (5.41%) do not use the title search method, (2.70%) do not use author search, (2.70%) do not use keyword search method, and (1.80%) are do not using subject search method to access e-resources.

- 34.** Highest number (60.12%) of faculty members of MZU depend on e-resources provided by the university library to a moderate extent, followed by (17.92%) to a great extent, (17.92%) to a little extent, and (4.05%) did not depend on e-resources provided by the university library. While, (60.36%) of faculty members of BBAU depend on e-resources provided by the university library to a moderate extent, followed by (18.92%) to a great extent, (17.12%) to a little extent, and (3.60%) did not depend on e-resources provided by the university library.
- 35.** Most (86.13%) of faculty members of MZU visit the library website for accessing e-resources and the rest (13.87%) do not visit the library website. While, (84.68%) of faculty members of BBAU visit the library website for accessing e-resources, and rest (15.32%) are not visit the library website.
- 36.** The majority (82.08%) of the faculty members of MZU opinion that library websites serve as a medium for their required information and (17.92%) assert that they do not. While, (81.98%) of faculty members of BBAU opinion that library websites serve as a medium for their required information and (18.02%) assert that they do not.
- 37.** The maximum (64.74%) of faculty members of MZU rate as good for their usefulness of e-resources, followed by (55.49%) rate as good for their comprehensiveness, (54.91%) rate as good for their easy to use, (53.76%) rate as good for their accessibility, (53.18%) rate as good for their flexibility, (52.6%) rate as good for their organized information, (52.02%) rate as good for their up-to-date information, (49.13%) rate as good for their hypertext links, (44.51%) rate as good for their access speed, and (1.16%) rated as good for their other features of e-resources. However, (65.77%) of faculty members of BBAU rate as good for their usefulness of e-resources, followed by (63.96%) rate as good for their flexibility, (58.56%) rate as good for their comprehensiveness, (56.76%) rate as good for their up-to-date information, (53.15%) rate as good for their access speed, (53.15%) rate as good for their hypertext links, (52.25%) rate as good for their organized information, (51.35%) rate as good for their accessibility, (50.45%) rate as good for their easy to use, and (1.80%) rated as good for their other features of e-resources.

- 38.** The majority (37.57%) of the faculty members of MZU rate as excellent for their easy to use of e-resources, followed by (29.48%) rate as excellent for their up-to-date information of e-resources, (27.17%) rate as excellent for their accessibility, (23.70%) rate as excellent for their flexibility, (21.97%) rate as excellent for their usefulness, (16.18%) rate as excellent for their comprehensiveness, (15.03%) rate as excellent for their organized information, (14.45%) rate as excellent for their access speed, and (12.14%) rated as excellent for their hypertext links. While, (43.24%) of faculty members of BBAU rate as excellent for their easy to use of e-resources, followed by (30.63%) rate as excellent for their accessibility, (27.93%) rate as excellent for their up-to-date information, (23.42%) rate as excellent for their usefulness, (16.22%) rate as excellent for their access speed, (16.22%) rate as excellent for their flexibility, (15.32%) rate as excellent for their comprehensiveness, (13.51%) rate as excellent for their organized information, and (9.01%) rated as excellent for their hypertext links of e-resources.
- 39.** Highest number (37.57%) of faculty members of MZU rate as fair for their access speed of e-resources, followed by (31.21%) rated as fair for their hypertext links, (27.17%) rate as fair for their organized information, (24.28%) rate as fair for their comprehensiveness, (21.39%) rate as fair for their flexibility, (16.76%) rate as fair for their up-to-date information, (16.18%) rate as fair for their accessibility, (12.14%) rate as fair for their usefulness, (5.78%) rate as fair for their easy to use, and (1.16%) rated as fair for their other features of e-resources. While, (34.23%) of faculty members of BBAU rate as fair for their hypertext links of e-resources, followed by (30.63%) rated as fair for their organized information, (27.03%) rate as fair for their access speed, (23.42%) rate as fair for their comprehensiveness, (18.02%) rate as fair for their flexibility, (16.22%) rate as fair for their accessibility, (13.51%) rate as fair for their up-to-date information, (9.91%) rate as fair for their usefulness, (5.41%) rate as fair for their easy to use, and (1.80%) rated as fair for their other features of e-resources.
- 40.** Highest number (7.51%) of faculty members of MZU rate as poor for their hypertext links of e-resources, followed by (5.20%) rated as poor for their

