E-LEARNING PRACTICES AMONG THE STUDENTS OF MIZORAM UNIVERSITY

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Submitted by

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Dated: Aizawl

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CONTENTS

List of Tables and Figures

List of Tables

List of Figures

List of Abbreviations

B.Arch.	Bachelor of Architecture
B.Ed.	Bachelor of Education
B.Tech.	Bachelor of Technology
B.Voc.	Bachelor of Vocational
CEC	Consortium for Educational Communication
CL	Central Library
ESNRM	Earth Science and Natural Resources Management
EVS	Environmental Science
Fores.	Forestry
Geogr.	Geography and Resource Management
Geol.	Geology
HAMP	Horticulture, Aromatics and Medicinal Plant
Hist.	History and Ethnography
ICT Centre	Information and Communication Technology Centre
IMBA	Integrated Masters in Business Administration
Lib. Science	Library Science
M.Z.U.	Mizoram University
Mass. Comm.	Mass Communication
MHRD	Ministry of Human Resource Development
MOOC	Massive Open Online Courses
P.A.	Public Administration
P.G.	Post-Graduate

PC	Personal Computer
Pol.Sc.	Political Science
Psy.	Psychology
R.S.	Research Scholar
S.W.	Social Work
SEH	School of Education and Humanities
SEMIS	School of Economics, Management and Information Sciences
Socio.	Sociology
SSS	School of Social Sciences
SWAYAM	Study Webs of Active-learning for Young Aspiring Minds
U.G.	Under-Graduate
UGC	University Grants Commission

CHAPTER -1: INTRODUCTION

1.1: PROLOGUE

Time and again it has been reiterated that the traditional system of education is burdensome and dreary for the learners (Govt. of India, 2004); consequently, resulting in a lot of anxiety and mental diseases among the students. Answer to this issue has led us to technology-based education. Use of Educational Technology can build motivation and make learner oriented. Technological advancements have evolved from time to time. The development of science and technology has changed the mode of living; not only in urban areas but also in each and every corner of the country. The technology, which emerges and dwell with everyone, must be of something which is very useful. At the same time, it can bring a great catastrophe for those who are not aware enough in handling such innovations. Each new technology aims to address questions of improving information delivery, quality of teaching and learning outcome in relation to precise problems and circumstances. Enormous developments have been made as the growth and development of science and technology has emerged from time to time. The new innovation has an effect and changes the education system by different means. An internet empowered technology has become more readily available and accessible, in formal and informal contexts.

E-learning is one wide-ranging term which encompasses all new technology used for learning or education and it is gaining more and more importance in the present times. E-learning has become an increasingly popular learning approach in educational institutions due to the rapid growth of Internet technologies. E-Learning is a learner-centered instructional strategy which provides students with the opportunity for an in-depth investigation of a given topic. This model encompasses both the ideology open learning and innovations in information and communication technology. Besides, ICT has brought radical changes even in the face to face, traditional model of learning. On the other hand this has given platform to virtual classes rooms or virtual campuses and has made distance learning real alike. E-Learning model is very much near to the concept of inclusion and equity. Anyone can have access to the world class teachers available in any institutions.

"The use of e-learning has a two-fold impact on the students' learning, i.e., we are able to provide a uniform system of education and, secondly, the students learning pattern can be recorded" (Sadia, et.al, 2016). In the words of Oye, Salleh & Iahad, (2010) "E-Learning refers to the use of advanced technology of information and communication in the learning process where the advanced technology comprises of electronic media – audio, video, text, and images. E-Learning is a unifying term used to describe the fields of online learning, web-based training and technology delivered instructions." According to Lorraine (2007) e-learning includes ICT component with internet facility, used for academic purpose. It can be starting from use of email services, through surfing for the course material to online courses (MOOCs*). "E-Learning can be different types, a campus-based institution may be offering courses, but using, E-Learning tied to the internet or another online network"*. (Lorraine, 2007)

1.2: USES OF TECHNOLOGY IN THE EDUCATION SECTOR

Some of the uses of technology in the education sector are mentioned below:-

(i) **Distance Education**: Distance education pave the way for those students or people who are already engaged in work to obtain further education and degree or courses remotely through online access and interact with faculty via online classroom. Interaction takes place between students and their mentors or tutors directly through online. Distance education gives the students or working people the flexibility to learn at their own time without the compulsion of going to a class.

(ii) **Classroom-based Learning**: With the introduction of various gadgets, classroom-based teaching has also transform into modern teaching-learning process. Many of the traditional styles of teaching-learning process are replaced. Nowadays, institutions have adopted new technology in the classroom, for instance, handwritten of teachers on blackboard or green-board are changed into power point presentation. Students can cope with the help of projector screens, laptops or computers and tablets to their lessons through animated learning content, the variety of audio-video materials so that they can have a better understanding of a their subject in a simple form.

(iii) **Online Learning Management System**: Many institutions in India are incorporating online Learning Management System or LMS platform into their web portal. Through LMS, students can access to course material and also attend live classes with teachers. The variety of Pre-recorded audio-video materials and lectures uploaded to the LMS platform is making easy for students to have a better comprehension on their subject in a simple way and go through it multiple times. The adoption of LMS is still low in many parts of India where students do not have the access to computers or broadband internet. However, the government is providing computers to remote areas and creating content that consumes fewer data and can be easily accessed on the internet.

(iv) **Learning through Mobile Apps**: According to a report released by Counterpoint Research, India has become the second biggest smartphone market in the world after China with more than 220 million active users (Forbes, 2016). This reveals that there is a massive chance for delivering e-learning content through mobile apps. Nowadays, educational mobile apps are popular and available in platforms like Android and iOS. These apps are on created based on specific subjects. The apps include mathematics, chemistry, grammar, and physics and so on. They make learning complex easier to understand. The prices of such gadgets like tablets and smartphone are ordinary, so that the people from villages and remote and isolated areas can purchase and also make use of these apps to become skilled at and update their academic performance.

(v) **MOOCs: "**A massive open online courses (MOOC) is a model for delivering learning content online, with no limit on attendance". (Educause, 2018) Constraints of age, gender, location and culture are not a barrier for anyone who is willing to learn. In addition to traditional course materials such as filmed lectures, readings and problem sets, many MOOCs provide interactive user forums to support community interactions among students, professors, and teaching assistants (TAs). MOOCs are a recent and widely researched development in distance education which were first introduced in 2006 and emerged as a popular mode of learning in 2012. Mizoram University is the first University in North East India to launched MOOCs, i.e. March 2018.

1.3: A HISTORY OF E-LEARNING

Illinois University at USA can be called one of the prominent forerunners in the field of E-learning. In 1960 students of Illinois could listen recorded lectures of their study program from their classrooms linked with computer linked. Stanford University is another name in the history of E-learning. Here also during 1960s professors used computers to teach mathematics and reading in elementary schools. These computer based programmes initiated new era in the field of educational technology. Therefore, CAI (computer assisted instruction) had been an overused term in the history. The approach was also known as computer aided instruction, computer assisted instruction, computer based education, and computer enriched instruction and many more. Advent of internet technology in 1990shad added new dimension and further came to be known as web-based-learning and web-based-instruction.By 1994, the first online high school CALCampus came into existence. (Khanna, Saxena, Lamba&Murthi, 2008; Agarwal & Pandey, 2013)

Our country can be termed as forerunner in the area of educational technology and ICT in education. Especially in the field of ODL and ICT based education we have established land marks. Establishment of educational technology cell at the center and in different states; Centre for Educational Technology at NCERT in 1970s (merged to Central Institute of Educational Technology in 1984) such initiatives are evidences of India's thirst for world class education with the help of modern technology. Policy of 1986 was a crucial step in recognizing the role of technology in education. Policy stated as;

> *"Educational Technology offers the means to reach numbers in remote and inaccessible areas, remove the disparity in educational facilities available to the disadvantaged and provide individualized instruction to learners conveniently suited to their needs and pace of learning"* (p. 183). (Govt. of India, 1998)

Policy emphasized on use of media and technology not only to outreach towards unserved zones but also to avoid structural dualism. Consequently so many steps were taken such as establishment of audio-video research centers (AVRCs), education multimedia research centers (EMRCs/EMMRCs) in various institutions.

Such EMRCs around 22 in number are still functional as inter-university centers at places as Indore, Patiala, Ahmedabad etc. Launch of EDUSAT in 2004, an exclusive satellite dedicate to educational services proved India's drive for technology based educational services. Many initiatives such as IT @School in Kerala were based on EDUSAT services. This was a big advancement in the country towards E-learning services which encompasses whole gamut from school education to university programmes. During the same time period of 2000s recommendations of National Knowledge Commission (NKC, 2007) and implementation of these recommendations by UPA government give impetus to empower educational institutions by high-speed networks and digital libraries. If 11th Five Years Plan can be called education plan, 12th Five Years Plan should certainly be known as ICT based Education plan.

Besides above-mentioned steps there is long list of e-learning programmes and initiatives in e-learning. Not only government Indian peoples are very techno-friendly, that is why most of the programme witnessed success in the country. New NDA government came in 2014 under its flagship digital India programme has started harnessing digital technology in education too. This is happening first time in the history of teacher education that around 15lacks untrained teachers are going under training in one batch through the distance mode programme of National Institute of Open Schooling (NIOS). MOOCs have been developed in video and audio formats and circulated through TV programmes, radio broadcasting, YouTube channel, mobile apps etc. In this direction MHRD Government of India has launched a group of 32 DTH channels dedicated to education only. Many institutions are contributing for this. Under digital India programmes emphasis is on technical and professional education. In other words governments wants that pass-out of any institution with any programme must be capable to serve the society with his/her exclusive knowledge and skills. Not only universities of liberal courses or common Universities, offering all programmes but also special institutions like IITs are also involved. IIT Bombay has started a all India programme entitled 'Spoken Tutorial' fro computer education through distance mode.

India may not be the early adopters of technology in the education sector but with access to the high-speed broadband internet and low lost computers and mobile

devices, there has been growth in the use of technology for learning. Today India is one of the fastest growing markets for e-learning based products and services. Therefore popular international platform of MOOCs, COURSERA also offers courses in Indian prices (Rupees). Recently UGC has directed all central universities to develop MOOCs and students should be allowed to earn 20% credits through online programmes. Accordingly, Mizoram University has also launched its MOOCs in 2018.

1.4: MIZORAM IT POLICY 2001

In line with the central government's initiatives Mizoram government has also recognised power of IT and took up Mizoram IT Policy 2001 (Cabinet decision no.13 dated 28.05.2001). The policy supports for the promotion of IT in several fields including Education. Main goals were two,

i. ICT litracy and Education;
ii. ICT based education.

All above mentioned initiatives taken by Central or State Governments leads to development of E-Learning climate in the country, which is the only solution to cope with the ever growing and fast flowing knowledge streams. Living in aperiod of stable change; the knowledge achieved by a person during his formal education is becoming outdated at a very rapid rate. Speedy development in computer technology has hit the arena of education. The development in computer technology has resulted in e-learning practices. E-learning is believed a more effective way of teaching a large number of students, thereby providing stability in educational quality. Now the opportunities made available through e-learning are both significant and numerous.

Considering the increases of information technology, it is the utmost need of the students to develop with the knowledge of E-Learning services to efficiently use it in their academic field and to have a competent career. The researcher felt the need to conduct as researches have not been conducted in Mizoram University to ensure the perception, purposes, and opinion of E-Learning among the students. For every student, learning/tutoring can be done at any time and from anywhere. Online materials can be updated, and learners are able to see the changes at once.

1.5: NEED OF THE STUDY

Increasingly, organizations are adopting online learning as the main delivery method to train employees. At the same time, educational institutions are moving toward the use of the Internet for delivery, both on campus and at a distance. Government of India has also put impetus to use of digital technology in different sphere of life including education through Digital India Progaramme. Not only in India technology is being promoted for education across the world (Buzzetto, 2008; Azad, 2009). Consequently, many research works have been conducted and ongoing for optimum utilization of E-learning resources in the country (Agarwal &Pandey, 2013; Sahu and Pradhan, 2017) as well as abroad (Lip San, 2015; Sadowski, Pediaditis& Townsend, 2017). Studies conducted in India had population area in mainland India, such as Delhi (Bhuvaneswari & Padmanaban, 2012). Hence this study targeted an institution in North East India to assess the reach of Central Governments policy in remote Central Government Institution.

Technology leverages positive (Zor and Oye, 2012) as well as negative (Gok, 2016) impacts on the students' learning, therefore It developed curiosity in the researcher to find out how the students of Mizoram University were using technology based E-learning resources and what they perceive about this. Hence this study targeted to fulfill this knowledge gap.

Moreover, Mizoram is special state in terms of its geographically scattered places and pupulation, thirst for education and lack of institutions of higher learning for all subjects at all places. Mizoram University is the one and only institution in the state running post-graduation and research programmes. Not only it runs advance courses in its campus but also provide leadership in the state to other higher education institutions by giving affiliations. To address the geographical chalnges and demands of pupulation in remote areas, the University has recently launched it websites for MOOCs i.e. http://www.mzuict.in/. On the otherside E-learning tools available and used by the in-campus students can be parameter of inquiry to test the progress of the university in the line of ICT based education and leadership. Importance of E-leaning resources in today's world, status of Mizoram University as premier institutions in the state and geographical challenges in the area raises some questions to be answered empirically.

1.6: STATEMENT OF THE PROBLEM

A study of E-Learning practices among the students of Mizoram University

1.7: RESEARCH QUESTIONS

(i) What types of e-learning resources are provided to the students of MZU?

(ii) How the ICT resourcesare utilized by the students?

(iii) What are the areas of e-learning services and practices which are to be improved?

1.8: OBJECTIVES OF THE STUDY

i. To find out the perception of students about e-learning.

ii. To find out the e-learning resources provided to the students of Mizoram University.

iii. To find out the e-resources accessed by the students of Mizoram University.

iv. To find out how students are using e-learning resources in MZU.

v. To give suggestions to the University administration regarding the improvement of services.

1.9: OPERATIONAL DEFINITIONS OF KEYWORDS

- *E-learning:* In this research, E-learning includes –use of a computer, mobile phone and other electronic gadgets for academic purpose. As internet services are key component of the concept of e-learning, therefore, accessing, surfing, browsing, emailing, sharing, social media features have also been included here.
- *Mizoram University:* The only University in Mizoram where different courses are running.
- *Students:* All the UG, P.G. students and M. Phil., Ph. D. research scholars studying in various departments in Mizoram University Campus

1.10: DELIMITATIONS OF THE STUDY

The delimitations of the study are as follows:

(i) This study was delimited to the students admitted in various degree courses in Mizoram University Campus.

(ii) This study was confined to the use of the researcher-developed tools.

(iii) This study confined to the qualitative analysis of the data.

PROFILE: MIZORAM UNIVERSITY

Mizoram University is one of the premier institutions in North East India. It would not be overstatement to say that this is the fast-growing institution in the region. University's details are described below in points;

- *Establishment Year*: 2000
- *Academics*
  - School of Life Sciences
  - School of Physical Sciences
  - School of Social Sciences
  - School of Education & Humanities
  - School of Fine Arts, Arch. & Fashion
  - School of Engineering & Technology
  - School of Earth Science & Natural Resources Management
  - School of Economics, Management & Information Science

- *Cells / Club*
  - Internal Quality Assurance Cell
  - Intellectual Property Right
  - Gender Champions
  - Right to Information
  - Alumni Association (MIZUAA)
  - Red Ribbon Club
  - Hindi Cell
  - Public Relation
  - National Service Scheme
  - Internal Audit Cell
  - Engineering Cell
  - Equal Opportunity
  - Mizoram University Teachers Association (MIZUTA)
  - Mizoram University Non-Teaching Employees Association (MUNTSA)

- *Facilities*
  - Central Library
  - Health Centre
  - ICT Centre
  - Central Instrumentation Lab.
  - DBT –Biotech Hub & BIF
  - Engineering Workshop
  - Kendriya Vidyalaya School
  - E-journals
  - Guest House
  - Hostels

- *Number of students (As on 2016-2017 Session)*

(i)	Under-Graduates	-576
(ii)	Post-Graduates	-1483
(iii)	Research scholar	-761
	Total	- 2820

CHAPTER - 2: REVIEW OF RELATED LITERATURE

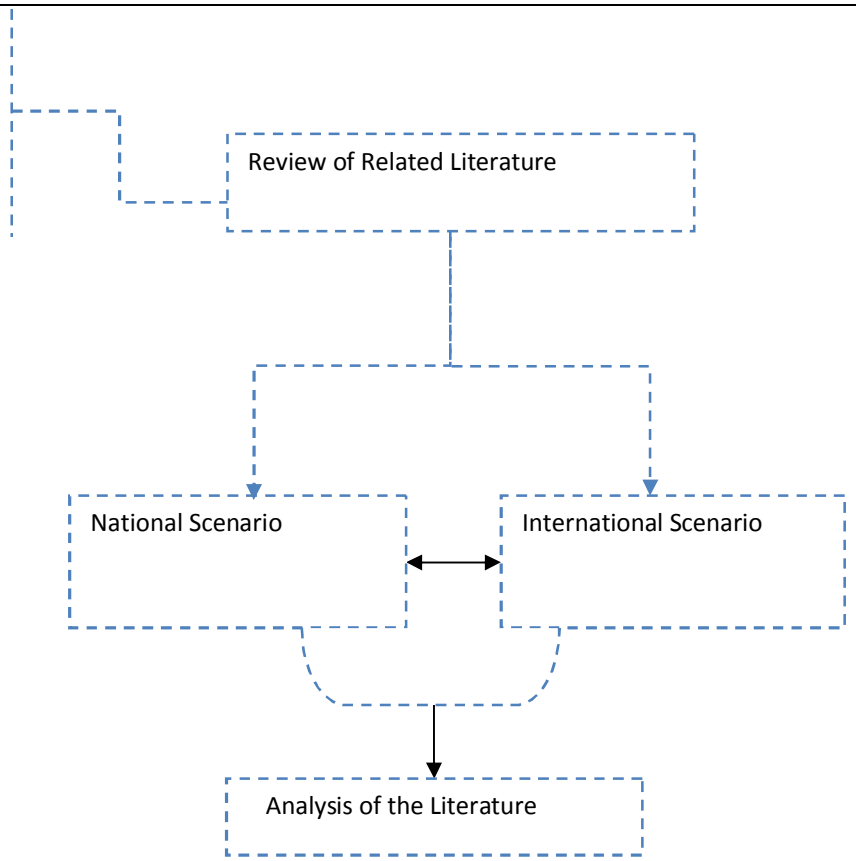


Fig. 2.1: The Layout of Second Chapter

In the words of Boote & Beile (2005), "A researcher cannot perform significant research without first understanding the literature in the field". Any research work or development of knowledge is always based on the existing knowledge in the field. Review of related literature guides the research and helps to find the way to frontiers of the field. Hence researcher can easily encircle the area on which the work to be done. It also helps to escape the repetition of the works already done. Hence literature review saves the energy and money of the researcher. Researcher can also find the basis for the methodology suitable to the topic and differentiate the way from earlier researches were conducted. If review of related literature is done meticulously, it can itself contribute new knowledge to the field. There are some research methods and strategies like content analysis, meta-analysis etc. which do help the researcher to come to the conclusion by review of literature

only. Hence it is part of research work which depends on a sound methodology of reviewing.

Before proposing this work and during execution researcher had gone through many research works conducted in India and abroad. Besides some thematic or theoretical articles are also reviewed which are relevant to elaborate the concepts. Those research works were conducted on different topics which served as key themes for review. Those key themes or terms are given in the following table.

Table: 2.1: The Key themes Used for The Survey.

Key Themes/Terms	• E-Learning, E-Resources, Electronic Media In Education, • Digital Learners, Digital Natives Digital Technologies, • Social Media For Education, Social Networking, SNSs(Social Networking Sites),Digital Libraries, • Web-Based Learning, • New Technology In Education, ICT Tools, ICT In The Teaching-Learning.

After reviewing relevant research work under above mentioned key areas, researcher has selected the most relevant and categorized them into national and international. Therefore this chapter presents the researches in the area into two sections i.e. national scenario and international scenario. In each section works are presented year wise separately. The time-line ranges from 2006 to 2017.

2.1: NATIONAL SCENARIO

Sharifabadi (2006) in his papers 'How digital libraries can support e-learning' talked about how much potential can digital libraries propose certain resources for sustaining e-learning. It also conferred on how e-learning resources, the functionality of the digital library and the library environment were comprised and organized in the digital library supporting each other. The paper revealed the types of learning and advantages of digital libraries for e-learning resources that could be supported by the digital libraries. The paper also presented alertness on how much one can gain knowledge and information through digital libraries and online resources on e-learning. Undoubtedly, there is a dedication to utilize online information resources for

teaching and research, but this seems to be matched by a lack of awareness of how best to incorporate these resources into the e-learning environment.