organized information, (4.05%) for their comprehensiveness, (3.47%) rated as poor for their access speed, (2.89%) rated as poor for their accessibility, (1.73%) rated as poor for their flexibility, (1.73%) rated as poor for their easy to use, (1.73%) rated as poor for their up-to-date information, and (1.16%) rated as poor for their usefulness. While, (3.60%) of faculty members of BBAU rate as poor for their hypertext links of e-resources, followed by (3.60%) rated as poor for their organized information, (3.60%) rated as poor for their access speed, (2.70%) rated as poor for their comprehensiveness, (1.80%) rated as poor for their flexibility, (1.80%) rated as poor for their accessibility, (1.80%) rated as poor for their up-to-date information, (0.90%) rated as poor for their usefulness, and (0.90%) rated as poor for their easy to use.

- 41.** The majority (75.14%) of the faculty members of MZU satisfied with facilities provided by the university library, and (24.86%) are not satisfied. While, (74.77%) of faculty members of BBAU are satisfied with the facilities provided by the university library, and (25.23%) are not satisfied.
- 42.** Highest number (60.69%) of faculty members of MZU opined that they are satisfied with the facilities available in the university for accessing e-resources, followed by (22.54%) moderately satisfied, (9.83%) extremely satisfied, and (6.94%) are slightly satisfied with the facilities available in the university for accessing e-resources. While, (58.56%) of faculty members of BBAU opined that they are satisfied with the facilities available in the university for accessing e-resources, followed by (24.32%) moderately satisfied, (9.91%) extremely satisfied, and (7.21%) opined that they are slightly satisfied with the facilities available in the university for accessing e-resources.
- 43.** The majority (56.07%) of the faculty members of MZU agree with the opinion that library staff take a personal interest and are polite as well as courteous in facilitating access to e-resources, followed by (27.75%) strongly agree, (11.56%) uncertain, (2.89%) disagree, and (1.73%) strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources. While, (55.86%) of faculty members of BBAU agree with the opinion that they take a personal interest

and are polite as well as courteous in facilitating access to e-resources, followed by (26.13%) strongly agree, (15.32%) uncertain, (1.80%) disagree, and (0.90%) strongly disagree with the opinion that they take a personal interest and are polite as well as courteous in facilitating access to e-resources.

- 44.** The majority (41.62%) of the faculty members of MZU agree with the opinion that library staff demonstrates and teach how to use CD-ROM, database/ online database, followed by (30.64%) uncertain, (7.51%) disagree, and (2.31%) strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database. While, (51.35%) faculty members of BBAU agree with the opinion that library staff demonstrate and teach how to use CD-ROM, database/ online database, followed by (27.93%) uncertain, (12.61%) strongly agree, (7.21%) disagree, and (0.90%) strongly disagree with the opinion that they demonstrate and teach how to use CD-ROM, database/ online database.
- 45.** It is found that (50.87%) of faculty members of MZU agree with the opinion that library staff are well trained in accessing e-resources and are up to date in their knowledge, followed by (31.79%) uncertain, (1.73%) disagree, and (1.16%) strongly disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge. While, (46.85%) of faculty members of BBAU agree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge, followed by (28.83%) uncertain, (23.42%) strongly agree, and (0.90%) disagree with the opinion that they are well trained in accessing e-resources and are up to date in their knowledge.
- 46.** Highest number (41.04%) of faculty members of MZU agree with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information, followed by (39.31%) uncertain, (13.87%) strongly agree, (4.05%) disagree, and (1.73%) strongly disagree with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information. While, (48.65%) of faculty members of BBAU agree with the opinion that library staff is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve

information, followed by (26.13%) uncertain, (18.92%) strongly agree, (4.50%) disagree, and (1.80%) strongly disagree with the opinion that is very much thorough in selecting appropriate e-resources and using relevant terms of phrases to retrieve information.