Sharma (2009) conducted a study on 'Use and Impact of e-resources at Guru Gobind Singh (Indrapastha University)'. The main purpose of the study was to analyze the reliance of the teachers and research scholars on e-resources; the problems and perceived impact of the e-resources on their academic purposes while using the e-resources. The survey mainly focused on the benefits of e-resources over the usual sources of information. It was found that e-resources are commonly used by the teachers and research scholars. Most of the teachers and research scholars relied on e-resources to get the significant and relevant information. In reality, the use of e-resources was not up-to the worth in comparison to investments made in attaining these resources; secondly infrastructure and training programmes should be revised as per requirements. It is observed that e-resources available on the campus was almost adequate for all the existing disciplines but the infrastructure to use these resources was not ample and could hamper the ability to meet the necessities of users.

Bhuvaneswari and Padmanaban (2012) conducted a research on "Attitude of senior secondary students towards e-learning" at New Delhi. The aim of the study was to help individual in adjusting towards a constant changing environment. The descriptive study method was adopted; a stratified random sampling technique was used in selecting the samples. A well designed and pre-tested questionnaire was used in collecting primary data. The results revealed that students' personal variables such as gender, subject specialization, parents' education, parents' monthly income and school management are differed significantly among themselves. Positive attitudes helped the teachers to deal with the new situation with less stress and enabled them in taking appropriate steps in tune with the need of the students and the institution.

Agarwal & Pandey (2013) from their article on "Impact of E-Learning in Education" argued that E-Learning was a modern way of learning, which involved electronic media in the field of education. E-learning makes use of information and communication technology. Correspondence learning or distances learning were the situations where e-learning are used. In involved various types of media that provide audio, video, text and images. E-learning used intranet or extranet or internet and widen the horizon of traditional learning. E-learning supported the widespread of

educational training. It became the most convenient in pursuing a degree in higher education. A lot of students were attracted to the flexibility and self-paced method in which they can attain their degree.

Thiyagu (2014) in his studies on "Attitude towards adopting Facebook as an e-learning platform among the Post-Graduate students" used a Survey method. The investigator used the self prepared questionnaire for collecting the data and has collected 250 samples in Tirunelveli District, Tamil Nadu using random sampling technique. Percentage analysis, t-test and chi-square test were used for analyzing the data. The findings of the study was that there was no significant difference in the mean scores of attitudes towards adopting Facebook as an e-learning platform among the post-graduate students with respect to their Gender, Course of study and year of study. There was no significant difference in the mean scores of attitude towards Facebook as an e-learning platform among the post-graduate students with respect to their staying location.

Goel & Singh (2016) studied "Impact of Students' Attitudes towards Social Media use in Education on their Academic Performance" in which a predominantly quantitative approach was adapted. Organizations were selected using Purposive sampling method. The sample was drawn from 3 private colleges and 2 private universities of Delhi NCR region. Data was collected using a self-designed questionnaire. The questionnaire used seven point Likert Scale in investigating the students' belief and attitudes towards the usage of social media in education. Co-relation, regression and descriptive analysis were carried out. Statistical analysis was performed using SPSS (ver.20). The result indicated that management students used social media mainly for sharing their assignments, projects and learning experience with their colleagues. The study also resulted in suggesting the academic institutions in promoting both the students and faculty in developing a positive attitude towards the usage of social media as effective having tools in order to affect the academic result of their institution in a positive way.

Vasanthi & Padmapriya (2016) in their work on "Students' Perception and Attitude on Social Networking Sites" had 100 under-graduate and post-graduate students in Tirupur. It was quantitatively found out that students have very positive attitudes towards on how Social Networking Sites are used. The study was an

analytical one, based on Survey method which involved description, secondary analysis and interpretation. The statistical tools used were simple percentage, descriptive analysis and ranking technique. Research showed that their scientific and educational functions were limited. Students had no clear opinion about their control over Social Networking Sites during interaction and about its worthiness. The study further gave evidence that the students had positive attitude towards in using Social Networking Sites in which Facebook was the most favorable site among the student of Tirupur.

Fanai (2017) conducted a study on the Role of Technological gadget on the tribal culture and education with special reference to the attitude of Mobile Phone by IGNOU B.Ed students of Mizoram. The aim of the study was to find out the ICT tools for teachers and general attitude and usage of mobile phone using the descriptive survey techniques, using a self made questionnaire. The study revealed that the urban teachers utilize mobile phone and its features more effective than the rural teachers for educational purpose as well as day to day life.

Sahu and Pradhan (2017) in their work "A study of the use of ICT in the Teaching-Learning Process in Secondary and Senior Secondary Schools of Sangur District (Pb)" used a self made Check list and Questionnaire. The study revealed that all the schools have basic infrastructure facility required for the use of ICT in the teaching-learning process. Majority of the teachers enhanced their teaching process through ICT. It helped in motivating the students in the learning standard and also found results in the students' performance. After, ICT is implemented in the institutions; the students' progress has become higher. The teachers approved that the used of ICT helped them in professional growth and developing insights for the content transaction and getting new ideas. The use of ICT makes it easier in delivering the lectures in many ways. But, at the same time, they wanted to improved, to have more knowledge and training on ICT since there were some teachers who were not able to deal with the use of ICT in the teaching-learning process at Secondary and Senior Secondary schools of Sangur District (Pb).

2.1: INTERNATIONAL SCENARIO

Buzzetto (2008) studied "Student Perceptions of Various E-Learning Components" which was conducted at a Historically Black University. It was designed to assess students' technology access, skills and usage, prior experiences with e-learning, course delivery preferences, perceived satisfaction with e-learning, and perceptions of, and preferences towards, various e-learning components. A mixture of mixed scaled, five point Likert scaled, multiple choice, and open ended questions. The data was entered into and analyzed using SPSS. Descriptive statistics were examined as well as ANOVAs performed. The study revealed that students' find course Websites as a useful resources which improved their course content better, and the Websites continued having an impact on higher education in the future. It also revealed that each student have favorably e-learning component to most available features. The strongest preference noted in the study was towards the online submission of assignments, with students overwhelmingly noting that they like having the ability to check their assignment grades online.

Isik (2009) in his research on "Perceptions of Students and Teachers about the use of E-Learning / Sharing Portal in Educational Activities" aimed to investigate the effects of the integration of the e-learning / sharing portal as a new technology in web-based learning environments. It was conducted on METU Development Foundation schools. Action research was the most appropriate method of investigating and integrating case study. Keeping the stated problem in mind, the research took action stages with Planning stage, Acting Stage, Developing Stage and Reflecting stage. To gather data among the students, Students' Perceptions about E-Learning / Sharing Portal Questionnaire (SPESP-Q) was used. Among the teachers, Teachers' Perception about E-Learning / Sharing Portal Interview Guide (TPESP-IG) was used. The research revealed that all the teachers' perceptions were positive about the perceived motivational factors. Particularly, students found the new technology useful in increasing their work speed and making their job easier. Both the students and teachers find it easy to use and easy to learn. According to Technology Acceptance Model (TAM), it can be said that the new technology was accepted by the students and the teachers of METU Development Foundation Schools in which the study was conducted.

Gamal & Aziz (2011) studied "The Perception of Students regarding E-Learning Implementation in Egyptian Universities: The case of Arab Academy for Science and Technology". The usefulness, effectiveness and implementation of E-Learning among the students were studied using a questionnaire which was designed expose the usage patterns, e-readiness, their perceptions and priorities. To analyze the data Statistical Packages for the Social Sciences (SPSS) was used to analyze the data. Chi-squares tests were applied to the questions. The study revealed that there are many factors that lead to students' doubt about the new educational platform such as the lack of normal college environment asynchronous interaction and feedback between learners and instructor, technological infrastructure problems such as Internet speed and bandwidth besides the familiarity of the structure routine of traditional on campus education.

Lam, et.al. (2011) in their study on "Students' use of eLearning strategies and their perceptions of eLearning usefulness" highlighted that Students may well be 'digital natives'; however, there is little evidence that they are natural 'digital learners'. A questionnaire was designed. Statistical analysis were conducted and analyzed by SPSS software. The students were generally positive (though not overly enthusiastic) about various forms of eLearning. Students who were more experienced in using technologies in their everyday lives were in general more positive about eLearning strategies. Most interestingly, the more experience the students had with eLearning strategies, the more positive they were towards eLearning as well. It is evidenced that eLearning has provided learning benefits to the students.

Bentley, et.al(2012) at The University of Bedfordshire, Luton, UK conducted a study on 'Design and Evaluation of Student-Focused eLearning' reported that on the design and evaluation of a UK University's global eLearning MBA programme. The aims of the research investigated the learning experiences of the students on the course and evaluate the effectiveness of the support system improving the programme. During the years 2008-2010, a longitudinal semi-structured questionnaire survey and relevant data were collected from students taking the course. To have a valid result from 149 respondents, three rounds of survey were conducted. The first round survey revealed that a fairly high level of student have satisfaction with the programme, but also showed that there are certain areas that needed further improvement. In the second round and third round of surveys, the impacts of

consequent changes in the programme and the learning support system were investigated. Overall, the findings helped to develop and improve the course's delivery approach, enriched the course's content, enhanced its quality, and improved the satisfaction level of the students. It is expected that these findings can provide useful and valuable insights to course managers and eLearning developers of other courses offered in a global context.

Oye,et.al. (2012) Department of Information Systems, Universiti of Teknologi Malaysia revealed from their work "The impact of E-learning on students' performance in Tertiary Institutions", that due to rapid growth of internet and information technology E-learning has become progressively more popular as learning approach in higher educational institutions. The study was conducted among the faculty of Computer Science and Information System. A simple linear regression analysis was conducted to accept or reject the five null hypothesis stated. In order to ensure the internal validity and consistency of the items used for each variables the reliability analysis was conducted. The results revealed that the use of E-learning improved students' academic performance (GPA). It studies the application of e-learning model in explaining students' acceptance of the e-learning technology within the academic settings. The findings confirmed that nurturing individual intention in using an e-learning, positive perception on e-learning used was crucial. The perception and behavioral intention were associated with the actual utilization of e-learning while the used of E-Learning was related with the increased in students' academic performance. Recommendation was that training and information sessions on e-learning need to focus primarily on how the e-learning technology can help improve the efficiency and effectiveness of students' learning process. The study found that greater E-Learning engagement lead to better academic performance.

Zor and Oye (2012) on their works 'Students' Perception on Social Networking Sites influence on Academic Performance' aimed on how social networking sites (SNSs) have had impact on Students' academic performance. Observation and survey method were used for collecting relevant data from both Under-graduate and Post-graduate faculty of Computer Science and information system of Universiti Teknologi Malaysia. Most of the younger students are engaged in the use of SNSs mainly for socializing activities rather than for academic purpose.

However, a vast majority of the students do not felt that the SNSs had more positive impact on their academic performance.

Abdulahi, Samadi & Gharleghi (2014) studied on "A study on the Negative Effects of Social Networking Sites such as Facebook among Asia Pacific University scholars in Malaysia" aiming to identify the negative effects. The result revealed that spending time on Social Networking Sites such as Facebook affects the scholars of Asia Pacific University and is exposed to have negatively impact on their academic performance. It also showed that as time spent on social networking sites increases, the academic performance of the students is seen to get worsen. The researcher also discovered that among the user of online social networking sites the relationship between health threat and social network site was found low; therefore the chance of the students getting addicted is not that high. This paper also revealed that the particular variable was the highest contributor in regression analysis and also showed a positive independent variable. The researcher found that the participants do not know how their personal data can be shared and remained unaware of sharing information policies, although the policies are clearly stated.

Alanazi & Abbod (2014) on their papers discusses the status and diversity of needs for building a centralized e-learning repository system for Saudi Universities. The purpose of the study is to provide an analytical outline of the present needs of a unified e-learning repository system for sharing learning objects and materials. The study is descriptive survey using a questionnaire. The respondents have high perceptions about the type of e-learning materials to be available on the repository and the type of services and functionality.

ELdeeb (2014) conducted a study on 'Students' Perception to e-learning', which was performed through Two Online Physiology courses designed using free online platform (Learning Management System). Open-ended questions and free responses were used to access areas of weakness and strength in LMS and e-learning. Data entry and analysis were done using SPSS. The study not only reported positive students' perception and attitudes towards e-learning and LMS system but also spotted the light on the availability, flexibility and convenience of e-learning as features and areas of strength. It also diagnosed the technical problems as a major challenge in e-learning and emphasized on the fact that a successful and enjoyable

LMS and e-learning experience should be accompanied by strategies to improve the access to the internet, computer and improve the broadband width.

Rhema, Amal & Iwona (2014) conducted a study on "Analysis of student Attitudes towards E-Learning: The Case of Engineering students in Lybia". The data was collected through a survey instrument and analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize and described the data collected from the respondents in the four participating groups. In addition, Pearson Product Moment Correlation was used to examine the relationships between the variables that were measured in the interval scale. The findings of the study served as a predictor of the attitudes of future students towards e-learning. The study demonstrated that there was a statistically significant correlation between students' attitudes towards technology and their levels of access to various technologies; unsurprisingly, students who had better access to technology and the Internet generated stronger positive attitudes. However, for e-learning to be widely accepted in higher education institutions in Lybia, there is a need for the provision of appropriate training at different levels, the development of expertise in e-learning use, and research to gather data and inform future developments.

Noesgaard and Orngreen (2015) in their research on "The Effectiveness of E-learning: An Explorative and Integrative Review of the Definitions, Methodologies and Factors that promote E-Learning Effectiveness" showing that a structured search of library database revealed that research examining the effectiveness of e-learning had heavily increased within the last five years. Several systematic reviewed and meta-studies on the effectiveness of e-learning are considered within the content of health care or language learning. The review primarily included quantitative studies based on certain criteria such as sample size (Veneri, 2011) transparency of statistical information (Grgurvic, Chapelle and Shelly, 2013; Means et al, 2013) or homogeneity of the respondents and predefined outcome measures (Rosenberg, Grad and Matear, 2003). Papers were chosen using a strategic randomized approach based on a purposive sample size, then analyzed based on the concept of theoretical saturation. The author conducted conventional subject searches in 30 academic databases (JStor, Scopus and Perquest etc.). The search only integrated articles in English, and where possible, only peer-reviewed journals. The search resulted in almost 1000 articles.

Gok (2016) conducted a research "The Effects of Social Networking Sites on Students' studying and Habits" among 220 students in vocational school of higher education. The data were collected with the help of a questionnaire designed for gathering the students' opinions about the digital technologies and social media. Survey methodology was used. The collected data were analyzed by IBM – SPSS Statistics 22. The frequency distributions, means and standard deviations of female and male students' values were calculated and independent-samples t-test was conducted to determine the statistical differences of means between male and female students according to the statements. The difference between genders was considered significant with p values less than 0.05. The results revealed that the digital technologies and social networking sites have negative impact on students' studies and habits.

Mamattah(2016) conducted a research on "Students' perceptions of E-learning" at Ho Polytechnic, Ghana. Questionnaires were used for the data collection. For the descriptive data analysis and interpretation of the data Statistical Package for the Social Sciences (SPSS) was administered. The research was done with the advancement in technology in which tools were provided to make e-learning effective. The study showed that majority of the students believed that e-learning became an innovative idea which encouraged; at the same time, there are a few employers' who feared of discrimination against those who studied through e-learning were discovered. It was also realized that a grouping of online learning and face-to-face learning i.e. hybrid learning was preferred mode of learning for the respondents. Regardless of all the respondents were studying in the traditional classroom setting, respondents were willing to study through any of the e-learning modes in the future. The research further revealed that in comparison, men have more positive views about e-learning than women, and that men were more likely to pursue further studies through e-learning modes.

Sadowski, Pediaditis & Townsend (2017) on their works "University students' perceptions of Social Networking Sites (SNSs) in their educational experiences at a regional Australian University". A mixed-methods online survey, involving semi-structured qualitative interviews. In this study, Four key themes were identified through thematic analysis: SNSs as a tool for fostering peer connectedness with fellow students; deliberate and distinct variation between personal and educational use

of SNSs; resistance to external SNSs within education settings; and need for a balance between digital and face-to-face learning and connectedness. Implications for curriculum design and delivery, and development of support for students in diverse learning contexts and considered.

Yongmei, Selassie & Shegunshi (2012) at The University of Bedfordshire, Luton, UK conducted a study on 'Design and Evaluation of Student-Focused eLearning' reported that on the design and evaluation of a UK University's global eLearning MBA programme. The aims of the research investigated the learning experiences of the students on the course and evaluate the effectiveness of the support system improving the programme. The primary research method was a longitudinal semi-structured questionnaire survey, and data were collected from students taking the course during the years 2008-2010. Three rounds of survey were conducted, resulting in 149 valid responses. The first round showed a fairly high level of student satisfaction with the programme, but also indicated areas that needed further improvement. The impacts of subsequent changes in the programme and the learning support system were investigated in the second and third rounds of the survey. Feedback from these has helped develop additional changes in the learning content and delivery approach of the programme. Overall, the findings helped improve the course's delivery approach, enriched the course's content, enhanced its quality, and improved the satisfaction level of the students. It is hoped that these findings can provide useful insights to course managers and eLearning developers of other courses offered in a global context.

San (2015) conducted a research on "E-Learning Bench-marking Survey: A case study of University of Utara Malaysia" A mail survey / questionnaire survey method was used to gather data for the study. Thirty four applications available from Universiti Utara Malaysia Learning information system (Learning zone) were grouped into six categories that served as e-learning benchmarks to access the uptake of e-learning among under-graduates. The results showed the accessing for course materials, communications, viewing information are the commonly used applications while helpdesks and support, and link to other centre were least popular among under-graduates. The result indicated that the Learning-zone was a teacher centered approached online teaching. Students demanded more than a repository dump. They enquired an active and enthusiastic engagement from their teacher.

2.3: THE ANALYSIS

Most of the studies conducted in India have followed survey design except Sharma (2009) which can be termed as an institutional case study. Finding the lack of focused case studies this research work was proposed on the pattern of case study. On sampling style non-probability (purposive sampling) had been the preferred choice but Bhuvaneswari and Padmanaban (2012) had used stratified random sampling techniques. In this work both type of techniques (mixed sampling techniques) have been used to find out the relevant data from different stakeholders. Matching with this work and need of dynamic area of technology in education self-made tools had been used in all studies. Questionnaire and scale were main tools in studies mentioned here. Studies were conducted on the variables preferably attitude, usage by the teachers and learners, impact of e-learning, e-resources, social media etc. but there was gap on students preferences or priorities e-resources, usage, perception etc. All these concluded that attitude was positive and resources were available, but there was lack of proper orientation, training, suitable updated and well maintained infrastructure. This study also found the same.

International scenario in the area is very diverse. Studies conducted are ranging from survey methods through correlational studies to action research (Isik**,** 2009). Differentiated tools were also used such as questionnaire, rating scale, interview, online questionnaire etc. various variables had been studied such as perception, usage, impact of e-learning or SNSs, which culminated in both positive(Mamattah, 2016) and negative (Gok, 2016) impacts, need of training was also found by a few (Rhema, Amal & Iwona 2014). Such a scenario had been guiding this research work.

Above mentioned researches are not revealing significant differences in attitude, perception of students about e-learning on different demographic variables. But all these in general revealed the positive impact of e-learning. Whereas some other researchers found that interactivity, collaboration, motivation, opportunities and pedagogy were the factors which determine the success of e learning practices (Gamage, Fernado & Perera, 2014). Finding digital technology positive for development of knowledge society Government of India wants to harness the benefits of digital technology in the field of higher education, and recognized its role in access, equity, and quality. Being central university Mizoram University has to match with

national policy and ideology and it has already moved ahead in this direction. But it is also true that main force of any university is its students' interest and ability. Many things depend on students' motivation to use the tools effectively, which paves the path of this research work. This research was proposed not only to assess the e-learning facilities in Mizoram University but also to bridge the knowledge gap and add some more to the knowledge domain of digital-learning, e-learning and ICT in education.

CHAPTER - 3: METHODOLOGY

The study is an analytical assessment one based on a descriptive survey. Its methodological issues are organized in 7 sections. The section 3.1 describes research approach and section 3.2 explained the sources selected for the collection of data, section 3.3 deals with the population and sample of the study, Tools, and techniques used for data collection are described in section 3.4. The processes of development of tools are described in 3.5 and 3.6 deals with the data collection process; the last 3.7 comprises the techniques of analysis of data.

3.1 The Research Approach

The present study aimed at studying the E-Learning practices among the students of Mizoram University. The researcher attempted to draw in-depth comprehension on how the students handled the new innovations that had been introduced in the University for e-learning. This single aim was executed by the study of perceptions of students, accessing to e-learning tools and resources; and their purpose of using these tools and resources. Consequently, descriptive survey (Best & Kahn, 2009) type method was followed for the present study. It also headed by broader paradigm of qualitative research (Best & Kahn, 2009), as data were collected and analyzed qualitatively. As this work was concerning to study of one institution only i.e. Mizoram University, hence it can also be termed as an institutional case study (Opie, 2004). As per the purpose of the study was an assessment of e-learning services in one institution and case study is considered as the most suitable method to evaluate the quality of services in an educational institution. This is the method used in the most of such type of studies (also used by Azad Isik, 2009; Gamal & Aziz, 2011; Rhema, Amal & Iwona, 2014; Lip San, 2015), therefore researcher followed the same.

3.2 SOURCES OF DATA

A collection of valid and reliable data is indeed a must in any kind of research study. Primary and secondary sources were considered suitable for gathering relevant data for the present study.

i. Primary sources of data: To find out the practices of E-learning and collecting the appropriate data, a self-made structured questionnaire was administered among the students; personal interview and observation were conducted among the extreme cases. Primary source of data were students mainly and moderately the system administrators and information scientist of the university.

ii. Secondary sources of data: Policy documents, journals, official record, e-sources, published and unpublished documents furnished valuable direct or indirect information while collecting the data, hence kept in this category.

3.3 POPULATION AND SAMPLE

3.3.1: Population: Population comprises those individuals or objects that have a common interest in the focus areas of the research. The population of this study comprised all the students and scholars of Mizoram University studying in various departments and courses (U. G., P. G., M. Phil., & Ph. D.). Students in certificate and diploma courses were not the part of this study. The following table (3.3.1) indicates the enrolment of students studying in Mizoram University, a*s* on 2016-2017 sessions, the year of execution of this research work.

Table 3.3.1: Total enrolment of Students / Scholars in Mizoram University

COURSE	TOTAL STUDENTS / SCHOLARS ENROLMENT		
	MALE	FEMALE	TOTAL
Under – Graduate	412	164	576
Post – Graduate	724	758	1483
M.Phil.	79	98	177
Ph.D.	309	275	584
Total	1524	1295	2820

Above mentioned number of students can be specified in terms of enrolment in various courses for the better understanding of the population. Course wise students' distribution was as follows in next tables (tables 3.3.2, 3.3.3, & 3.3.4).

Table 3.3.2: Enrolment of Under-Graduate Students in Mizoram University

Sl. No.	UNDERGRADUATE	No. of Students
1	Bachelor of Technology	354
2	Bachelor of Vocational	10
3	Bachelor of Architecture	20
4	Bachelor of Education	100
5	IMBA	92
	TOTAL	576

Table 3.3.3: Enrolment of Post – Graduate Students in Mizoram University

Sl. No	POST – GRADUATE	No. of Students
1	Economics	95
2	Commerce	52
3	Library and Information Science	54
4	Mass Communication	45
5	Public Administration	65
6	History and Ethnography	72
7	Psychology	57
8	Political Science	85
9	Sociology	52
10	Social Work	62
11	English	42
12	Mizo	106
13	Hindi	6
14	Education	78
15	Mathematics and Computer Sciences	72
16	Chemistry	47
17	Physics	54
18	Botany	63
19	Zoology	60

20	Biotechnology	47
21	Geology	59
22	Geography and RM	72
23	Horticulture, Aromatic & Med. Plants.	32
24	Forestry	52
25	Environmental Sciences	54
	TOTAL	1483

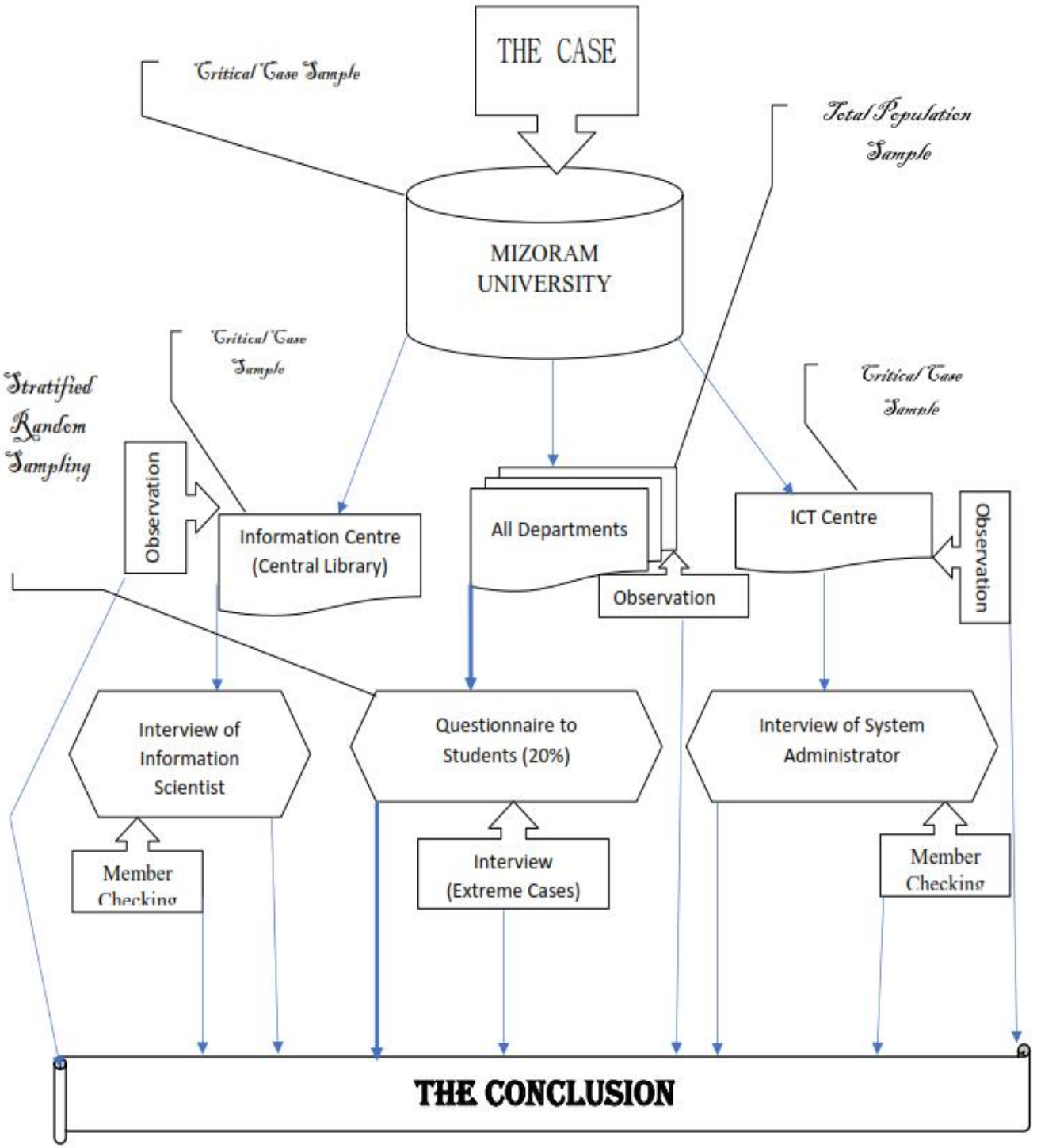
Table 3.3.4: Enrolment of Research Scholars in Mizoram University

Sl. No	Research Scholars	No. of Scholars
1	M.Phil	177
2	Ph.D.	584
	TOTAL	761

3.3.2: Sample: All the representative units of the population can be called sample of the study (Sindhu, 2014).A multi-stage and multi-phased sampling technique was used for collecting the relevant data. Mizoram University was a critical case and e-learning tools, resources and training programs were introduced and managed at different levels. At the level of university ICT center and information center (central library/CL) were key functionaries so critical case sampling technique (Patton, 2002) was followed to collect the data from these two units. Interview of system administrator (ICT Centre) and Information Scientist (CL) were collected and extensive observations were made at these two centers. Coming two the next position of investigation all departments of the university were included (total population sampling). Further to find out the nonbiased representative sample from the students researcher had followed stratified random sampling process and selected twenty percent (20%) students in proportion to the courses in the departments. Considering different conditions to obtain the data from the research scholars (M. Phil. & Ph. D.) researcher had followed purposive cum incidental sampling technique and collected information from total forty respondents at the level of university. In next phase researcher observed the facilities for e learning in the

departments. After observation and finding the pattern of the data, the researcher conducted interviews of extreme cases or information-rich respondents only. Sampling process and techniques have depicted in figure 3.1.

Figure 3.1: Sampling Process and Techniques



3.3.3: Sample Size: With a careful thought, it was decided to take only 20% of the total population randomly as a sample for the study in case of U.G.& P.G. students' responses; and 40 scholars (20 each from M.Phil. and Ph.D. courses) were also selected by incidental sampling techniques, hence this study followed a mix sampling design.

Table 3.3.5: Sample-size for the present study

PROFILE	LABEL	ENROLMENT
Field of Study	Under – Graduate	115
	Post – Graduate	293
	Research Scholar	40
	TOTAL	448

Besides above-mentioned sample size selected strategically, System Administrator, Information Scientist and other staff of ICT center and Central Library of Mizoram University were part of the total sample of this study.

3.4 TOOLS AND TECHNIQUES USED

The researcher usedself-constructed questionnaire, observation schedule, and semi-structured interviewschedule as the main tools for collection of relevant data. Tool of the study are described brlow.

3.4.1: Questionnaire: The questionnaire was used to collect relevant data among the students (U.G., P.G. & Research Programmes) of Mizoram University (Appendix A)

3.4.2: Interview Schedule: Semi-structured interview and discussion were conducted with the Information scientist from the Central Library and the System Administrator from Information and Communication Technology (ICT) Centre; and the extreme type respondents among students (Appendix B)

3.4.3: Besides, the researcher maintained a diary for noting and records various relevant secondary data.

3.5 PROCESS OF DEVELOPMENT OF TOOLS

3.5.1: Questionnaire

The researcher developed a Questionnaire, as there was no readymade tool available to find out about the E-Learning practices among the students of Mizoram University. The questionnaire was divided into three (3) sections. Section 1 deal with the perception of E-Learning services (Objective No. 1). As suggested by expert and supervisor, the final outline of this questionnaire has 9 items, in which the respondents had to answer 'Agree' or 'Disagree'. To find out about the accessing and opinion (Objective No. 3) of E-Learning services are described in section 2, the students have the freedom to responses each statement according his or her will. In section 3, the researcher also developed a Questionnaire to find out the uses of E-Learning resources (Objective No. 4) where the respondents had to answer using the three-point scale and questionnaire were developed by the researcher, herself. The scales ranged in three (3) dimensions are 'Always', 'Sometimes' and 'Never'. The students had to notify their answer according to their degree on each statement.

3.5.2: Semi-structured interview

Semi-structured interview was conducted with The System Administrator, Information and Communication Technology Center (ICT), The Information Scientist, E-Resource Center. The researcher noted information and data held from the discussion based on semi-structured interview.

3.5.3: Observation cum checklist

An observation cum checklist was prepared by the researcher to find out the available e-learning resources in MZU (Objective No.2). The researcher kept a record of what is observed under the structured tool developed and recorded accordingly. The following are the common observation cum checklist items:

i. Separate room / building
ii. Maintenance of the center
iii. Orientation programme
iv. Sitting capacity

v. Working hours / opening hours
vi. Availability of E-resources
vii. Types of e-resources available
viii. Subscription of periodicals
ix. Availability of Internet and Intranet connection
x. Equipment or materials provided

3.6 DATA COLLECTION PROCESS

The researcher visited the entire department personally and collected the data with the tools mentioned above. After taken permission of the heads of the departments, researcher met students in the classes and informed the purpose of the study. Before administering the questionnaire and interview, rapport was established with the participants through informal discussion and explaining the intention of the study. The participants were also informed that the collected data will be kept strictly confidential and be used only for research purposes. After a good rapport was formed and the consent of the participants was obtained, each participant completed the demographic information sheet and the questionnaire. Approximately 15 minutes were taken for completing the questionnaire. The individual response sheets were carefully screened, sealed and tabulated for the analysis the investigator also conducted a semi-structured interview with the Information Scientist and the System Administrator with regard to the resources available for the students. After analyzing the data collected through the questionnaire and finding the patterns, researcher conducted a few interviews for the extreme responses.

In next phase of the data collection process researcher observed the resources and facilities available in the university. In this case researcher observed the E-resource centre at central library, ICT center and departments in the university.

At the time of analysis of the data researcher visited back the key respondents like system administrators and called over phone a few times. This process served in supplying additional data as well as enhancing the credibility of the research work.

3.7 ANALYSIS OF DATA

The study was descriptive in nature; the major data was analyzed and presented in percentage only. Qualitative data analyzed in categories, themes, and codes. General pattern evolved were described and interpreted side by side, outlier cases were also presented there. Researcher triangulated the data in many ways such as different items within questionnaire; questionnaire to observation; questionnaire to interview etc.

CHAPTER-4: ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data, collected through the researcher's made tools i.e. interview schedule and questionnaire with the students, scholars, system administrator, ICT and Information Scientist, Central Library and General Administrative Department (GAD) teachers & other staff of Mizoram University. This chapter is divided into five sections, corresponding to the objectives of the study, mentioned as below:

- ***4.1 To find out the perception of students about e-learning;***
- ***4.2 To find out the e-learning resources available to the students of Mizoram University;***
- ***4.3 To find out the e-resources accessed by the students of Mizoram University;***
- ***4.4 To find out how students are using e-learning resources in MZU;***
- ***4.5 To give suggestions to improve the services.***

The interpretations and result of the first four objectives (No. 1-4) of the study present here are directly based on the data from respondents whereas the last objective (no. 5) is a partially direct response and partially inferred indirectly from the data collected for other four objectives. These inferences are also based on the results of the other four objectives (Fig. 4.1).

Here researcher has compared the data within the school with a thinking that in one school nature of courses (departments) was almost similar so difference, if any, could be interpreted as lack of training, exposure, orientation etc.; Whereas inter-departmental comparison was purposely side stepped because that could not be justified at many times. Such as putting together computer engineering (3 Computer Labs. & Practicals) and Mizo/Hindi (No lab) could be termed an ostentatious attempt to diminish students of non-technical and non-professional courses.

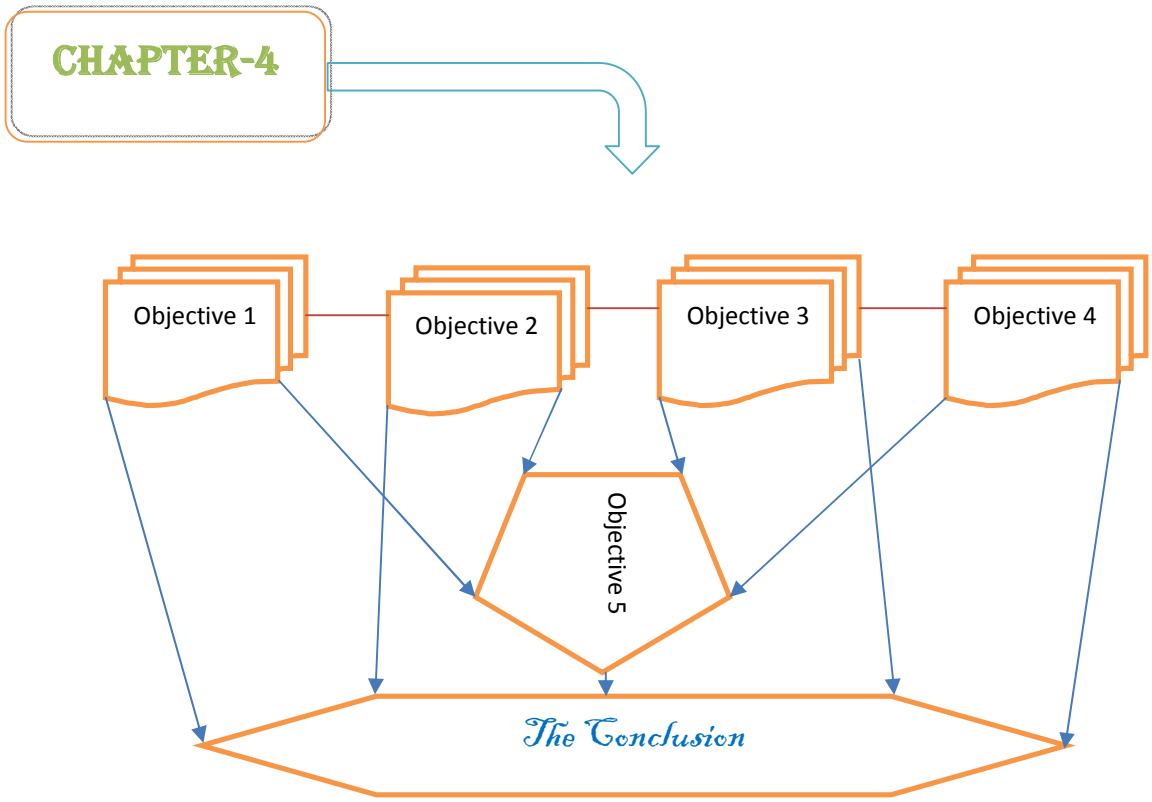


Figure 4.0: Design of the chapter

SECTION-1

4.1: PERCEPTION OF STUDENTS ABOUT E-LEARNING

Many technologies are being used for the purpose of education but the technology itself cannot make a success. Only it is successful when the major stakeholders in education i.e. students use it fruitfully. Use, disuse or misuse depends on the orientation and training of students. Orientation and awareness do also depend on the perception and attitude. Therefore, the researcher intended to find out the perception of students of Mizoram University about E-learning. Study of perception about e-learning was the very first objective of this study.

The following list of statements/questions was the main instrument to obtain the data of perceptions of the students. Students were given two options on each item i.e. agree and disagree. Researcher intentionally avoided the other ranges such as

'don't know; 'sometimes' etc. so that respondents could answer those precisely. Total items in that category were nine (9) only as listed in the table no. 4.1.

Table 4.1: Students' perception about E-Learning

Sl. No.	STATEMENTS/ITEMS	RESPONSES *(in percentage)*	
		Agree	Disagree
1	The use of E-Learning increases the students understanding	95	5
2	E-Learning training should be provided to all students	99	1
3	The use of E-Learning improves the quality of the work of the students (assignment / practical / test/exams)	90	10
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	90	10
5	I find E-Learning interesting and useful	83	17
6	I think socially isolated when using E-Learning	26	74
7	E-Learning is difficult to handle and therefore, frustrating	18	82
8	I like E-Learning because I can work according to my own space	86	14
9	I find E-Learning cost effective	21	79

The above table 4.1. shows the responses of the students in relation to the perception of E-Learning practices.

1. A vast majority 95% of the participants responded that the use of E-Learning increased student understands while 5% of the respondents disagreed with the statement.
2. A vast majority 99% of the participants responded that training in E-Learning should be provided for all students, while only 1% disagreed to have the training.

3. A large majority 90% of the participants responded that the use of E-learning improved the quality of the work of the students (assignment/practical/test/exams), though 10% of the respondents disagreed with the statement.
4. A large majority 90% of the participants answered that the use of E-Learning helped to complete the work more quickly and smoothly than usual while 10% of the respondents disagreed with the statement.
5. Total 83% of the respondents found E-Learning interesting and useful, while 17% of the respondents did not agree.
6. Only 26% of the respondents thought socially isolated when using E-Learning, but, 74% of the respondents did not have such problem.
7. Only 18% of the respondents have difficulty handling E-learning while 82% of the respondents did not face any difficulty in handling E-Learning.
8. A large majority 86% of the respondents liked E-Learning because they could work according to their own space while 14% of the respondents did not like at all.
9. Only 21% of the respondents find E-Learning cost-effective while majority (79%) of the respondents did not agree with the statement.

INTERPRETATIONS:

The study revealed that majority of the participants liked using E-Learning services as it improved the quality of their work (assignment/practical/test/exams). It also helped them in completing their work quicker and smoother than usual, since it is less time-consuming. A large majority of the respondents found E-Learning interesting and useful as it had no boundaries and they can work according to their own time and space. Moreover, it increased students' understanding of their academic content. A vast majority of the respondents did not have difficulty in handling E-learning, but the majority of them agreed that training in E-Learning should be provided for all students. It means various departments in the university might be lacking in the orientation of students about discipline-specific e-resources. On the other point, many of the students did not find E-Learning cost effective.

Triangulation:

a) Majority of the students (56%) came to know online sources from their friends, only a few (15%) were informed by the institutions. Hence item 2 in perception section (objective 1) was supported by the items 8 & 9 of section access of e-resources (objective -3).
b) Here in this section, 79% respondents did not find e-learning cost-effective because most of them had access at their home and residences (objective 3, item 5). It means whatever they were accessing was their personal investment. Hostellers were also required to use their personal data and instruments. As per the information obtained from a few hostelers and one warden, there was no computer lab in the hostel to be used by residents. Bearing of cost by the students was also confirmed by the objective 2 where a researcher found that many departments in the university did not have functional and connected computer laboratories.

The majority of the users of E-Learning services did not have any isolated feelings. Majority of the students of Mizoram University (95 percent) perceived that E-Learning increased students' understanding. For proper use of E-Learning resources by the students, they should be provided training (99 percent responses). Only 10 percent responded difficulty in handling e-learning tools whereas 90 percent learners find it interesting so a part of this 10 percent reflects here that though it is difficult, yet it helped students to do their work quickly.

Researcher concludes here that students of Mizoram University had a positive perception about e-learning. But an orientation is required to guide them to discipline-specific e-resources.

4.1.1: COMPARISON OF PERCEPTION ABOUT E-LEARNING AMONG UG, PG & RS.