- 47.** The majority (68.79%) of the faculty members of MZU opined that they are satisfied with the usage of e-resources, followed by (16.18%) moderately satisfied, (13.29%) extremely satisfied, (1.16%) slightly satisfied, and (0.58%) opined that they are not satisfied with the usage of e-resources. While, (64.86%) faculty members of BBAU opined that they are satisfied with the usage of e-resources, followed by (18.92%) moderately satisfied, (14.41%) extremely satisfied, and (1.80%) opined that they are not satisfied with the usage of e-resources.
- 48.** The majority (76.88%) of faculty members of MZU facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by (43.35%) of server down, (34.10%) of slow processing of computer/ machine, (25.43%) for lack of authenticity/ reliability of resources, (21.39%) of frequent power failure, (19.08%) for getting unsynchronized information, (6.94%) of changes in URL, and (6.94%) are facing problems in other things while accessing the internet. However (75.68%) of faculty members of BBAU are facing the problem of poor internet connectivity (low speed) while accessing the internet, followed by (43.24%) of server down, (34.23%) of slow processing of computer/ machine, (28.83%) for lack of authenticity/ reliability of resources, (18.92%) of frequent power failure, (19.82%) for getting unsynchronized information, (9.01%) of changes in URL, and (8.11%) are facing problems in other things while accessing the internet.
- 49.** Highest number (65.90%) of faculty members of MZU faced problems while using/ accessing e-resources and (34.10%) of faculty members of MZU did not face any problem. While, (64.86%) of faculty members of BBAU faced problems while using/ accessing e-resources, and (35.14%) of faculty members of BBAU did not face any problem.
- 50.** The majority (51.45%) of faculty members of MZU faced the problem of poor connectivity (low bandwidth) while accessing e-resources, followed by (30.64%) retrieval of irrelevant/ junk information, (18.5%) non-availability of

the latest software (to view, read and write accessed information), (17.92%) of unfamiliar file formats, (16.76%) of unorganized information content, (13.29%) of lack of IT knowledge to effectively utilize the service/ e-resources, (10.98%) of change in URL, (9.25%) of change of the content/ information, (7.51%) of lack of assistance from library staff, and (7.51%) are faced other problem while accessing e-resources. While, (48.65%) of faculty members of BBAU faced the problem of poor connectivity (low bandwidth) while accessing e-resources, followed by (35.14%) of retrieval of irrelevant/ junk information, (18.92%) of unfamiliar file formats and unorganized information content, (18.02%) have of non-availability of the latest software (to view, read and write accessed information), (16.22%) of lack of IT knowledge to effectively utilize the service/ e-resources, (12.61%) of change in URL, (11.71%) of change of the content/ information, (9.01%) of lack of assistance from library staff, and (6.31%) are faced other problem while accessing e-resources.

51. Highest number (51.45%) of faculty members of MZU facing difficulties in slow access speed while accessing e-resources through online mode, followed by (35.84%) too much time consuming for searching the information, (35.26%) in unorganized elements/contents in a search page, (27.17%) in unfamiliarity with the search methods, (23.70%) in lack of any online help, and (0.58%) are facing difficulties in other search modes while accessing e-resources through online mode. While, (54.05%) of faculty members of BBAU facing difficulties in slow access speed while accessing e-resources through online mode, followed by (40.54%) in too much time consuming for searching the information, (39.64%) in unorganized elements/contents in a search page, (25.23%) in lack of any online help, (24.32%) in unfamiliarity with the search methods, and (0.90%) are facing difficulties in other search modes while accessing e-resources through online mode.

52. The majority (95.38%) of the faculty members of MZU motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by (89.6%) for online submission of papers to Journals/ Conferences/ Seminars, etc., (83.82%) to easy access to information resources, (74.57%) to know about latest rules, and regulations related to

academic activities, (71.68%) for 24X7 access of resources, (61.85%) because the internet provides faster communication for social networking, (61.27%) for user-friendly search engines, and (7.51%) motivated to use the internet for other factors. While (93.69%) of faculty members of BBAU were motivated to use the internet to update self-knowledge in the subject with the help of available updated information, followed by (87.39%) for online submission of papers to Journals/ Conferences/ Seminars, etc., (83.78%) to easy access to information resources, (74.77%) to know about latest rules, and regulations related to academic activities, (69.37%) for 24X7 access of resources, (61.26%) because the internet provides faster communication for social networking, (60.36%) for user-friendly search engines, and (7.21%) motivated to use the internet for other factors.