The comparison of perception about E-Learning among the students of Mizoram University can be seen from the following tables. The comparison was made among undergraduate students (UG), postgraduate students (PG) and M.Phil. & Ph. D. research scholars(RS)of Mizoram Univerity.

Table 4.1.1: Comparistion among UG, PG, & RS

Sl. No	STATEMENTS / ITEMS	RESPONSES *(in percentage)*					
		UG		PG		RS	
		Agree	**Disagree**	**Agree**	**Disagree**	**Agree**	**Disagree**
1	The use of E-Learning increases the students understanding	100		92	8	100	
2	E-Learning training should be provided to all students	96	4	100		100	
3	The use of E-Learning improves the quality of the work of the students (assignments / practical / test/exams)	100		86	14	86	14
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	95	5	89	11	78	22
5	I find E-Learning interesting and useful	89	11	78	22	100	
6	I think socially isolated when using E-Learning	14	86	26	74	35	65
7	E-Learning is difficult to handle and therefore, frustrating	12	88	22	78		100

8	I like E-Learning because I can work according to my own space	91	9	82	18	100	
9	I find E-Learning cost effective	50	50	13	87		100

As per the above table:

1. All (100%) of Under-Graduate students, 92% of Post-Graduate students and 100% of Research Scholars agree that the use of E-learning increased students' understanding while only 8% of Post-Graduate students did not agree with the statement.
2. A vast majority 96% of Under-Graduate respondents and all the respondents (100%) of Post-Graduate and Research Scholar agree that training in E-Learning should be provided for all the students while only 4% of Under-Graduate respondents did not agree with the statement.
3. All the respondents (100%) of Under-Graduate respondents and 86% of Post-Graduate and Research Scholar from each respondents agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams) while 14% of each respondent from Post-Graduate and Research Scholar disagree with the statement.
4. A vast majority 95% of Under-Graduate respondents, 89% of Post-Graduate respondents and 78% of Research scholars' respondents agree on the statement that the use of E-Learning helps to complete the work more quickly and smoothly than usual while 5% of Under-Graduate respondents, 14% of Post-Graduate respondents and 22% of Research Scholar disagree with the following statement.
5. A large majority 89% of Under-Graduate respondents, 78% of Post-Graduate respondents and all the respondents 100% of Research scholar find E-Learning interesting and useful while 11% of Under-Graduate and 22% of Post – Graduate respondents disagree with the statement.
6. Total 14% of Under-Graduate respondents, 26% of Post – Graduate respondents and 35% of Research scholar think socially isolated when using

E-Learning while 86% of Under-Graduate respondents, 74% of Post-Graduate respondents and 65% of Research scholar opposed to the following statement.

7. Total 12% of Under-Graduate respondents and 22% of Post-Graduate respondents consider E-Learning is frustrating as they have difficulty in handling while 88% of Under-Graduate respondents, 78% of Post-Graduate respondents and all the respondents 100% of Research Scholar did not have a problem in handling E-Learning.
8. A vast majority 91% of Under-Graduate respondents, 82% of Post-Graduate respondents and all the respondents 100% of Research Scholar like E-Learning as they can work according to their space while 9% of Under-Graduate respondents and 18% of Post-Graduate respondents did not agree with the statement.
9. Half 50% of Under-Graduate respondents and 13% of Post-Graduate respondents find E-Learning cost-effective while 50% Under-Graduate of respondents, 87% of Post-Graduate respondents and all 100% of the respondents of Research Scholar find it costly.

INTERPRETATIONS:

Looking at Table No. 4.1.1, we can see the comparison among the Under-Graduate, Post-Graduate and Research Scholar with regard to their perception of E-Learning. The results show that majority of the participants from Under-Graduate, Post-Graduate and Research Scholar felt E-Learning have a significant effect on their academic performance. Comparatively opposed to the agreement of 100% UG students 14% of PG students and 14% of research scholars did not find any improvement in the quality of their work with e-learning tools. In case of research scholars, it can be interpreted that after the coursework examination they were not supposed to regular assignments, tests, exams etc. in their typical sense. The case of 14% PG students here seems a little surprising. Those students might be lacking in proper orientation how to use such tools for quality work. On the same pattern more 22% research scholars compared to 11% PG students and 5% of UG students did not find such tools helping to work quickly. Whereas, research scholars were supposed to be more helped and dependents to new technology.

Disconfirming Evidence: On item no. 8 related to freedom to work as per own time and space 100% of research scholars were agreed. It means they found it helpful in the areas where they were comfortable and well-versed.

Compared to UG (14%) and PG (26%), there were more research scholars (35%) who felt socially isolated by being online or working with e-learning tools.

Even though the majority of the respondents from Under-Graduate, Post-Graduate and Research Scholar stated that they did not face any difficulty in handling E-Learning, still, it was found that training in E-Learning should be provided for all students.

Outlier: Where 100% research scholar and 87% PG students found e-learning costly, at the same time 50% UG students found it cost-effective. In fact, there were very few UG courses running in the MZU campus. Whatsoever offered, all of them were professional courses in departments like engineering and architecture. Owing to the demand of their curriculum these departments had better e-resources and connectivity. That the main reason inferred by the research scholars to justify this fact.

4.1.2: COMPARISON OF PERCEPTION OF E-LEARNING AMONG UNDER-GRADUATE STUDENTS

The comparison of perception of E-Learning among the Under-Graduate students of Mizoram University can be seen from the following tables. This comparison was made among the students of different courses (B. Tech., B. Arch., B. Voc., B.Ed. and IMBA) in Mizoram Univerity.

Table 4.1.2: Comparison of Perception among UG students.

Sl. No	**STATEMENTS**	**Responses**	**Field of Study and Responses** *(in percentage)*				
			B.TECH.	**B.ARCH.**	**B.VOC.**	**B.ED.**	**IMBA**
1	The use of E-Learning increases the students understanding	Agree	100	100	100	100	100
		Disagree					

2	E-Learning training should be provided to all students	Agree	97	100	100	85	100
		Disagree	3			15	
3	The use of E-Learning improves the quality of the work of the students assignment/practical/test/ exams	Agree	100	100	100	100	100
		Disagree					
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	Agree	96	75	100	90	100
		Disagree	4	25		10	
5	I find E-Learning interesting and useful	Agree	86	100	100	85	100
		Disagree	14			15	
6	I think socially isolated when using E-Learning	Agree	16			10	17
		Disagree	84	100	100	90	83
7	E-Learning is difficult to handle and therefore, frustrating	Agree	16			10	6
		Disagree	84	100	100	90	94
8	I like E-Learning because I can work according to my own space	Agree	89	100		100	100
		Disagree	11		100		
9	I find E-Learning cost effective	Agree	75	25		20	
		Disagree	25	75	100	80	100

Table 4.1.2 shows as follows.

1. All the respondents (100%) of B.Tech., B.Voc., B.Arch., B.Ed., and IMBA agreed that the use of E-learning increased students' understanding.
2. All the respondents (100%) of B. Voc., B.Arch., IMBA and a vast majority 97% of B.Tech and 85% of B.Ed. respondents agreed that training in E-Learning should be provided for all the students while only 3% of B. Tech. and 15% of B.Ed. did not agree with the statement.
3. All the respondents (100%) of B.Tech., B.Voc., B.Arch., B.Ed., and IMBA respondents agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).
4. All the respondents (100%) of B. Voc., IMBA and a vast majority 96% of B.Tech., 75% of B. Arch. and 90% of B.Ed. respondents agreed on the statement that the use of E-Learning helps to complete the work more quickly and smoothly than usual while 4% of B.Tech., 25% of B.Arch. and 10% of B.Ed. disagreed.
5. All the respondents (100%) of B. Voc., B. Arch., IMBA and a large majority 86% of B. Tech., 85% of B.Ed. respondents found E-Learning interesting and useful while 14% of B.Tech. and 15% of B.Ed. disagreed with the statement.
6. Total 16% of B.Tech. respondents, 10% of B.Ed respondents and 17% of IMBA found socially isolated when using E-Learning while 84% of B.Tech. respondents, 90% of B.Ed. respondents, 83% of IMBA and all the respondents (100%) of B.Voc. and B. Arch. opposed to the statement.
7. Only 16% of B.Tech. respondents, 10% of B.Ed respondents and 6% of IMBA considered E-Learning frustrating as they had difficulty in handling while all the respondents (100%) of B. Arch., B. Voc. and a vast majority (84%) of B.Tech., 90% of B.Ed. and 94% of IMBA did not face problem in handling E-Learning.
8. All the respondents (100%) of B.Arch., B.Ed., IMBA and a large majority (89%) of B.Tech. like E-Learning as they can work according to their space while 11% of B. Tech and 100% B. Voc. did not agree with the statement.
9. All 100% B.Voc., 100% IMBA, 80% B.Ed., and 75% B.Arch. students did not found E-Learning cost-effective while some (75%) of B.Tech., (25%) of B. Arch. and (20%) of B.Ed. found E-Learning cost effective.

INTERPRETATIONS:

A quick glance at the table no. 4.1.3, we can see the comparison among the Under-Graduate students with regard to their perception of E-Learning. The results here show that all the participants from B.Tech., B.Arch., B. Voc. B.Ed. and IMBA felt E-learning increased their understanding and had an impact on their academic performance as they observed better quality and improvement in their assignment/practical/test/exams etc. It was quite a surprise to see that there were a few technical students, who were not interested, felt isolated and frustrated while using E-Learning. But most of them did not feel isolated. And it was found that training in E-learning should be provided for all students.

Owing to the professional nature of the course all students reported on the same pattern. Comparatively a few students of B.Tech (3%) and B.Ed. (15%) did not feel the need for training. In the case of B.Tech., 3% can be negligible because of less number of respondents as well as the nature of course which might not need extra training, though 97% of them demanding training. But, in the case of B.Ed. students, it is little surprising. On item no. 4 more students from B.Arch. did not find E-learning helpful to complete the work quickly. Comparatively two groups 14% B.Tech. and 15% B.Ed. did not find e-learning interesting. It might be because B.Ed. is more oriented to classroom teaching and learning and their internship again conducted in schools, but a case of B.Tech. students were a little out of the trend.

Disconfirming Evidence**:* As in general observation majority of the respondents (79%) found E-learning costly. Within this group, majority of the respondents from B.Tech. (75%) found it cost-effective. This is the result because all four departments in the school of engineering were equipped with computer laboratories. Where two departments had 3 to 4 labs and connected with internet (Triangulated with table 4.2.1***).

Outlier: 100% of B. Voc. students did not feel the freedom to work in their own space. It was surprising because MZU is running vocation degree courses in software development, and web-technology & Multimedia. Students of such courses should not be ignorant of new developments across the world. It might be the reason that this department was very new to the campus and proper infrastructure and training might not be available.

4.1.3: COMPARISON OF PERCEPTION OF E-LEARNING IN SCHOOL OF ECONOMICS, MANAGEMENT AND INFORMATION SCIENCES

The comparison of perception of E-Learning among the School of Economics, Management and Information Sciences students of Mizoram University can be seen from the following tables. This comparison was made among the students of different courses in the Department of Commerce, Economics, Library Science, and Mass. Communication. The students were requested to notify their answer 'Agree' or 'Disagree' to the statement.

Table 4.1.3: Comparison of Perception Among the Departments of SEMIS

Sl. No	**STATEMENTS**	**Responses**	**Field of Study and responses** *(in percentage)*			
			Commerce	**Economics**	**Lib. Science**	**Mass. Comm.**
1	The use of E-Learning increases the students understanding	Agree	100	84	100	100
		Disagree		16		
2	E-Learning training should be provided to all students	Agree	100	100	100	100
		Disagree				
3	The use of E-Learning improves the quality of the work of the students assignment/practical/test / exams	Agree	80	84	100	100
		Disagree	20	16		
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	Agree	80	100	82	78
		Disagree	20		18	22
5	I find E-Learning interesting and useful	Agree	70	84	100	78
		Disagree	30	16		22
6	I think socially isolated when using E-Learning	Agree	40	11		56
		Disagree	60	89	100	44

7	E-Learning is difficult to handle and therefore, frustrating	Agree	40	16		33
		Disagree	60	84	100	67
8	I like E-Learning because I can work according to my own space	Agree	70	89	100	89
		Disagree	30	11		11
9	I find E-Learning cost effective	Agree	20	21		22
		Disagree	80	79	100	78

Table 4.1.3 can be described as below;

1. All the respondents (100%) of Commerce, Library Science, Mass. Communication and majority (84%) of Economics respondents agree that the use of E-learning increased students' understanding.
2. All the respondents (100%) of Commerce, Economics, Library Science, and Mass. Communication agreed that training in E-Learning should be provided for all the students.
3. All the respondents (100%) of Library Science, Mass. Communication and majority of Commerce (80%) and Economics (84%) agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).
4. All the respondents of Economics (100%) and a vast majority of Library Science (82%), Commerce (80%) and Mass. Communication (78%) agreed with the statement that the use of E-Learning helped to complete the work more quickly and smoothly than usual.
5. All the respondents of Library Science (100%) and a large majority of Economics (84%), Mass. Communication (78%) and Commerce (70%) found E-Learning interesting and useful.
6. Most of the respondents from Mass. Communication (54%), some of the Commerce (40%) and Economics (11%) felt socially isolated when using E-Learning while all the respondents of Library Science (100%) respondents opposed to the following statement.

7. All the respondents of Library Science (100%) and a vast majority of respondents from Commerce (60%), Economics (84%) and Mass. Communication (67%) did not have a problem in handling E-Learning tools.
8. All the respondents of Library Science (100%) and a large majority of Economics and Mass. Communication (89%) and Commerce (70%) respondents liked E-Learning as they can work according to their space.
9. All the respondents of Library Science (100%) and the majority of Commerce (80%), Economics (79%) and Mass. Communication (78%) students did not find E-Learning cost effective.

INTERPRETATIONS:

It can be observed here that a vast majority of the respondents from Commerce, Economics, Library Science, and Mass. Communication felt E-Learning increased their understanding and had achieved better quality and improvement in their assignment/practical/test/exams etc. Library Science students were more positive about E-Learning services as compared to the other departments. But 100% of them, more than any other department, found it costly.

On item no. 4 commerce and mass communication students were negative more than any other department i.e. 40% and 56% respectively. Both departments' students did also surpass other departments on item no. 7 and reported it difficult and frustrating.

4.1.4: COMPARISON OF PERCEPTION OF E-LEARNING WITHIN SCHOOL OF EDUCATION AND HUMANITIES

The comparison of perception of E-Learning among the School of Education and Humanities of the University can be seen from the following table. This comparison was made among the students of different courses in the department of English, Mizo, Hindi, and Education. In case of more than one UG or PG course data was collected proportionately.

Table 4.1.4: Comparison of perception among the different departments of SEH

Sl. No	**STATEMENTS**	**Responses**	**Field of Study and responses***(in percentage)*			
			English	**Mizo**	**Hindi**	**Education**
1	The use of E-Learning increases the students understanding	Agree	75	86	100	81
		Disagree	25	14		19
2	E-Learning training should be provided to all students	Agree	100	100	100	100
		Disagree				
3	The use of E-Learning improves the quality of the work of the students assignment/practical/test/ exams	Agree	75	76	100	75
		Disagree	25	14		25
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	Agree	75	91	100	88
		Disagree	25	29		12
5	I find E-Learning interesting and useful	Agree	62	57	100	75
		Disagree	38	43		25
6	I think socially isolated when using E-Learning	Agree	50	38		
		Disagree	50	63	100	100
7	E-Learning is difficult to handle and therefore, frustrating	Agree	12	38		31
		Disagree	88	62	100	69
8	I like E-Learning because I can work according to my own space	Agree	62	86	100	81
		Disagree	38	14		19
9	I find E-Learning cost effective	Agree	25	19		
		Disagree	75	81	100	100

Table 4.1.4 can be described and interpreted as following;

1. All the respondents of Hindi (100%) and the majority of Mizo (86%), Education (81%) and English (75%) agreed that the use of E-learning increased students' understanding.
2. All the respondents (100%) of English, Mizo, Hindi and Education respondents agree that training in E-Learning should be provided for all the students.
3. All the respondents of Hindi (100%) and the majority of Mizo (86%), English and Education (75% each) respondents agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).
4. All the respondents of Hindi (100%) and a majority of Education (88%), English (75%) and Mizo (71%) agreed on the statement that the use of E-Learning helped to complete the work more quickly and smoothly than usual.
5. All the respondents (100%) of Hindi and a majority of Education (75%), English (62%) and Mizo (57%) found E-Learning interesting and useful.
6. All the respondents (100%) of Hindi and Education and majority of Mizo (63%) and half of English (50%) did not feel isolated when using E-Learning services.
7. All the respondents of Hindi (100%) and a vast majority of respondents from English (88%), Mizo (62%) and Education (69%) did not have a problem in handling E-Learning.
8. All the respondents of Hindi (100%) and a large majority of Mizo (86%) and Education (81%) and of English (62%) liked E-Learning as they can work according to their space.
9. All the respondents of Hindi and Education (100%) and majority of Mizo (81%) and English (75%) students did not find E-Learning cost effective.

INTERPRETATIONS:

In general observation students of Education and Humanities in Mizoram were did not respond extremely. Their responses were also in line with other departments.
In the school of Education and Humanities perception of students of Hindi department (course) was more positive towards e-learning practices. Researcher confirms this finding with the context of teaching and learning of Hindi in the state. Hindi is a third

language subject in the school curriculum of Mizoram and teaching and learning of the subject has not found up to the mark. Further majority of the students were from Mizoram only and were not competent enough in the subject. Hence a student pursuing a course in Hindi department naturally should depend on e-learning tools and e-resources. But here again, 100 percent students from all four departments expressed need of training.

4.1.5: COMPARISON OF PERCEPTION ABOUT E-LEARNING WITHIN SCHOOL OF SOCIAL SCIENCES

The comparison of perception students about E-Learning among the School of School Sciences can be seen from the following tables. This comparison was made among the students of different courses in the Department of Public Administration, History and Ethnography, Psychology, Political Science, Sociology and Social Work. The students were requested to notify their answer in 'Agree' or 'Disagree' to the following statements.

Table 4.1.5: Comparison of Perception among the Departments of SSS.

Sl.No.	**STATEMENTS**	**Responses**	**Field of study and their responses in percentage**					
			P.A.	**Hist.**	**Psy.**	**Pol.Sc.**	**Socio.**	**S.W.**
1	The use of E-Learning increases the students' understanding	Agree	69	86	100	82	100	100
		Disagree	31	14		18		
2	E-Learning training should be provided to all students	Agree	100	100	100	100	100	100
		Disagree						
3	The use of E-learning improves the quality of the work of the students (assignment/practical/ test/exams)	Agree	77	64	100	88	100	100
		Disagree	23	36		12		

4	The use of E-Learning helps to complete the work more quickly and smoothly than usual	Agree	100	100	100	82	100	100
		Disagree				12		
5	I find E-Learning interesting and useful	Agree	77	64	82	82	90	100
		Disagree	23	36	18	18	10	
6	I think socially isolated when using E-Learning	Agree	31	36	18	29	10	
		Disagree	69	64	82	71	90	100
7	E-learning is difficult to handle and therefore, frustrating	Agree	31	14	18	24	10	
		Disagree	69	86	82	76	90	100
8	I like E-learning because I can work according to my own space	Agree	85	100	100	100	90	100
		Disagree	15				10	
9	I find E-learning cost Effective	Agree	31			24		
		Disagree	69	100	100	76	100	100

1. All the respondents (100%) of Psychology, Sociology, Social Work, and majority of History (86%), Political Science (82%), Public Administration (69%) agreed that the use of E-learning positively supported students' understanding.
2. All the respondents (100%) of Public Administration, History, Psychology, Political Science, Sociology and Social Work agreed that training in E-Learning should be provided for all the students.
3. All the respondents (100%) of Psychology, Sociology and Social Work and majority of Political Science (88%), Public Administration (77%), History

(64%) and Economics (84%) agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).

4. All the respondents (100%) of Public Administration, History, Psychology, Sociology, Social Work and a vast majority of Political Science (88%) agreed on the statement that the use of E-Learning helps to complete the work more quickly and smoothly than usual.
5. All the respondents of Social Work(100%) and a large majority of Sociology (90%), Psychology (82%), Political Science (82%), Public Administration (77%) and History (64%) found E-Learning interesting and useful.
6. All the respondents of Social Work (100%) and a vast majority of Sociology (90%), Psychology (82%), Political Science (71%), Public Administration (69%) and History (64%) did not feel socially isolated when using E-Learning services.
7. All the respondents of Social Work (100%) and a vast majority of Sociology (90%), Psychology (82%), Political Science (76%), Public Administration (69%) and History (86%) did not feel any difficulty in e-learning.
8. All the respondents (100%) of History, Psychology, Political Science and a large majority of Public Administration (85%) and Sociology (90%) liked E-Learning as they could work according to their space.
9. All the respondents (100%) of Psychology, Sociology and Social Work and majority (76%) of Political Science and (69%) Public Administration students did not find E-Learning cost effective.

INTERPRETATIONS:

It can be observed that a good number of the respondents from the Public Administration, History, Psychology, Political Science, Sociology and Social Work like E-learning services. Here it is observable that students of social work department found to be more in support of E-learning. It may be because of the fact that social work as a discipline is comparatively new in the country and yet to complete hundred years (Pinto, 2014). Based on this fact, researcher found a reason that students of social work might be more dependent on e-services to have access to international literature in the field. Another fact might the deprivation as these students felt the need of services, therefore, they supported unanimously because social work

department did not possess any computer lab by which students could access e-resources.

Outlier: Here, Department of Social Work overtly seems to be an outlier because of their responses on all statements were positively supporting e-learning resources. They found it costly too as there was no lab in the department. Here the researcher found the real case of an outlier in the department of history & ethnography. This department was found to be equipped with a computer lab, one researcher scholar room and one archive with 8Pcs, 1PC, and 1PC respectively. All these were connected with the network. In spite that 100 percent of students found e-learning costly. During further exploration researcher came to know from the teacher of the department that these facilities were least used by the students. Here researcher feels the need for a comprehensive research work including all stakeholders of the university.

4.1.6: COMPARISON OF PERCEPTION ABOUT E-LEARNING WITHIN SCHOOL OF LIFE SCIENCES

The comparison of perception of E-Learning among the School of Life Sciences can be seen from the following table. This comparison was made among the students of different courses in the department of Botany, Zoology, and Biotechnology.

Table 4.1.6: Comparison of perception within school of life sciences.

Sl.No.	**STATEMENT**	**Responses**	**Field of study and their responses** *(in percentage)*		
			Botany	**Zoology**	**Biotech.**
1	The use of E-learning increases the students' understanding	Agree	85	100	100
		Disagree	15		
2	E-learning training should be provided to all students	Agree	100	100	100
		Disagree			
3	The use of E-learning improves the quality of the work of the students	Agree	77	67	100
		Disagree	23	33	

4	The use of E-learning helps to complete the work more quickly and smoothly than usual	Agree	100	83	67
		Disagree		17	33
5	I find E-learning interesting and useful	Agree	69	58	100
		Disagree	31	42	
6	I think socially isolated when using E-learning	Agree	34	25	22
		Disagree	66	75	78
7	E-learning is difficult to handle and therefore, frustrating	Agree	23	25	33
		Disagree	77	75	67
8	I like E-learning because I can work according to my own space	Agree	85	83	78
		Disagree	15	17	22
9	I find E-learning cost effective	Agree	31	25	33
		Disagree	69	75	67

1. All the respondents (100%) of Zoology and Biotechnology and majority of Botany (85%) agreed that the use of E-learning increased students' understanding.
2. All the respondents (100%) of Botany, Zoology, and Biotechnology agreed that training in E-Learning should be provided to all the students.
3. All the respondents of Biotechnology ((100%); and majority of Botany (77%), & Zoology (67%) agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).
4. All the respondents of Botany (100%) and a vast majority of Zoology (83%) and of Biotechnology (67%) respondents agreed on the statement that the use of E-Learning helped to complete the work more quickly and smoothly than usual.
5. All the respondents of Biotechnology (100%), and majority of Botany (69%) and Zoology (58%) found E-Learning interesting and useful.

6. Majority of the respondents from Botany (66%), Zoology (75%) and Biotechnology (78%) did not feel socially isolated when using E-Learning services.
7. Majority of the respondents from Botany (77%), Zoology (75%), and Biotechnology (67%) did not have a problem in handling E-Learning.
8. Majority of the respondents from Botany (85%), Zoology (83%) and Biotechnology (78%) liked E-Learning as they could work according to their own space.
9. Majority of the respondents from Botany (61%), Zoology (75%) and Biotechnology (67%) did not find E-Learning cost effective.

INTERPRETATIONS:

All three departments in the school of life sciences were equipped with computer labs connected to the network. Here students of these departments were univocal on some statements, and different on others, so a pattern is not visible in the above table. Students of Biotech were little more positive on some statements. This might be because of their well-equipped and up to date bioinformatics lab. But on item Nos. 4 many students (33%) from Biotech reported that e-learning did not improve the quality of the work. Quite surprisingly students of Zoology in a large number (42) were not interested in e-learning. The researcher found the reason for further exploration. It was because a student spared more time in their disciplinary labs and computer lab was least used by them. Here again majority of students from all departments found e-learning costly.

4.1.7: COMPARISON OF PERCEPTION ABOUT E-LEARNING IN THE SCHOOL OF PHYSICAL SCIENCES

The comparison of perception of E-Learning among the School of Physical Sciences is described here in the following table. This comparison was made among the students of different courses in the departments of Mathematics, Chemistry, and Physics.

Table 4.1.7: Comparison of perception within school of physical sciences.

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage		
			Mathematics	Chemistry	Physics
1	The use of E-learning increases the students' understanding	Agree	100	100	100
		Disagree			
2	E-learning training should be provided to all students	Agree	100	100	100
		Disagree			
3	The use of E-learning improves the quality of the work of the students	Agree	100	100	100
		Disagree			
4	The use of E-learning helps to complete the work more quickly and smoothly than usual	Agree	100	100	100
		Disagree			
5	I find E-learning interesting and useful	Agree	100	78	100
		Disagree		22	
6	I think socially isolated when using E-learning	Agree		33	
		Disagree	100	67	100
7	E-learning is difficult to handle and therefore, frustrating	Agree		22	
		Disagree	100	78	100
8	I like E-learning because I can work according to my own space	Agree	100	78	100
		Disagree		22	
9	I find E-learning cost effective.	Agree			
		Disagree	100	100	100

1. All the respondents (100%) of Mathematics, Chemistry and Physics respondents agreed that the use of E-learning increased students' understanding.
2. All the respondents (100%) of Mathematics, Chemistry, and Physics agreed that training in E-Learning should be provided for all the students.
3. All the respondents (100%) of Mathematics, Chemistry and Physics agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).
4. All the respondents (100%) of Mathematics, Chemistry, and Physics agreed that the use of E-Learning helped to complete the work more quickly and smoothly than usual.
5. All the respondents (100%) of Mathematics and Physics and a large majority of Chemistry (78%) found E-Learning interesting and useful.
6. All the respondents (100%) of Mathematics and Physics and most Chemistry (67%) did not think socially isolated when using E-Learning services.
7. All the respondents (100%) of Mathematics and Physics and a majority of respondents from Chemistry (67%) students did not have a problem in handling E-Learning.
8. All the respondents (100%) of Mathematics and Physics and a large majority of Chemistry (78%) liked E-Learning as they could work according to their space.
9. All the respondents (100%) of Mathematics, Chemistry and Physics did not find E-Learning cost effective. ***(outlier)***

INTERPRETATIONS:

Comparing with the general pattern of responses from other schools, it can be seen that a vast majority of the respondents from Mathematics, Chemistry, and Physics were having positive perception about E-Learning. Here in the school of physical sciences all the departments have well-equipped laboratories. In general understanding of the discipline of mathematics, computer lab may be least useful but in Mizoram University department's name was Mathematics and Computer Science. This department was having more resources than physics and chemistry. Therefore students from mathematics reported more absolutely.

Chemistry department had little different perspective, unlike Mathematics and Physics department. This department may be lacking in proper orientation of students. Mathematics department had a teacher from computer science department and two labs *(table no. 4.2.1)*, and physics as a discipline do share knowledge of computer and its applications, but nature of chemistry as a discipline is more oriented to subject labs. Therefore it was a slight variation in the responses of students of chemistry.

Outlier: In spite of having well-equipped laboratories in the departments all students (100%) from all three departments found e-learning costly. Department of Mathematics and Computer Sciences came up as big extreme case at this point.

4.1.8: COMPARISON OF PERCEPTION ABOUT E-LEARNING ON SCHOOL OF EARTH SCIENCES AND NATURAL RESOURCES MANAGEMENT

The comparison of perception of E-Learning among the School of earth sciences and natural resource management is described in the following table 4.1.9. This comparison was made among the different courses in the Department of Geology, Geography & RM, HAMP, Forestry and Environmental Sciences. There was one more department in this school i.e. Department of Extention Education and Rural Development, as there was no UG and PG course running in this department so no information is there in the following table.

Table 4.1.8: Comparison of perception within school of ESNRM.

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage				
			Geol.	Geogr.	HAMP	Fores.	EVS
1	The use of E-Learning increases the students' understanding	Agree	100	86	100	100	100
		Disagree		14			
2	E-learning training should be provided to all students	Agree	100	100	100	100	100
		Disagree					

3	The use of E-learning improves the quality of the work of the students (assignment/practical/ test/exams)	Agree	83	64	83	70	100
		Disagree	17	36	17	30	
4	The use of E-learning helps to complete the work more quickly and smoothly than usual	Agree	75	100	83	70	82
		Disagree	25		17	30	18
5	I find E-learning interesting and useful	Agree	67	64	83	70	100
		Disagree	33	36	7	30	
6	I think socially isolated when using E-learning	Agree		36	50	22	
		Disagree	100	64	50	82	100
7	E-learning is difficult to handle and therefore, frustrating	Agree	25	14	33	40	
		Disagree	75	86	67	60	100
8	I like E-learning because I can work according to my own space	Agree	75	100	83	90	100
		Disagree	25		17	10	
9	I find E-learning cost effective	Agree	17			20	
		Disagree	83	100	100	80	100

1. All the respondents (100%) of Geology, HAMP, Forestry and EVS and majority of Geography (86%) agreed that the use of E-learning increased students' understanding.
2. All the respondents (100%) of Geology, Geography, HAMP, Forestry and EVS agreed that training of E-Learning should be provided to all the students.
3. All the respondents of EVS (100%) and majority of Commerce (80%) and Geology (83%) and HAMP (83%), Forestry (70%) and Geography (64%) agreed that the use of E-Learning improved the quality of the work of the students (assignment/practical/test/exams).

4. All the respondents of Geography (100%) and a vast majority of HAMP (83%), EVS (82%), and Geology (75%) and of Forestry (70%) agreed that the use of E-Learning tools helped to complete the work more quickly and smoothly than usual.
5. All the respondents of EVS (100%), and a large majority of HAMP (83%), Forestry (70%), Geology (67%) and Geography (64%) found E-Learning interesting and useful.
6. All the respondents (100%) of Geology and EVS and most of the respondents from Forestry (80%), Geography (64%) and HAMP (50%) did not feel socially isolated when using E-Learning services.
7. All the respondents of EVS (100%) and a large majority of Geography (80%), Geology (75%), HAMP (67%) and Forestry (60%) did not have a problem in handling E-Learning.
8. All the respondents (100%) of Geography and EVS; and a vast majority of Forestry (90%), HAMP (83%), and Geology (75%) liked E-Learning as they could work according to their own space.
9. All the respondents (100%) of Geography, HAMP and EVS; and majority of Geology (83%), and Forestry (80%) did not find E-Learning cost effective.

INTERPRETATIONS:

Majority of the respondents from Geology, Geography & RM, HAMP, Forestry and Environmental Sciences were having positive perception about e-learning. Their responses did not show any extreme cases in comparison to one another department. Comparing each Department from School of Earth Sciences and Natural Resources Management, Environmental Sciences students were more positive. This was little strange because of the fact that this department was not having a computer lab or e-resource center to be used by the students (***triangulated with table 4.2.1***).

SECTION-2

4.2: E-LEARNING RESOURCES

This section reveals the availability of E-Learning resources for the students of Mizoram University. The relevant data was collected through a checklist and observation schedule made by the researcher, herself. In case of information from the departments, telephonic interviews of HODs or teachers and face to face interview of the students were conducted. As it was difficult for the research scholar to find their labs open at the time of visit to the departments; and getting them open was another challenge. Therefore, data presented in the table 4.2.1 is totally based on interviews with HODs, teachers and students. Resources were found at three places available to be used by students. Those three places were ICT Centre, E-resource Centre (CL) and Departments (34 in total). Researcher observed the facilities at ICT centre and E-resource center and a few departments (5) herself with the help of checklist cum observation schedule. Data are presented as follows.

4.2.1: E-RESOURCES CENTRE

A separate room for accessing and downloading E-resources by the students with 15 computers was provided within the Central Library. E-Resource Centre was maintained by Information Scientist. Orientation programs for newly admitted students had been conducted by the central library to orient the students how to use library facilities, including how to use this center. The working hours or opening hours of the center are 8:00 hours in each working day. E-Resource centre had been established in November 2013 under INFLIBNET, which includes subscriptions such as e-ShodhSindhu, Consortia for Higher Education, and other resources from 22 Publishers. There were 7,506 numbers of e-journals subscribed by the library. All-Society Periodicals Package (ASPP) had been subscribed, providing access to the IEEE core collection of engineering, electronics, and computer science periodicals since 2015-16. The center also had CDs/DVDs. Subscription made by this center can be accessed by any terminal (PC) connected with university network in the campus.

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

4.2.2: ICT CENTRE

ICT Centre was set up in 2007 and had a server room housing five high-end servers which provided various services such as the Internet file sharing, etc. for the users. The System Administrator took care of Information & Communication Technology Centre. The Centre was maintaining and monitoring University Website (www.mzu.edu.in) and EDUSAT programme and also maintains the Campus Network which had covered all existing Academic and Administrative buildings with an internet connection that had 1Gbps bandwidth under NKN (National Knowledge Network) scheme. At the moment, more than 700 nodes were connected by cable and the full Wifi connection had also been provided within the Campus. The Centre had a well-resourced Training Hall for conducting various kinds of ICT training programme. Video Conferencing System had also been installed in the hall for having online meetings both for official and academic related matters. The center was also looking after the newly launched MOOCs of the university http://www.mzuict.in/

4.2.3: E-RESOURCES WITHIN DEPARTMENTS

As it is cited above that e-resource subscribed by the university could be accessed at anyplace in the campus. Therefore, the existence of departmental laboratories was vital. Role of these laboratories found to be crucial regarding the topography of the university. Mizoram University is located in hilly terrain and covers a vast area. Physical distance from different departments to E-resource center may range from 1km to 5kms. Hence all students cannot access these centers after attending classes and without having their own personal vehicle. Here research scholars targeted two main things to be reported. One was connectivity and other was computer labs or such places where students could access resources. Regarding connectivity, all departments were equipped with WiFi routers, and regarding computer laboratories details are given in the following table;

Table: 4.2.1: Available Resources - Department Wise

Sl.No.	*Departments*	*Resources*	*Remarks*
1: School of Earth Sciences and Natural Resource Management			
i.	Geology	One lab with 4 PCs	Non-functional
ii.	Forestry	One lab with 10 PCs	Non-functional, Functional before 1 Year, Connected
iii.	Geography	GIS Lab with 10PCs	Most of them connected
iv.	Horticulture, Aromatic &Medicinal Plants (HAMP)	No	
v.	Environmental Sciences	No	
vi.	Extension Education & Rural Development	No	
2. School of Economics, Management and Information Sciences			
vii.	Commerce	One lab with 12PCs	Not connected
viii.	Economics	No	
ix.	Management	Two Labs with 30 & 30 PCs	Connected
x.	Library & Information Sciences	One lab with 20 PCs	Connected
xi.	Mass Communication	One lab with 5-6 PCs	Connected by University
3. School of Education and Humanities			
xii.	Mizo	No	Sharing with language lab
xiii.	English	1 Language lab with 21 PCs	Not Connected
xiv.	Education	One lab with 31PCs	Not connected
xv.	Hindi	No	Sharing with language lab

4. School of Engineering and Technology			
xvi.	Information Technology	Four Labs with 26, 27, 24, & 25 PCs	3 labs connected with departmental
xvii.	Electronics & Communication	One lab with 25 Pcs	Not connected/Some PCs connected.
xviii.	Computer Engineering	Three labs with 50, 30& 30PCs	One Lab with 30 with Connected
xix.	Electrical Engineering	One lab with 30 PCs	A few PCs connected but All with Wifi
xx.	Civil Engineering	One Lab with 30 PCs	Only One PC Connected
5. School of Life Sciences			
xxi.	Botany	One Lab with 5 PCs	Connected
xxii.	Zoology	One Lab with 2 PCs	Connected
xxiii.	Biotech	One Bio-informatics Centre with 30 (Funded by DBT)	Connected
6. School of Physical Sciences			
xxiv.	Physics	One lab with 30 PCs	One PC Connected
xxv.	Chemistry	One lab with 8PCs	Not-Connected
xxvi.	Mathematics & Computer Sciences	Two labs with 33 PCs Total	3/4 PCs connected
7. School of Social Sciences			
xxvii.	Psychology	No	
xxviii.	Social-work	No	
xxix.	Political Science	4 PCs in Research Scholars Room	Connected
xxx.	Public Administration	One room with 1PC	Connected
xxxi.	History & Ethnography	One lab with 8 PCs, One Research Scholars Room with 1PC, One Archives with 1PC	Connected but *least used by students*
xxxii.	Sociology	One lab with 15PCs	Not Connected

8. School of Fine Arts, Archeology and Fashion			
xxxiii.	Planning & Architecture	One lab with 20PCs	Connected
9. Independent Department (Without Under any School)			
xxxiv.	B. Voc.	One lab with 30PCs	Connected

From the above table: **4.2.1,** it can be inferred that all departments of the university did not have computer laboratories (08 Depts.), whereas some departments have but those labs were not connected with internet (05 Depts.) or partially connected (06 Depts.); two departments reported about non-functional labs. While six (06) departments had fully connected labs. Most of the departments with well-connected labs had done networking with departmental funds except a few like the department of Mass Communication. As per the information provided by the system administrators the university did not have any policy for networking of departmental laboratories as the university provided WiFi facility to all departments to be used by students. If any department wanted to establish connectivity to all terminals of its lab, ICT center provided technical support only, while budget and material to be procured by the department itself.

Researcher concludes here as following

University is required to extend the facility such as all hostels should be provided computer laboratories to help students who don't possess personal tools. Departmental laboratories should be established wherever these are not established till now. Also, these laboratories should be maintained properly by recruiting technical staff at least one at the school level.

SECTION-3

4.3: E-RESOURCES ACCESSED BY THE STUDENTS OF Mizoram University

This section deals with the third objective of the study concerning resources accessed by the students of the university. Major data collected for this purpose is described in the following table 4.3.1. This objective of the research was relevant because of many reasons. Such as an educational institution can only provide the infrastructure but how much it would benefit depends totally on the users i.e. students. Therefore, keeping in view such factors researcher tried to know the resources accessed by the students of Mizoram University.

Table 4.3.1: E-resources accessed by the students

Sl. No.	STATEMENTS / ITEMS	LABEL	RESPONSES (In percentage)
1	I have been using computer/laptop for	1-5 years	11
		6-10 years	39
		More than 10 years	50
2	I have been using a smartphone for	6-12 months	8
		1-3 years	54
		More than 5 years	38
3	I am using the Internet for	Job	11
		Recreational	47
		Educational purpose	42
4	I have access to the Internet	Very rarely	2
		Occasionally	5
		A few times a week	8
		Every day, I'm addicted!	85
5	I have access to a network through computer/smartphone	Home / student residence	96
		University / Learning center	4

6	Which of the following social/academic networks are you using?	LinkedIn	17
		Facebook	98
		Whatsapp	100
		YouTube	99
		MySpace	3
		Almaconnect	8
		Twitter	21
		Instagram	65
		Hike	45
		Telegram	22
		Google+	66
		Academia	31
		ResearchGate	12
		Bharat students	0
7	I have an online personal space other than a social network	Yes	5
		No	95
8	How do you come to know about the online sources?	Friends	56
		Family	16
		Institution	15
		Media	14
9	Is any orientation about online sources has been done by the department?	Yes	45
		No	32
		Don't know	23
10	Do you know MOOC?	Yes	9
		No	91
11	Which of the following are you using?	Vyas	1
		Gyan Darshan	4
		Swayam	8
		Swayam Prabha	1
		None	86

Table 4.3.1 is described and interpreted as follows.

1. A total of 11% respondents stated that they had been using computer or laptop for 1 – 5 years while 39% of the respondents said that they had been using computer or laptop for 6 - 10 years on the other hand half of the respondents, 50% said that they had been using a computer or laptop for more than 10 years.
2. Only 8% of the respondents stated that they had been using a smartphone for 6 – 12 months while 54% of the respondents said that they had been using a smartphone for 1 – 3 years and 38% of them responded that they had been using a smartphone for more than 5 years.
3. A total of 11% respondents clarified that they had been using the Internet in search of Job, 47% of them said that they had been using the Internet for recreational while 42% of them responded they had been using the Internet for Educational purposes.
4. Only 2% of the respondents said that they had accessed to the Internet very rarely, 5% of the respondents had access to Internet occasionally, and 8% of the respondents had access to the Internet a few times a week while large majorities 85% of the respondents were addicted in accessing the Internet.
5. A vast majority 96% of the respondents had accessed to a network at their residence while only 4% had accessed to a network at the department.
6. Only 17% of the respondents used LinkedIn, a vast majority 98% used Facebook, all the respondents 100% used Whatsapp, 99% used YouTube, 3% used MySpace, 8% used AlmaConnect, 21% used Twitter, 65% used Instagram, 45% used Hike, 22% used Telegram, 66% used Google+, 31% used Academia, 12% used ResearchGate and no response was received for using Bharat Students.
7. A vast majority 95% responded that they did not have any online personal space other than social network while 5% informed that they had online personal space like Blogs, YouTube Channel, etc.
8. A vast majority 56% of the respondents clarified that they came to know online sources through their friends, 16% came to know from their families, 15% came to know from the Institution, while 14% came to know from the media.