53. Highest number (82.66%) of faculty members of MZU are benefited from using e-resources for access to up-to-date information, followed by (80.35%) for time-saving, (76.88%) for a better source of information, (74.57%) for improvement in the quality of professional work, (69.94%) for 24×7 access, (65.32%) for easy portability, and (54.34%) for information available in various formats as per the need. While, (81.08%) of faculty members of BBAU are benefited from using e-resources for access to up-to-date information, followed (80.18%) for time-saving, (72.97%) for a better source of information, (72.97%) for 24×7 access, (71.17%) for improvement in the quality of professional work, (68.47%) for easy portability, and (55.86%) are benefited using e-resources for information available in various formats as per the need.

54. Highest number (86.71%) of respondents of MZU want to improve skill for using/ accessing e-resources and (13.29%) contend that they do not. While, (86.49%) of respondents of BBAU want to improve skill for using/ accessing e-resources and (13.51%) contend that they do not.

55. Highest number (61.85%) of faculty members of MZU want to improve skill for using e-resources by attending workshops/ seminars, followed by (56.65%) by a discussion with experts, (52.02%) by attending Orientation/ training programs, (45.66%) by a discussion with colleagues, (41.04%) by referring user manuals/guides, etc., (33.53%) by e-mail assistance. While,

(58.56%) of faculty members of BBAU want to improve skill for using e-resources by attending workshop/ seminars, followed by (57.66%) by attending Orientation/ training programs, (6.76%) by a discussion with experts, (43.24%) by a discussion with colleagues and referring user manuals/guides, etc., (36.04%) by e-mail assistance.

56. The majority (42.20%) of faculty members of MZU agree that library staff provides sufficient training to use e-resources, followed by (39.88%) who gave no opinion for sufficient training provided by library staff to use e-resources, and (17.92%) have disagreed that library staff provides sufficient training to use of e-resources. While, (45.95%) of faculty members of BBAU agree that library staff provides sufficient training to use e-resources, followed by (38.74%) gave no opinion for sufficient training provided by library staff to use e-resources, and (15.32%) have disagreed that library staff provides sufficient training to use of e-resources.

11. CONCLUSION

The usage of e-resources is increasing at both university libraries under study, which are obtaining essential journals and offering a wide choice of e-resources that faculty members use because of their superior characteristics to print resources. To ensure that e-resources are used effectively, there is a need for frequent technological expertise training programmes for faculty members on the latest changes in technology collection and their ease of accessibility, user orientation programmes, MOOC (Massive Online Open Course) as nowadays, online lecture series are thought by experts in various subjects and, as a result, e-resources will be used more effectively.

The study aims to find out the use of e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University and compare the various factors of use of e-resources to fulfill the objectives of the study. It is found that the maximum respondents were assistant professors in both universities, the highest numbers of respondents were male and a large number of faculty members were between 36-45 years age group. In the use of the internet, all the respondents of both universities have frequently used the internet and have more than 13 years of experience. The highest number of respondents of both universities access the internet from their respective departments. The purpose of faculty members of both universities was to use the internet for sending mail and for reading/ writing research