9. Majority (45%) of the respondents said to have an orientation about online sources through their department, 32% responded that they did not have any orientation about online sources through their department while 23% responded that they did not know whether there is an orientation programme or not.
10. A vast majority 91% did not know MOOC while only 9% knew MOOC.
11. Only 1% of the respondents used Vyas, 4%used Gyan Darshan, 8%used Swayam, and 1% used Swayam Prabha while 86% of the respondents used none of the educational channel introduced by the government.

INTERPRETATIONS:

This above-mentioned data reveals that for accessing the Internet, the majority of the respondents used Computer or Laptop for more than 10 years. Not withstanding most of them reported need of training in section 1 of this chapter. *It denotes that students were not reaching to correct locations.* Most of the participants responded that they had used their Smart Phone for about 1-3 years and there are a few numbers who had used it for more than 5 years. If utilized optimally and judiciously smartphone can be proved as a crucial academic instrument. Many institutions had already started utilizing this resource. *It was a positive sign that around all of the students were using a smartphone and a big number (38%) had been using for more than 5 years.* The study revealed that several respondents used the Internet for recreational and educational purposes; there were few who used it in search of a job. Almost, all the participants' access to the Internet from their home or residence (hostel), therefore researcher could not cross-check the data about the preferred resources for the students, with the data available with ICT center of the university. A vast majority 96% of the respondents had accessed to a network at their residence. This is the fact because of the many reasons. Such as all of the departments were not providing computer labs or access points to the students. Another factor was that many students, especially in non-practical subjects, used to leave campus after the inside-classroom interaction, by buses at 3 PM. Therefore, students were not sparing time with the resources wherever these were provided on the campus. Here researcher found a way *that the university should stop running buses before 4pm so that students can stay back on the campus and utilize some resources. Triangulating with the table 4.2.1 it was informed that resources were available but these were least used by the students.* Students were mostly introduced to online resources by their friends and

family, here again, role of the respective departments found to be less than expected. Departments should orient the students to the e-resources available in their respective areas. Here a large number of the respondents (45%) declared of having orientation on e-learning resources by the departments. But as per the information sought by the researcher scholars, departments had not conducted any specific and formal programme for this purpose. Hence it seemed that respondents were confused between general orientation at the time of admission in the department, and specific orientation programme on how to use e-learning tools and resources. Some (15%) respondents came to know online sources from their institutions and media. The student regularly visited internet but looking at the table it can be seen that they had visited social networks more than academic networks. Some of the academic networks like 'Spoken Tutorial'; were totally unknown by students, so such options were removed at the pilot study phase. It can also be observed that a number of respondents did not know the online courses and the educational programmes launched by the Government; whereas in Mizoram University MOOC is much talk term. Around the end of the data collection process, Mizoram University had also launched the MOOC which can be accessed from website, i.e. www.mzuict.edu.in

SECTION-4

4.4: PURPOSES OF E-LEARNING

This section is connected with the fourth objective of the study i.e. *To find out how students are using e-learning resources in MZU.* It was intended to know that for what purpose students were using e-learning tools and resources available in the university. Data in this section based on the 15 items (Table 4.4.1) designed to know the purpose and usage of resources. The three-point scale was developed by the researcher herself. The scales ranged over three dimensions i.e. 'Always', 'Sometimes' and 'Never'.

Table 4.4: Purposes of E-Learning

Sl. No	STATEMENTS / ITEMS	RESPONSES *(in percentage)*		
		Always	**Sometimes**	**Never**
1	I use the Internet for self-study	68	30	2
2	I download learning content from the Internet	67	29	4
3	I prefer to read an e-book	37	49	14
4	I download pictures, diagrams, etc. for project	53	35	12
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	36	45	19
6	I find online learning much more comfortable	30	45	25
7	I use different educational blogs and social media for academic interaction	24	51	24
8	I feel satisfies when I collect learning materials from the Internet	45	43	12
9	I could understand course content better in e-book	31	46	22

10	I regularly visited the links/websites related to my syllabus/research area.	76	20	4
11	I like the content of my syllabus/course available in Slideshare / YouTube and other websites	42	42	16
12	I prefer the online submission of assignment/softcopy on e-mail	33	44	23
13	I keep tracking of my assignments/course online	78	19	3
14	I am satisfied with the quality of the course/content available on the Internet	36	45	19
15	The variety of audio-video material helps to hold my attention to the course	38	42	19

Table 4.4. shows the responses of the respondents in relation to the usage of E-Learning resources.

1. Majority of the respondents(68%) used the Internet for self-study, 30% of the respondents said that they used the Internet for self-study sometimes, while only 2% responded never used internet for self-study.
2. Total 67% of the respondents' downloaded learning content from the Internet, 29% of the respondents downloaded learning content from the Internet sometimes, whereas only 4% of the respondents never downloaded any learning content form the Internet.
3. Total 37% of respondents preferred to read an e-book, 49% of respondents read an e-book sometimes, on the other hand, 14% of the respondents never read an e-book.
4. Majority of the respondents (53%) downloaded pictures, diagrams, etc. for their project, 35% of the respondents downloaded pictures, diagrams, etc. sometimes only, at the same time, 14% of them responded they never download any pictures, diagrams, etc. for their project.
5. Total 36% responded they preferred transferring material through e-mail to friends, teachers, etc., 45% responded they did it sometimes, and 19%

responded that they never preferred transferring material through e-mail to friends, teachers, etc.

6. Only 30% of the respondents' found online learning comfortable, 45% of the respondents found it comfortable sometimes, and 25% of the respondents never found online learning comfortable.
7. Only 24% of the respondents used different educational blogs and social media for academic interaction, 51% of the respondents did it sometimes only, and 24% of the respondents never used educational blogs and social media for academic interaction.
8. Total 45% of the respondents felt satisfied when collecting learning materials from the Internet, 43% respondents felt satisfied sometimes, and 12% of them responded that they never felt satisfied when collecting learning material from the Internet.
9. Only 31% of the respondents could understand course content in e-books, 46% of the respondents could do sometimes only, and 22% of them responded they never understand course content in the e-book.
10. Total 76% of the respondents regularly visited the links and website related to their syllabus, 20% of the respondents did sometimes, and only 4% of them responded never visited the links and website related to their syllabus.
11. Total 42% liked the content of their syllabi or courses available on Slideshare, YouTube or other Websites, another 42% of the respondents liked the content of their syllabi or courses sometimes, while 16% of them did not like the content of their syllabi or courses available at such platforms.
12. Total 33% of the respondents preferred the online submission of assignments or in softcopy on e-mail, 44% of the respondents preferred it sometimes, while 23% never preferred this mode.
13. Majority of the respondents (78%) kept tracking of their assignments or courses online, 19% of the respondents did the same sometimes only, while only 3% of the respondents do not track their assignment or course online.
14. Total 36% of the respondents were satisfied with the quality of the course or content available on the Internet, 45% of the respondents found it satisfactory sometimes only, while 19% of the respondents were never satisfied with the quality of the course or content available.

15. Only 30% of the respondents expressed that the variety of audio-video material held their attention to the course, 42% of the respondents stated that the variety of audio-video materials hold their attention sometimes only, and 19% of the respondents said that the audio-video material never held their attention to the course.

INTERPRETATIONS:

Quite a number of the participants used the Internet for self-study and regularly visited the links/websites related to their learning content. There were some participants who felt comfortable and satisfied when collecting learning material from the Internet. Numerous participants like the content available on YouTube, Slideshare and even downloaded many pictures, diagrams and academic content from the Internet. Majority of the participants stated that they used different educational blogs and social media for academic interaction at least sometimes.

However, there were a few participants who did not prefer to read e-book since they had difficulty in understanding the course content and were not satisfied with the quality of the learning content available on the Internet. It can be seen from the table that the variety of audio-video material did not hold the attention of some of the respondents with regard to their academic purpose.

Though a number of such negative responses was very small it attracted the interest of the researcher that there were some students in the campus of a central university in the digital era, who never used e-resources for their study. Matching this small percentage to the total enrolment of the students in the university there would be hundreds of students who never visited sites related to their courses. *Researcher terms it as a very low-spirited scenario in the university.*

Triangulation: *At the item number 8 it is again proved that many students were not reaching to appropriate and relevant resources. Triangulating item nos.14 with item nos. 8 of this section and item nos.8 of table 4.3.1. the researcher convincingly established the need for orientation programmes by the departments so that students can reach to the satisfactory e-sources in their discipline.*

Outlier*: Here at the item no. 13 surprisingly 78% respondents reported tracking of assignments or courses online. This fact overtly falsifies the earlier statements of the*

students. As this much percentage of students never used online services and nor they submitted the assignment. But, the researcher found that many respondents stuck with the word tracking and they took it for surfing. Moreover, this point was as cross-confirming type item in the tool. By close observation and scrutiny of the data, researcher found that the many students who responded sometimes in earlier items clearly answered here.

4.4.1: COMPARISON OF PURPOSES ACCORDING TO THE COURSES OF STUDY ON ITEM

The comparison of perception according to the courses of study i.e. Under-Graduate, Post- Graduate and Research Scholar on the item are given as follows:-

Table 4.4.1: Comparison among UG, PG, & RS

Sl. No	**STATEMENTS / ITEMS**	**Responses**	**Field of study and responses in percentage**		
			U.G.	P.G.	R.S.
1	I used the Internet for self-study	Always	57	73	62
		Sometimes	37	27	33
		Never	6		5
2	I download learning content form the Internet	Always	60	69	73
		Sometimes	31	29	23
		Never	9	2	5
3	I prefer to read an e-book	Always	37	40	15
		Sometimes	39	49	75
		Never	24	11	10
4	I download pictures, diagrams, etc. for project	Always	63	56	3
		Sometimes	30	37	35
		Never	4	7	63
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	37	35	37
		Sometimes	43	45	43
		Never	20	20	20

6	I find online learning much more comfortable	Always	36	29	23
		Sometimes	44	44	50
		Never	20	27	27
7	I use different educational blogs and social media for academic interaction	Always	35	18	40
		Sometimes	40	57	45
		Never	25	25	15
8	I feel satisfies when I collect learning materials from the Internet	Always	44	43	60
		Sometimes	37	47	33
		Never	19	10	8
9	I could understand course content better in e-book	Always	34	28	45
		Sometimes	47	48	30
		Never	19	23	25
10	I regularly visited the links/websites related to my syllabus/research area.	Always	64	82	77
		Sometimes	30	17	19
		Never	5	1	4
11	I like the content of my syllabus/course available in Slideshare/YouTube and other websites	Always	40	45	30
		Sometimes	44	41	43
		Never	16	14	27
12	I prefer the online submission of assignment /softcopy on e-mail	Always	27	35	35
		Sometimes	49	43	40
		Never	24	22	25
13	I keep tracking of my assignments/course online	Always	70	84	65
		Sometimes	26	15	30
		Never	4	2	5
14	I am satisfied with the quality of the course/content available on the Internet	Always	37	34	43
		Sometimes	50	46	25
		Never	12	20	33
15	The variety of audio-video material available	Always	39	38	43
		Sometimes	44	42	40

	online helps to hold my attention to the course	Never	17	20	17

Table no. 4.4.1 has been described and interpreted as below.

1. As it can be seen from the items 1 here, that majority of the participants i.e. 57% from Under-Graduate, 73% from Post-Graduate and 62% of Research Scholar always used the Internet for self-study. 37% of Under-Graduate, 27% of Post-Graduate and 33% of Research scholar used internet sometimes for self-study, while only 6% of Under-Graduate and 5% of Research Scholar never used the Internet for self-study.
2. Most of the participants i.e.60% of Under-Graduate, 69% of Post-Graduate and 73% of Research Scholar used to download learning content from the Internet. 31% of Under-Graduate, 29% of Post-Graduate and 23% Research scholars responded they did sometimes, while 9% of Under-Graduate, 2% of Post-Graduate and 5% of Research Scholar responded that they never downloaded any learning content from the Internet.
3. There were 37% of Under-Graduate, 40% of Post-Graduate and 15% of Research Scholar prefer to read an e-book. 39% of Under-Graduate, 49% of Post-Graduate and 75% of Research scholar sometimes prefer to read an e-book while 24% of Under-Graduate, 11% of Post-Graduate and 10% of Research Scholar never preferred to read an e-book. Generally, Research Scholar prefers to read an e-book.
4. Total 63% of Under-Graduate, 56% of Post-Graduate and only 3% of Research Scholar downloaded pictures, diagrams, etc. for the project. 30% of Under-Graduate, 37% of Post-Graduate and 35% of Research Scholar downloaded sometimes, while 4% of Under-Graduate, 7% of Post-Graduate and a big no. 63% of Research Scholar never downloaded pictures, diagrams, etc. for the project. Under-Graduate made use of pictures, diagrams, etc. for their project. So, they were more in number who downloaded pictures, diagrams, etc. from the Internet. Research scholars were the least user of Internet in term of downloading pictures, diagrams, etc. for their project.
5. Through item no. 5, it is revealed that 37% of each from Under-Graduate and Research Scholar and 35% of Post-Graduate preferred to transferred material

through e-mail to their friends, teachers, etc. 43% of each from Research Scholar and of Under-Graduate, and 45% of Post-Graduate did it sometimes only, while 20% of each from Under-Graduate, Post-Graduate and Research Scholar never preferred to transfer material through e-mail to friends, teachers etc.

6. Only 36% of Under-Graduate, 29% of Post- Graduate and 23% of Research Scholar found online learning comfortable, 44% of each from Under-Graduate and Post-Graduate, and 50% of Research scholar found it sometimes, while 20% of Under-Graduate, 27% of each from Post- Graduate and Research Scholar never found online learning comfortable.
7. Only35% of Under-Graduate, 18% of Post-Graduate and 40% of Research Graduate used different educational blogs and social media for academic interaction. 40% of Under-Graduate, 57% of Post-Graduate and 45% of Research scholar used different educational blogs and social media for academic interaction sometimes only, while 25% of each from Under-Graduate and Post-Graduate and 15% of Research scholar never used educational blogs and social media for academic interaction.
8. It shows here that most of the participants were satisfied when they collected learning materials from the Internet. 44% of Under-Graduate, 43% of Post-Graduate and 60% of Research Scholar felt satisfied when collecting learning materials from Internet, 37% of Under-Graduate, 47% of Post-Graduate and 33% of Research scholar felt satisfied sometimes, while 19% of Under-Graduate, 10% of Post-Graduate and 8% of Research Scholar were never satisfied when collecting learning materials from Internet. *It seems that most of the learning material or content available in the links/website or they accessed were difficult to make out and understand.*
9. it is visible that 34% of Under-Graduate, 28% of Post- Graduate and 45% of Research Scholar could understand course content in the e-book. 47% of Under-Graduate, 48% of Post-Graduate and 30% of Research scholars understood sometimes only. *It was astonished to find out that there were some Under-Graduate (19%), Post-Graduate (23%) and Research Scholar (25%) who never understood course content in the e-books.*
10. As it can be observed from the table that majority of the participants regularly visited the links/websites related to their syllabus, i.e. 64% of Under-Graduate,

82% of Post-Graduate and 77% of Research scholar regularly visited the links and website related to their syllabi. Whereas, 30% of Under-Graduate, 17% of Post-Graduate and 19% of Research Scholar visited sometimes, while 5% of Under-Graduate, 1% of Post-Graduate and 4% of Research Scholar never visited the links and website related to their syllabi.

11. It is evident from the Table 4.4.2, how much they liked the syllabus/course available in Slideshare/YouTube and another website, i.e., 40% of Under-Graduate, 45% of Post-Graduate and 30% of Research Scholar liked the content of their syllabi or course available on Slideshare or YouTube or other websites. 44% of Under-Graduate, 41% of Post-Graduate and 43% of Research Scholar liked sometimes the content of their syllabi or course available on Slideshare or YouTube and other websites; while 16% of Under-Graduate, 14% of Post-Graduate and 27% of Research scholar never liked the content of their syllabi or course available on Slideshare or YouTube and other websites.
12. Only 27% of Under-Graduate, 35% of each from Post-Graduate and Research Scholar preferred online submission of assignment or softcopy on e-mail; 49% of Under-Graduate, 43% of Post-Graduate and 40% of Research Scholar preferred it sometimes only, while 24% of Under-Graduate, 22% of Post-Graduate and 25% of Research Scholar never preferred online submission of assignment or softcopy on e-mail.
13. Majority of the participants kept tracking their assignment/course online i.e., 70% of Under-Graduate, 84% of Post-Graduate and 65% of Research Scholar kept tracking of their assignment or course online. 26% of Under-Graduate, 15% of Post-Graduate and 30% of Research Scholar tracked sometimes, while 4% of Under-Graduate, 2% of Post-Graduate and 5% of Research Scholar never tracked it.
14. It can be seen from the table how much they were satisfied with the quality of the course/content on the Internet, i.e., 37% of Under-Graduate, 34% of Post-Graduate and 43% of Research Scholar were satisfied with the quality of the course or content available on the Internet. 50% of Under-Graduate, 46% of Post-Graduate and 25% of Research scholar were satisfied sometimes only; while 12% of Under-Graduate, 20% of Post-Graduate and 33% of Research scholar were never satisfied.

15. How the participants made use of the variety of audio-video to hold their attention with regard to their course, i.e., 39% of Under-Graduate, 38% of Post-Graduate and 43% of Research Scholar stated the variety of audio-video material hold their attention to the course; 44%of Under-Graduate, 42% of Post-Graduate and 40% of Research scholar stated the variety of audio-video material held their attention sometimes only, while 17% of Under-Graduate, 20% of Post-Graduate and 17% of Research Scholar stated that the variety of audio-video material never held their attention to the course.

INTERPRETATIONS:

Comparatively research scholars seemed using more purposefully in terms of absolute responses (always) at many statements. At the same time on other few items, UG and PG students were higher. It is quite surprising to observe the item no. 1& 2 here, that there were some Research Scholars who never used internet for self-study. It is a big question on their knowledge global literature in their field. Generally, all the participants from each group i.e. Under-Graduate, Post-Graduate and Research scholars had the same response with regard to transferring of material through e-mail to their friends and teachers.

Confirmation: in connection with item no. 4, *it was revealed through interaction with few research scholars that after coursework programme research scholars as such was not required to submit assignments and projects.*

Triangulation: *triangulating with 3, item 6 it can be seen that Facebook, WhatsApp, and YouTube were the most common social media used by the students. In that ration here at item 7, fewer respondents reported using social media for the educational purpose. Educational blogs mentioned here in the item were not commonly used by the students.*

4.4.2 COMPARISON OF PURPOSES OF E-LEARNING AMONG UNDER-GRADUATE STUDENTS

The comparison of purposes of E-Learning among the Under-Graduate students of Mizoram University can be seen from the following table. This comparison was made among the different courses (B. Tech., B. Arch., B. Voc., B.Ed, and IMBA) of Under-Graduate programmes in Mizoram Univerity.

Table 4.4.2: Comparison among the students of under-graduate programmes

Sl. No	STATEMENTS	Responses	Field of Study and responses in percentage				
			B.TECH	B.ARCH	B.VOC.	B.ED.	IMBA
1	I use the internet for self-study	Always	63	75	100	50	33
		Sometimes	37	25		30	50
		Never				20	17
2	I download learning content from the internet	Always	69	100	50	30	50
		Sometimes	25		50	55	33
		Never	6			15	17
3	I prefer to read an e-book	Always	38			15	67
		Sometimes	34	75	100	60	22
		Never	28	25		25	11
4	I download pictures, diagrams, etc. for projects	Always	45	75	100	55	56
		Sometimes	27	25		35	39
		Never	8			10	6
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	23	50	50	70	50
		Sometimes	51	50	50	20	39
		Never	3			10	11
6	I find online learning much more comfortable	Always	32	25	100	20	61
		Sometimes	46	75		50	28
		Never	21			30	11
7	I use different educational blogs and social media for academic interaction	Always	28			45	61
		Sometimes	42	100	50	25	33
		Never	30		50	30	6
8	I feel satisfied when I collect learning materials from the internet	Always	38	100	100	65	28
		Sometimes	38			15	67
		Never	24			20	6
9	I could understand course content better	Always	32	25	50	45	28
		Sometimes	45	50	50	35	67

	in e-book	Never	23	25		20	1
10	I regularly visited the links/website related to my syllabus/research area.	Always	68	100	100	50	56
		Sometimes	32			30	33
		Never				20	11
11	I like the content of my syllabus/course available on Slideshare/YouTube and other websites	Always	39	25	100	20	61
		Sometimes	48	50		50	28
		Never	13	25		30	11
12	I prefer the online submission of assignment/softcopy on e-mail	Always	27	50	50	15	33
		Sometimes	44	50	50	65	50
		Never	30			20	17
13	I keep tracking of my assignment/course online	Always	73	100	100	75	39
		Sometimes	27			20	39
		Never				5	22
14	I am satisfied with the quality of the course/content available on the internet	Always	37	25	50	30	50
		Sometimes	51	75	50	55	39
		Never	13			15	11
15	The variety of audio/ video material available online helps to hold my attention to the course	Always	41	50		35	39
		Sometimes	39	50	100	45	56
		Never	20			20	6

Table 4.4.3 shows detail comparison of responses with effect to the purposes of E-learning practices among the Under-Graduate students.

1. All the respondents (100%) of B.Voc. and majority of the respondents from B.Tech. (63%) and B. Arch. (75%) used internet for self-study. Generally, B.Ed. and IMBA students agreed with the statement.
2. All the respondents (100%) of B. Arch. and a majority (69%) of B.Tech downloaded learning content from the internet. B. Voc., B.Ed. and IMBA normally downloaded learning content from the internet.
3. All the respondents (100%) of B.Voc. majority of (75%) B.Arch. and (60%) B.Ed., respondents preferred sometimes to read an e-book.
4. All the respondents (100%) of B. Voc. and majority (75%) of B. Arch., (55%) B.Ed and (56%) IMBA students always downloaded pictures, diagrams, etc. for projects.
5. Generally, (50%) of B.Arch. B.Voc., IMBA and (70%) of B.Ed. preferred to transfer material through e-mail to their friends, and teachers.
6. Majority of the respondents of B.Voc. (100%), and some IMBA (61%), students found online learning much more comfortable, while several (46%) B.Tech, (75%) B.Arch, (50%) B.Ed. found it sometimes.
7. Many students of IMBA (61%), used different educational blogs and social media for academic interaction while all the respondents of B.Arch. (10%), and most of B.Tech. (42%), and (50%) of B. Voc. students used sometimes different educational blogs and social media for academic interaction.
8. All the respondents (100%) of B. Arch. and B. Voc. and majority (65%) of B.Ed. felt satisfied when they collected learning materials from the internet.
9. Most of the B.Tech. (45%), and 50% of B.Arch. and B.Voc. and 67% of IMBA respondents could understand sometimes course content better in the e-book.
10. All the respondents (100%) of B.Arch. and B.Voc. and quite a number of B. Tech. (68%), B.Ed. (50%), and IMBA (56%), regularly visited the links/website related to their syllabus.
11. All the respondents of B. Voc. (100%) and 61% of IMBA respondents liked the content of their syllabus/course available on Slideshare/YouTube and other websites; while 50% of each B. Arch. and B.Ed. and 48% of B.Tech. liked

sometimes the content of their syllabi/courses available on Slideshare/YouTube and other websites.

12. Normally 50% of B.Arch., B. Voc., and IMBA, and 45% of B.Tech. and 65% of B.Ed. preferred sometimes the online submission of assignment/softcopy on e-mail.
13. All the respondents (100%) of B. Arch. and B. Voc. and a majority of B.Ed. (75%), and 73% of B.Tech. kept tracking of their assignments/courses online.
14. Quite a number (50%) of B.Voc. and IMBA were satisfied with the quality of the course/content available on the internet while several respondents of B. Tech. (51%), B. Arch. (75%), and B.Ed. (55%) were satisfied sometimes with the quality of the course/content available on the internet.
15. All the respondents (100%) B.Voc. and a half (50%) of the respondents from B. Arch. said that the variety of audio-video materials helped to hold their attention to the course.

INTERPRETATIONS:

Highlighting the comparison on the purposes of E-Learning among the Under-Graduate students, B.Voc students were the top user of E-Learning services for different kinds of educational purpose. B.Arch. students were second top users of E-Learning services. B.Ed. students and IMBA students normally used E-Learning services. Surprisingly; B.Tech students did not make less use of the E-Learning services as compared to other courses.

4.4.3: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF EARTH SCIENCES AND NATURAL RESOURCES MANAGEMENT

The comparison of purposes of E-Learning among the School of Earth Sciences and Natural Resources Management students of Mizoram University can be seen from the following table. This comparison was made among the different courses in Geology, Geography and RM, HAMP, Forestry and Environmental Studies departments of Mizoram Univerity.

Table 4.4.3: Comparison among the students of School of ESNRM

Sl. No	STATEMENTS	Responses	Field of Study and responses in percentage				
			Geology	Geography	HAMP	Forestry	EVS
1	I use the internet for self-study	Always	75	71	83	90	91
		Sometimes	25	19	17	10	9
		Never					
2	I download learning content from the internet	Always	100	100	83	40	73
		Sometimes			17	60	27
		Never					
3	I prefer to read an e-book	Always	75	29	50	20	64
		Sometimes	25	57	50	70	36
		Never		14		10	
4	I download pictures, diagrams, etc. for projects	Always	92	71	33	70	55
		Sometimes	8	29	67	30	45
		Never					
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	50	36	67	40	27
		Sometimes	42	50	33	40	64
		Never	8	14		20	9
6	I find online learning much more comfortable	Always	50	29	50	20	27
		Sometimes	42	42	33	30	64
		Never	8	29	17	30	9
7	I use different educational blogs and social media for academic interaction	Always	45	14	17	10	55
		Sometimes	45	65	50	60	45
		Never	10	21	33	30	

8	I feel satisfied when I collect learning materials from the internet	Always	58	64	33	30	46
		Sometimes	32	36	67	50	36
		Never	8			20	18
9	I could understand course content better in e-book	Always	25	29	17	40	27
		Sometimes	33	42	67	20	56
		Never	42	29	16	40	17
10	I regularly visited the links/website related to my syllabus/ research area.	Always	100	100	100	80	73
		Sometimes				20	27
		Never					
11	I like the content of my syllabus on Slideshare/YouTube and other websites	Always	83	57	83	10	45
		Sometimes	17	36	17	60	36
		Never		7		30	19
12	I prefer the online submission of assignment/softcopy on e-mail	Always	34	43	50	10	27
		Sometimes	33	43	50	50	27
		Never	33	14		40	46
13	I keep tracking of my assignment/course online	Always	83	100	100	80	91
		Sometimes	17			20	9
		Never					
14	I am satisfied with the quality of the course/content available on the internet	Always	42	36	50	10	46
		Sometimes	58	43	50	40	36
		Never		21		50	18
15	The variety of audio/ video	Always	75	36	33	50	27
		Sometime	25	21	67	10	45

	material helps to hold my attention to the course	s					
		Never		43		40	28

Table 4.4.3 shows a detail comparison of responses with effect to the purposes of E-learning practices among the students of different departments of the school of earth science and natural resource management.

1. A vast majority of the respondents from Geology (75%), Geography (71%), HAMP (81%), Forestry (90%) and EVS (91%) used internet for self-study.
2. All the respondents (100%) of Geology and Geography and a majority 83% of HAMP, and 73% EVS always downloaded learning content from the internet while 60% of the respondents from Forestry downloaded sometimes.
3. Most of the respondents from Geology (75%) and EVS (64%) always preferred to read an e-book while majority of the respondents from Forestry 70%), Geography (57%), and HAMP (50%) preferred sometimes to read an e-book.
4. Majority of the respondents of Geology (92%), Geography (71%), Forestry(70%), and EVS(55%), always downloaded pictures, diagrams, etc. for projects while 67% of HAMP respondents downloaded sometimes pictures, diagrams, etc. for projects.
5. 50% of Geology and 67% of HAMP and 40% of Forestry students always preferred to transfer material through e-mail to their friends, teachers while 50% of Geography, 40% of Forestry and 64% of EVS respondents sometimes preferred to transfer material through e-mail to their friends, and teachers.
6. The many respondents from Geology (50%) and HAMP (50%) always found online learning much more comfortable, while several respondents from (42%) Geography (30%) Forestry and EVS (64%) sometimes found it more comfortable.
7. Some (55%) of the EVS respondents always used different educational blogs and social media for academic interaction while the respondents from Geology (45%), Geography (65%), HAMP (50%) and 60% of Forestry students used sometimes different educational blogs and social media for academic interaction.

8. Respondents from Geology (58%), Geography (64%) and EVS (46%) always felt satisfied when they collected learning materials from the internet while HAMP (67%) and Forestry (50%) felt sometimes satisfied when they collected learning materials from the internet.
9. Some (40%) of the respondents from Forestry could always understand course content better in e-books, on the other hand, some (40%) never understood from the same Department. There were departments like Geology (32%), Geography(42%), HAMP(67%) and EVS(56%) who understood sometimes course content better in the e-book.
10. All the respondents(100%) of Geology, Geography, HAMP respondents regularly visited the links/website related to their syllabi while quite a number of Forestry(80%), and EVS(73%) students regularly visited the links/website related to their syllabi.
11. Majority of the respondents from Geology (83%), Geography (57%), HAMP (83%) and EVS (45%) always liked the content of their syllabi/courses available on Slideshare/YouTube and other websites, while numerous (60%) of Forestry liked sometimes the content of their syllabi/courses available on Slideshare/YouTube and other websites.
12. The students from Geology (34%), Geography (43%) and HAMP (50%) always preferred the online submission of assignments/softcopy on e-mail. On the other hand, 50% of the respondents from Forestry preferred sometimes the online submission of assignments/softcopy on e-mail while 46% of EVS respondents never preferred the online submission of assignment/softcopy on e-mail.
13. All the respondents (100%) of Geography and HAMP always tracked their assignments/courses online, while majority of Geology (83%), Forestry (80%) and EVS(91%) respondents tracked it sometimes.
14. Many students from Geology (58%) and Geography (43%) were always satisfied with the quality of the course/content available on the internet while half (50%) of the respondents from HAMP satisfied sometimes with the quality of the course/content available on the internet. At the same time, 50% respondents of Forestry never satisfied with the quality of the course/content available on the internet.

15. Majority of the respondents (75%) of B.Voc. and half (50%) of the respondents from Forestry said that the variety of audio-video materials always helped to hold their attention to the course, while 67% of HAMP and 45% of EVS students said that that the variety of audio-video materials helped sometimes to hold their attention to the course, on the other hand, 43% of Geography students said that the variety of audio-video materials never helped to hold their attention to the course.

INTERPRETATIONS:

Comparing the responses of students within the school, students of Geology were more purposeful users in terms of absolute responses (always), followed by followed by geography and HAMP. Overall scenario of the school was much positive as the researcher did not find the negative response to many items.

4.4.4: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF ECONOMICS, MANAGEMENT, AND INFORMATION SCIENCES

The comparison of purposes of E-Learning among the School of Earth Sciences and Natural Resources Management of Mizoram University can be seen from the following table 4.4.5. This comparison was made among the different courses of Commerce, Economics, Library Sciences and Mass Communication departments of Under-Graduate in Mizoram Univerity.

Table 4.4.4: ***Comparison among the students of School of SEMIS***

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage			
			Commerce	Economics	Lib.Sc.	Mass. Com.
1	I use the internet for self-study	Always	40	42	73	78
		Sometimes	60	58	27	22
		Never				
2	I download learning content from the internet.	Always	50	63	64	56
		Sometimes	40	26	36	44
		Never	10	11		

3	I prefer to read an e-book.	Always	20	32	55	33
		Sometimes	50	36	45	56
		Never	30	32		11
4	I download pictures, diagrams, etc. for projects.	Always	40	68	82	56
		Sometimes	60	26	18	44
		Never		5		
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	20	42	36	33
		Sometimes	50	32	64	67
		Never	30	26		
6	I find online learning much more comfortable	Always	40	37	27	22
		Sometimes	40	26	46	50
		Never	20	37	27	22
7	I use different educational blogs and social media for academic interaction.	Always	10	21	9	33
		Sometimes	80	53	55	56
		Never	10	26	36	11
8	I feel satisfied when I collect learning materials from the internet.	Always	30	79	45	44
		Sometimes	70	21	36	33
		Never			18	22
9	I could understand course content better in e-book	Always	30	15	36	22
		Sometimes	40	74	27	33
		Never	30	11	36	44
10	I regularly visited the links/websites related to my syllabus	Always	50	79	73	100
		Sometimes	50	21	27	
		Never				
11	I like the content of my syllabus/content available on Slideshare/YouTube and other websites	Always	20	42	36	33
		Sometimes	60	37	45	22
		Never	20	21	18	44
12	I prefer the online submission of assignment/ softcopy on e-mail	Always	20	47	27	56
		Sometimes	50	21	46	44
		Never	30	32	27	

13	I keep tracking of my assignments/course online	Always	80	58	64	100
		Sometimes	20	32	36	
		Never		11		
14	I am satisfied with the quality of the course/content available on the internet.	Always	30	37	36	33
		Sometimes	30	37	55	56
		Never	40	26	9	11
15	The variety of audio-video material helps to hold my attention to the course	Always	40	36	36	44
		Sometimes	30	32	45	56
		Never	30	32	18	

Table 4.4.4, shows detail comparison of responses with effect to the purposes of E-learning practices among the students of different departments of SEMIS.

1. 73% respondents of Lib.Sc. and 78% of Mass Communication always used internet for while 60% of Commerce and 58% of Economics sometimes used internet for self-study. Nobody answered 'never' from this school.
2. Majority of the respondents (63%) of Economics and (64%) of Lib. Sciences always downloaded learning content from the internet; 50% of Commerce and 56% of Mass Communication did it sometimes.
3. Total 55% respondents of Library science always preferred to read an e-book while many of the Commerce (50%), Economics (36%) and Mass Communication (56%) respondents did the same sometimes only.
4. Majority of the respondents from Economics (80%), Lib. Sciences (82%), and of Mass Communication (56%), always downloaded pictures, diagrams, etc. for projects while 60% of Commerce did the same sometimes only.
5. Total 42% of Economics always preferred to transfer material through e-mail to their friends and teachers, while majority 50% of Commerce, 64% of Lib. Science and 67% of Mass. Communication did it sometimes only.
6. Some of the respondents from Commerce (40%) and Economics (37%) always found online learning much more comfortable, while several from Lib. Science (46%) and Mass Communication(50%) found it sometimes.

7. Majority of the respondents from Commerce (80%) always used different educational blogs and social media for academic interaction while 53% of Economics, 55% Lib. Science and 56% of Mass Communication sometimes used different educational blogs and social media for academic interaction.
8. Majority of the respondents (70%) from Commerce always felt satisfied when they collected learning materials from the internet while 79% of Economics, 45% of Lib. Science and 44% of Mass. Communication sometimes felt satisfied when they collected learning materials from the internet.
9. Most of the respondents from Commerce (40%) and Economics (74%) always understood course content better in e-books, while 36% of Lib. Science could understand sometimes. At the same time, 44% of the respondents from Mass. Communication never understood course content better in e-book ***(outlier).***
10. All the respondents (100%) of Mass. Communication and quite a number of Economics (79%) and Lib. Science(73%) regularly visited the links/website related to their syllabi while 50% of the respondents from Commerce visited sometimes the links/websites related to their syllabus.
11. The respondents from Economics (42%) respondents like the content of their syllabus/course available on Slideshare/YouTube and other websites while numerous Commerce (60%) and Lib Science (45%) liked sometimes the content of their syllabus/course available on Slideshare/YouTube and other websites. At the same time, 44% of Mass. Communication never liked the content of their syllabi/courses available on Slideshare/YouTube and other websites.
12. Total 47% Economics and 56% Mass. Communication always preferred the online submission of assignments/softcopy on e-mail while 50% of Commerce and 46% of Lib. Science sometimes preferred the online submission of assignments/softcopy on e-mail.
13. All the respondents (100%) of Mass. Communication and a majority of Commerce (80%), Economics (58%) and Lib. Science(64%) kept tracking their assignments/course online.
14. Total 37% of Economics was always satisfied with the quality of the course/content available on the internet, while 55% of Lib. Science and 56% of Mass. Communication respondents were satisfied sometimes with the quality of the course/content available on the internet. On the other hand, 40%

respondents of Commerce were never satisfied with the quality of the course/content available on the internet.

15. Many respondents from Commerce (40%) and Economics (36%) said that the variety of audio-video materials always helped to hold their attention to the course, while 45% of Lib. Science and 56% of Mass. Communication said that the variety of audio-video materials sometimes helped to hold their attention to the course

INTERPRETATION:

To assess critically students of library science and economics were a comparatively better user of e-resources. They were found positive on more absolute responses. Most surprisingly 44% of the respondents from Mass. Communication never understood course content better in e-book ***(outlier).*** At the same time, 44% of the respondents from Mass. Communication never understood course content better in e-book ***(outlier).*** On the other hand, 40% of respondents of Commerce were never satisfied with the quality of the course/content available on the internet. Which reiterate the need for training in e-learning ***(Triangulating with section-1)***

4.4.5: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF EDUCATION AND HUMANITIES

The comparison of purposes of E-Learning among the School of Education and Humanities of Mizoram University can be seen from the following table. This comparison was made among the different courses in the departments of English, Mizo Hindi and Education in Mizoram Univerity.

Table 4.4.5: ***Comparison among the students of School of SEH***

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage			
			English	Mizo	Hindi	Education
1	I use the internet for self-study	Always	75	67		75
		Sometimes	25	33	100	25
		Never				

2	I download learning content from the internet.	Always	62	52	100	63
		Sometimes	38	34		37
		Never		14		
3	I prefer to read an e-book.	Always	50	24		31
		Sometimes	50	57		56
		Never		19	100	13
4	I download pictures, diagrams, etc. for projects.	Always	38	19		56
		Sometimes	62	52	100	44
		Never		29		
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	38	29		31
		Sometimes	62	38		50
		Never		33	100	19
6	I find online learning much more comfortable	Always	25	24		19
		Sometimes	63	43		31
		Never	12	33	100	50
7	I use different educational blogs and social media for academic interaction.	Always	38	19		13
		Sometimes	38	62	100	74
		Never	24	19		13
8	I feel satisfied when I collect learning materials from the internet.	Always	38	24		31
		Sometimes	62	62	100	69
		Never		14		
9	I could understand course content better in e-book	Always	25	24		37
		Sometimes	63	62		63
		Never	12	14	100	
10	I regularly visited the links/websites related to my syllabus	Always	100	43		88
		Sometimes		38	100	12
		Never		29		
11	I like the content of my syllabus/content available on Slideshare/YouTube and other websites	Always	50	24		63
		Sometimes	50	48	100	31
		Never		29		
12	I prefer the online	Always	63	19		25

	submission of assignment/ softcopy on e-mail	Sometimes	37	38		75
		Never		43	100	
13	I keep tracking of my assignments/course online	Always	100	43		100
		Sometimes		43	100	
		Never		14		
14	I am satisfied with the quality of the course/content available on the internet.	Always	25	24		18
		Sometimes	75	52	100	56
		Never		24		25
15	The variety of audio-video material helps to hold my attention to the course	Always	38	28		31
		Sometimes	62	28		69
		Never		24	100	

Table 4.4.5 shows a detailed comparison of responses with effect to the purposes of E-learning practices.

1. All the respondents (100%) of Hindi sometimes used internet for self-study while majority of the respondents English (75%), Mizo (67%) and Education (75%) always used internet for self-study.
2. All the respondents (100%) of Hindi and a majority of the respondents English (62%), Mizo (52%) and Education (63%) downloaded learning content from the internet.
3. All the respondents (100%) of Hindi never preferred to read an e-book while Mizo (57%) and Education (56%) sometimes preferred to read an e-book, at the same time English (50%) always preferred to read an e-book.
4. All the respondents (100%) of Hindi and majority (62%) of English and (52%) Mizo respondents sometimes downloaded pictures, diagrams, etc. for projects while Education (50%) respondents always downloaded pictures, diagrams, etc. for projects.
5. Majority of English (62%), Education (50%) and Mizo (38%) sometimes preferred to transfer material through e-mail to their friends, teachers while all the respondents (100%) of Hindi never preferred to transfer material through e-mail to their friends, teachers.

6. All the respondents (100%) of Hindi and some (50%) Education students never find online learning much more comfortable, while several (63%) English and (43%) Mizo sometimes find online learning much more comfortable.
7. Some (38%) of the English respondents always used different educational blogs and social media for academic interaction while all the respondents (100%) of Hindi and majority (62%) of Mizo and (74%) of Education students sometimes used different educational blogs and social media for academic interaction.
8. All the respondents (100%) of Hindi and majority (62%) of English and Mizo, (69%) Education sometimes felt satisfied when they collect learning materials from the internet.
9. All the respondents (100%) of Hindi never understand course content better in e-book while English (63%), Mizo (62%) and Education (69%) sometimes understand course content better in the e-book.
10. All the respondents (100%) of English and quite a number (88%) of Education respondents regularly visited the links/website related to their syllabus while Mizo (38%) and Hindi (100%) sometimes visited the links/websites related to their syllabus.
11. All the respondents (100%) of Hindi and (43%) Mizo respondents never liked the content of my syllabus/course available on Slideshare/YouTube and other websites while numerous (37%) of English and (75%) Education sometimes liked the content of my syllabus/course available on Slideshare/YouTube and other websites.
12. Majority (63%) English respondents always preferred the online submission of assignment/softcopy on e-mail while Education (75%) sometimes preferred the online submission of assignment/softcopy on e-mail. At the same time, all the respondents of Hindi (100%) and some (43%) of Mizo respondents never preferred the online submission of assignment/softcopy on e-mail.
13. All the respondents (100%) English and Education and 43% of Mizo respondents always tracked their assignments/course online, on the other hand, all the respondents of Hindi (100%) sometimes traced their assignments/course online.