papers and projects and they were motivated to use the internet to update self-knowledge. In the use and awareness of e-resources and services, the highest number of faculty members were use and aware, the highest number of the respondents of both universities were using e-journals and e-books most frequently, the highest number of faculty members of both universities use e-resources and services provided by E-ShodhSindhu, highest faculty members of both universities were aware of to use e-resources by personal communication with friends, subject experts, e-mail alerts, by chance and by resource persons. The highest respondents of both universities learn to use by self-learning method. The maximum respondents of both universities have more than 10 years of experience. The purpose of using e-resources by the faculty members of both universities was reading writing research papers, proposals, and projects, etc. and the benefits of using e-resources are saving time, up to date information. The poor internet connectivity was the major problem stated by the respondents of both universities while accessing e-resources. The maximum number of the respondents of both universities want to improve skill in the use of e-resources and prefer attending workshops/seminars to improve skill. The maximum number of faculty members of both universities use the institutional repository and digital library to access e-resources. The maximum number of faculty members of both universities is satisfied with the facilities provided by the library. The maximum respondents were facing problems of the slow speed of accessing or e-resources. The highest number of respondents from both universities were using an electronic format of resources and using both print and electronic formats of information resources. The maximum number of faculty members of both universities stated that e-resources were time-saving, more informative, less expensive, easy to use, more preferred, more flexible, easy to handle, and more effective in the comparison of print resources. The maximum number of faculty members of both universities were using PDF format to use e-resources and prefer direct reading from the computer screen. The maximum number of faculty members of both universities were highly satisfied with e-resources while using.

This study provided insight into the use of e-resources by the faculty members of Mizoram University and Babasaheb Bhimrao Ambedkar University. The data was collected through a well-structured questionnaire, which involved several aspects of the usage of e-resources such as awareness of e-resources, frequency of usage, place

of access, the purpose of usage, benefits, learn to use, problems, need of skill improvement, training/orientation need, the preferred mode of training, the attitude of library staff, level of satisfaction, rating of e-resources, factors of the search engine, preferred search engine, search methods, difficulties face while accessing e-resources, preferred file format, preferred storage devices, degree of satisfaction and methods of reading e-resources to use e-resources by the faculty members of both universities. The general attitude of faculty members of both universities towards the use of e-resources was found highly positive. It was clear within the high extent of users, the high frequency of utilization, and the great significance of the use of e-resources. Although the use of e-resources in both universities under study is well established, there is still a need to increase the utilization of e-resources. If other factors are desirable, such as internet speed or access to e-resources from outside the university campus, the frequency of use of e-resources may be higher. Encouraging the use of the services at the library can be increased by assisting them in finding and downloading required information to use e-resources. Another finding is that the majority of the faculty members of both universities prefer both print and electronic resources, as a result, the library should continue to provide in both formats like electronic and print formats and screen-based reading habit is evolving for reading e-resources.

12 SUGGESTIONS

The suggestions based on the primary data, the following suggestions are given to improve the use of e-resources among the faculty members of both universities i.e. Mizoram University and Babasaheb Bhimrao Ambedkar University.

- 1.** More informative, user-friendly, and well-organised library website that makes it easy to access the e-resources should be offered.
- 2.** The central library may provide access and updated content of e-resources and services to the faculty members as well as students at regular intervals for research and development.
- 3.** The university network and internet services must be strengthened by increasing bandwidth to improve the quick accessibility of available e-resources.
- 4.** It is necessary to subscribe to more e-resources of various disciplines, besides the E-ShodhSindhu consortium.

- 5.** Effective use of existing e-resources the central library needs to organise several user orientation programmes for faculty members.
- 6.** The faculty members should be trained to use advanced search techniques to found relevant information.
- 7.** To make greater use of widely available e-resources, the central library may organise seminars, workshops, and orientation programmes for faculty members regularly to keep them up-to-date with the latest technologies.
- 8.** The library budget should be increased to allow for the purchase of the most up-to-date e-resources, services, and databases.
- 9.** More promotion of library services and products, such as bulletin board services, current awareness services for posting messages, announcements, and publishing new and existing e-resources via the library website.
- 10.** Implementing social networks to communicate with faculty members to learn how to use e-resources, such as e-mail, discussion groups, blogs, etc.
- 11.** To effective retrieval of information it is strongly recommended that the search engine provide content-based e-resources search capabilities.
- 12.** The library staff should create a database of e-mail of all the faculty members to notify them as soon as the new e-resources and services are subscribed or available in the library via e-mail.
- 13.** The library should establish a server in the library to offer library resources and services to its users provide accessibility of e-resources off-campus automatically.

These are the common suggestion for both of the Universities.