14. All the respondents (100%) Hindi and quite a number (75%) of English, Mizo (52%) and Education (50%) were sometimes satisfied with the quality of the course/content available on the internet.
15. All the respondents (100%) Hindi said that the variety of audio-video materials never helped to hold their attention to the course while English (62%), Mizo (28%) and Education (69%) said that the variety of audio-video materials sometimes helped to hold their attention to the course. At the same time, Mizo (28%) said that the variety of audio-video materials always helped to hold their attention to the course.

INTERPRETATION:

Observation of the data here makes clear that students of the department of English were more highest users of e-resources for academic purposes. It is quite natural because English is a global language and literature of English is very dynamic and beyond the boundaries. Therefore, the internet is only media to be updated in the field. The second department was education. This fact can be justified because this department was running professional and liberal courses in the same premises. Therefore, students of M.A. and B.Ed. both were sharing theory content, teachers and assets in the department. Therefore, they might be excelling other Hindi and Mizo departments.

4.4.6: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF PHYSICAL SCIENCES

The comparison of purposes of E-Learning among the School of Physical Sciences students of Mizoram University can be seen from the following table. This comparison was made among the different courses (Mathematics, Chemistry, and Physics) school of physical sciences in Mizoram Univerity.

Table 4.4.6: ***Comparison among the students of School of Physical Sciences***

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage		
			Mathematics	Chemistry	Physics
1	I use the internet for self-study	Always	71	67	82
		Sometimes	29	33	18
		Never			

2	I download learning content from the internet.	Always	86	67	64
		Sometimes	14	33	36
		Never			
3	I prefer to read an e-book.	Always	36	44	45
		Sometimes	64	12	45
		Never		44	10
4	I download pictures, diagrams, etc. for projects.	Always	36	67	64
		Sometimes	43	33	36
		Never	21		
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	42	21	45
		Sometimes	29	67	45
		Never	29	12	10
6	I find online learning much more comfortable	Always	29	33	18
		Sometimes	42	55	56
		Never	29	12	26
7	I use different educational blogs and social media for academic interaction.	Always	21	33	64
		Sometimes	50	67	36
		Never	29		
8	I feel satisfied when I collect learning materials from the internet.	Always	43	33	64
		Sometimes	50	46	18
		Never	37	21	18
9	I could understand course content better in e-book	Always	29	33	18
		Sometimes	50	55	46
		Never	21	12	36
10	I regularly visited the links/websites related to my syllabus/ research area.	Always	93	100	64
		Sometimes	7		36
		Never			
11	I like the content of my syllabus/content available on Slideshare/YouTube and other websites	Always	50	33	27
		Sometimes	50	21	64
		Never		46	9

12	I prefer the online submission of assignment/ softcopy on e-mail	Always	50	56	27
		Sometimes	36	44	55
		Never	14		18
13	I keep tracking of my assignments/course online	Always	100	100	82
		Sometimes			18
		Never			
14	I am satisfied with the quality of the course/content available on the internet.	Always	36	21	27
		Sometimes	36	67	46
		Never	28	12	27
15	The variety of audio-video material helps to hold my attention to the course	Always	36	44	18
		Sometimes	43	56	46
		Never	21		36

Table 4.4.6 shows a detailed comparison of responses with effect to the purposes of E-learning practices among the different departments of the school of physical sciences.

1. Majority of the respondents from Mathematics (71%), Chemistry (67%) and Physics (82%) respondents always used internet for self-study.
2. More of the respondents from Mathematics (86%), than Chemistry (67%) and Physics (64%) downloaded always the learning content from the internet.
3. Majority (64%) of Mathematics respondents sometimes preferred to read an e-book while 44% of Chemistry and 45% of Physics respondents preferred always to read an e-book.
4. Majority of the respondents of Chemistry (67%) and of Physics (64%) respondents always downloaded pictures, diagrams, etc. for projects, while Mathematics(43%) respondents downloaded sometimes pictures, diagrams, etc. for projects.
5. Total respondents 42% of Mathematics and 45% of Physics always preferred to transfer material through e-mail to their friends and teachers, while majority

of respondents from Chemistry (67%) preferred sometimes to transfer material through e-mail to their friends and teachers.

6. Mathematics (42%), Chemistry (55%) and Physics (56%) respondents found online learning much more comfortable sometimes.
7. Majority of respondents from of Physics (64%) always used different educational blogs and social media for academic interaction, while Mathematics (50%) and Chemistry (67%) used sometimes different educational blogs and social media for academic interaction.
8. The more respondents from Physics (64%) respondents always felt satisfied when they collected learning materials from the internet, while 50% Mathematics and 46% of Chemistry felt satisfied sometimes.
9. Majority of the respondents from Mathematics (50%), Chemistry (55%) and Physics (46%) could sometimes understand course content better in the e-book.
10. A vast majority of the respondent's Mathematics (93%), Chemistry (100%) and Physics (46%) respondents regularly visited the links/website related to their syllabus.
11. Total 50% of Mathematics respondents always liked the content of their syllabi/courses available on Slideshare/YouTube and other websites, while 64% of Physics liked sometimes the content of their syllabi/courses available on Slideshare/YouTube and other websites. At the same time, 46% of Chemistry respondents never liked the content of their syllabi/courses available on Slideshare/YouTube and other websites.
12. Mathematics (50%), Chemistry (56%) and Physics (55%) respondents in majority preferred sometimes the online submission of assignment/softcopy on e-mail.
13. All the respondents (100%) of Mathematics and Chemistry respondents and a majority (82%) of Physics respondents kept tracking of their assignments/course online.
14. Quite a number of Chemistry (67%) and Physics (46%) respondents were satisfied sometimes with the quality of the course/content available on the internet while some (36%) of the respondents of Mathematics were always satisfied with the quality of the course/content available on the internet.

15. Generally, Mathematics (43%), Chemistry (56%) and Physics (46%) respondents said that the variety of audio-video materials helped sometimes only to hold their attention to the course.

INTERPRETATIONS:

Majority of the respondents from Mathematics Chemistry and Physics could sometimes understand course content better in the e-book. A vast majority of the respondents Mathematics Chemistry and Physics respondents regularly visited the links/website related to their syllabus. At the same time, 46% of Chemistry respondents never liked the content of their syllabi/course available on Slideshare/YouTube and other websites *(confirms with the previous section)*. Comparatively students of physics seemed to be using more e-resources for their academic purposes.

4.4.7: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF LIFE SCIENCES

The comparison of purposes of E-Learning among the School of Life Sciences students of Mizoram University can be seen from the following table. This comparison was made among the different courses (Botany, Zoology, and Biotechnology) of Under-Graduate in Mizoram Univerity.

Table 4.4.7: ***Comparison among the students of School of Life Sciences***

Sl.No.	STATEMENT	Responses	Field of study and their responses in percentage		
			Botany	Zoology	Biotechnology
1	I use the internet for self-study	Always	77	83	88
		Sometimes	23	17	12
		Never			
2	I download learning content from the internet.	Always	77	83	78
		Sometimes	23	17	22
		Never			
3	I prefer to read an e-book.	Always	38	67	44
		Sometimes	62	33	56
		Never			

4	I download pictures, diagrams, etc. for projects.	Always	69	100	78
		Sometimes	31		22
		Never			
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	15	50	44
		Sometimes	54	33	56
		Never	31	17	
6	I find online learning much more comfortable	Always	15	25	22
		Sometimes	54	42	33
		Never	31	33	45
7	I use different educational blogs and social media for academic interaction.	Always	24	17	44
		Sometimes	38	66	56
		Never	38	17	
8	I feel satisfied when I collect learning materials from the internet.	Always	31	58	44
		Sometimes	38	42	56
		Never	31		
9	I could understand course content better in e-book	Always	46	42	33
		Sometimes	23	50	34
		Never	31	8	33
10	I regularly visited the links/websites related to my syllabus/ research area.	Always	77	100	100
		Sometimes	23		
		Never			
11	I like the content of my syllabus/content available on Slideshare/YouTube and other websites	Always	31	75	56
		Sometimes	54	25	33
		Never	15		11
12	I prefer the online submission of assignment/ softcopy	Always	15	25	33
		Sometimes	46	42	67
		Never	39	33	

	on e-mail				
13	I keep tracking of my assignments/course online	Always	77	100	100
		Sometimes	23		
		Never			
14	I am satisfied with the quality of the course/content available on the internet.	Always	38	33	44
		Sometimes	38	59	56
		Never	24	8	
15	The variety of audio-video material helps to hold my attention to the course	Always	23	33	33
		Sometimes	46	50	56
		Never	31	17	11

Table 4.4.7 shows a detail comparison of responses with effect to the purposes of E-learning practices.

1. Total88% of Biotechnology and 83% of Zoology and 77% of Botany students used the internet for self-study.
2. Total88% of Zoology, 78% of Biotechnology and 77% of Botany downloaded learning content from the internet. B. Voc., B.ED. and IMBA normally downloaded learning content from the internet.
3. Total67% of Zoology preferred to read e-books and majority of (62%) Botany and (56%) Biotechnology respondents preferred sometimes.
4. All the respondents (100%) of Zoology and majority of Botany (69%) and Biotechnology (78%) downloaded always pictures, diagrams, etc. for projects.
5. Total 50% respondents of Zoology preferred always to transfer material through e-mail to their friends and teachers while 54% of Botany and 56% of Biotechnology students preferred sometimes to transfer material through e-mail.
6. Total 54% of Botany and 42% of Zoology found sometimes online learning much more comfortable, while several (45%) Biotechnology students never found online learning much more comfortable.

7. Total 38% of the respondents from Botany, 66% of Zoology and 45% of Biotechnology used sometimes different educational blogs and social media for academic interaction.
8. Total respondents 38% of Botany and 56% of Biotechnology felt sometimes satisfied when they collected learning materials from the internet while 58% of Zoology students always felt satisfied when they collected learning materials from the internet.
9. Many of the respondents from Botany (46%) could understand course content better in e-books while 50% of Zoology and 34% of Biotechnology students sometimes understood course content in e-books.
10. All the respondents (100%) of Zoology and Biotechnology, and quite a number of Botany (77%) regularly visited the links/website related to their syllabi.
11. Total 54% respondents of Botany always liked the content of their syllabus/courses available on Slideshare/YouTube and other websites; while 75% of Zoology respondents and 56% Biotechnology respondents like sometimes the content of their syllabi/courses available on Slideshare/YouTube and other websites.
12. Total 67% respondents from Biotechnology, 46% of Botany, and 42% of Zoology preferred sometimes the online submission of assignments/ softcopy on e-mail.
13. All the respondents (100%) from zoology and Biotechnology, and 77%of Botany kept tracking of their assignments/course online.
14. Some of the respondents (38%) from Botany were always satisfied with the quality of the course content available on the internet; while several respondents of Zoology (59%) and Biotechnology (76%) were sometimes satisfied with the quality of the course/content available on the internet.
15. The more respondents from Botany (46%), Zoology (50%) and Biotechnology (56%) said that the variety of audio-video materials sometimes helped to hold their attention to the course.

INTERPRETATIONS:

Comparatively students of Biotechnology and Zoology were found little better in use of the e-resources for academic purpose**.** But at the item 6 students of botany

excelled others. Most surprisingly 45% students of Biotechnology never found online learning much more comfortable

4.4.9: COMPARISON OF PURPOSES OF E-LEARNING AMONG SCHOOL OF SOCIAL SCIENCES

The comparison of purposes of E-Learning among the School of Social Sciences of Mizoram University can be seen from the following table. This comparison was made among the different courses (Public Administration, History & Ethnography, Psychology, Political Science, Sociology and Master of Social Work) in the school of social sciences in Mizoram Univerity.

Table 4.4.9: ***Comparison among the students of School of Social Sciences***

Sl.No.	STATEMENTS	Responses	Field of study and their responses in percentage					
			P.A.	Hist.	Psy.	Pol.Sc.	Socio.	MSW
1	I use internet for self-study	Always	69	64	69	76	70	100
		Sometimes	31	36	31	24	30	
		Never						
2	I download learning content from the internet	Always	69	43	69	71	60	75
		Sometimes	31	57	31	29	40	25
		Never						
3	I prefer to read e-book	Always	31	36	31	29	40	58
		Sometimes	54	64	54	53	40	42
		Never	15		15	18	20	
4	I download pictures, diagrams, etc. for projects.	Always	38	36	38	24	70	50
		Sometimes	54	43	54	41	30	50
		Never	8	21	8	35		
5	I prefer to transfer material through e-mail to my friends, teachers, etc.	Always	23	42	23	29	30	42
		Sometimes	31	29	31	47	40	50
		Never	46	29	46	24	30	8

6	I find online learning much more comfortable	Always	38	29	38	29	30	25
		Sometimes	62	42	62	47	30	50
		Never		29		24	40	25
7	I use different educational blogs and social media for academic interaction.	Always	15	21	15	12	10	25
		Sometimes	31	50	31	59	60	67
		Never	54	29	54	29	30	8
8	I feel satisfies when I collect learning materials from the internet.	Always	38	43	38	24	30	42
		Sometimes	54	50	54	53	70	58
		Never	8	7	8	24		
9	I could understand course content better in the e-book.	I Always	24	29	24	24	20	33
		Sometimes	38	50	38	65	50	42
		Never	38	21	38	12	30	25
10	I regularly visited the links/websites related to my syllabus/ research area.	Always	77	86	77	82	80	100
		Sometimes	23	14	23	18	20	
		Never						
11	I like the content of my syllabus/course available on Slideshare / YouTube and other websites	Always	31	50	31	59	30	67
		Sometimes	38	50	38	35	60	33
		Never	31		31	6	10	
12	I prefer the online submission of assignment/softcopy on e-mail	Always	46	50	46	41	20	42
		Sometimes	54	36	54	41	50	25
		Never		14		18	30	33
13	I keep tracking of my assignments /course online	Always	77	100	77	82	70	83
		Sometimes	23		23	18	30	17
		Never						

14	I am satisfied with the quality of the course/content available on the internet	Always	31	36	31	82	20	17
		Sometimes	46	6	46	16	50	58
		Never	23	28	23	6	30	25
15	The variety of audio-video material helps to hold my attention to the course.	Always	24	36	24	53	40	58
		Sometimes	38	43	38	35	30	42
		Never	38	21	38	12	30	

Table 4.4.9 shows a detail comparison of responses with effect to the purposes of E-learning practices.

1. All the respondents (100%) of MSW and majority of the respondents from Political Science (76%) and Sociology (70%) used internet for self-study, while 69% of Psychology and Public Administration, 64% of History respondents used internet for self-study
2. Total 75% respondents of MSW and 71% of Political Science, 69% of Psychology and Public Administration and 60% of Sociology downloaded learning content from the internet, while 57% of the respondents from History downloaded learning content from the internet.
3. Total 58% respondents of MSW preferred to read e-books, while 64% of History, 54 % of PA and Psy., 53% from Pol. Sc., and 40% of Sociology preferred sometimes to read an e-book.
4. Majority of the respondents of Sociology (70%) always downloaded pictures, diagrams, etc. for projects, and 54% of PA and Psy., 50% of MSW, 43% of History and 41% of Pol. Sc. downloaded sometimes only.
5. 42% respondents of History preferred to transfer material through e-mail to their friends and teachers and 47% of Pol. Sc. 50% of MSW and 40% of Sociology preferred it sometimes only, while 46% of PA and Psy. never preferred to transfer material through e-mail to their friends, teachers.

6. Total 62% of PA and Psy, 50% of MSW, 47% of Pol. Sc., 42% of history students found sometimes online learning much more comfortable, while 40% of Sociology students never found online learning much more comfortable.
7. Majority of the respondents from different departments (67% of MSW, 60% of Socio, 59% of Pol. Sc. and 50% of History) sometimes used different educational blogs and social media for academic interaction, while 54% of PA and Psy. students never used different educational blogs and social media for academic interaction.
8. Total 70% students of Sociology, 58 % of MSW, 54% of PA and Psy; 53 % Pol. Sc., 50 % of History respondents felt sometimes satisfied when they collected learning materials from the internet.
9. Total 65% students of Pol. Sc, 42% of MSW, 38% of PA and Psy., 50 % of History and Sociology could sometimes understand course content better in e-books.
10. All the respondents of MSW (100%) and 86% of History, 82% Pol. Sc. and 80% Sociology and 77% of PA and Psy. regularly visited the links/website related to their syllabus.
11. Total 67% of MSW and 59% of Pol. Sc. liked the content of their syllabi/courses available on Slideshare/YouTube and other websites, while60% of Socio. and 50% History and 38% of PA and Psy. liked sometimes the content of their syllabi/courses available on Slideshare/YouTube and other websites.
12. 50% respondents of History, 42% of MSW preferred the online submission of assignments or softcopy on e-mail, and 54% of PA and Psy, 50% of Socio, 41% of Pol. Sc., preferred it sometimes only.
13. All the respondents (100%) of History and a majority of MSW (83%), Pol Sc.(82%), PA (77%) and Psy (77%), and Sociology (70%) kept tracking of their assignments/courses online.
14. Majority of respondents from Pol. Sc.(82%), and 36% of History were satisfied with the quality of the course/content available on the internet; while several respondents of MSW (58%), Socio. (50%), and PA (46%) and Psy (46%) were satisfied sometimes only.
15. Total 58% respondents of MSW, 40% of Socio and 53% of the respondents from Pol. Sc. said that the variety of audio-video materials helped to hold their

attention to the courses, while 43% of History and 38% of PA and Psy said that the variety of audio-video materials helped sometimes hold their attention to the course.

INTERPRETATIONS:

Confirming to the finding from the last section of this chapter student of social work again found to be more positive in their responses here. Surprisingly 46% students from departments of public administration and psychology never preferred to transfer material through e-mail to their friends, teachers. Also, 54% students of public administration and psychology never used different educational blogs and social media for academic interaction. Similarly, 40% students of Sociology students never found online learning much more comfortable. Triangulating with the table 4.2.1 these departments were also lagging behind in the availability of departmental resources.

SECTION-5

4.5: SUGGESTIONS FOR IMPROVEMENT AND THE IMPLICATION OF THE STUDY

4.5.1. The Orientation Programme should be more detailed as most of the students were not aware of the new technological innovations for academic purposes.

4.5.2. The sitting capacity in the E-Learning center should be extended.

4.5.3. The self-checked machine should be maintained. The researcher came to know that after the data collection process central library of the university already got a new self-check machine. Although this information was not related to e-learning resources, since many students had reported it to be improved, therefore the researcher brought the information to this section. As the central library of the university was understaffed so authorities must maintain the technological instruments.

4.5.4. The Computers in ICT must always be ready to use whenever needed and all the computers that are kept out for use should fully function as they meant to be.

4.5.5. Departments' computer laboratories should be maintained and connected with the internet.

4.5.6. Departments' laboratories should have computer instructors.

4.5.7. Students must spend more time in the campus so that they can utilize resources available freely. For this university administration stop plying buses at 3 PM and before.

THE CONCLUSION

To conclude the chapter researcher derived the general propositions from all sections of this chapter. Many students of the university accessed their private networks. Therefore, it was costly for them. They were least aware of the academic resources related to their disciplines. Most of them were informed by their friend and family of whatever resources they were using. Therefore, the researcher proposed in the fifth section of this chapter that departments must conduct the orientation courses and training to make the students more aware. This was also expressed by the most of the students. Behind this lag of information, another major factor was lack of resources and trainers in the departments. If a teacher at the time of initiation of any syllabus, unit or chapter could inform the students about the e-resources pertinent to the topics, it might not be the scenario. Students were using their personal laptops, computers, and Smartphone for a long time but they log on more to social networking sites (also found by **Zor and Oye,** 2012). All hundred percent students were using WhatsApp and preferably Facebook but not all (100%) reported of using such platforms for academic purpose. Overuse of such social networking sites might be a reason of students' low awareness about their academic resources. Abdulahi, Samadi & Gharleghi (2014) had also reported that social networking sites such as Facebook had a negative impact on the academics of students. The needs for spreading awareness through training, orientation and workshop have been a recurring finding of this research work. Students should also stay back to the campus after their classroom-indoor interaction and utilize the resources available. In some departments resources were available but those were disused. For this problem researcher suggests to the university administration that they should stop plying buses from campus to city at 3 pm or before; side by side departments should make spaces for students to use the time fruitfully.

CHAPTER – 5: RESULTS AND CONCLUSIONS

This chapter deals with the findings of the study; discussion and conclusion of the results; educational implications of the study; suggestions for further research and limitations of the study. The chapter is divided into five sections, as follows:

5.1 Findings of the study

5.2 Discussion and conclusion of the results

5.3 Educational Implications of the study

5.4 Suggestion for further research

5.5 Limitations of the study

5.1 FINDINGS OF THE STUDY

The major findings of the study are presents in different headings based on the objectives of the study:-

Objectives 1: To find out the perceptions of students about E-Learning

Major findings on the perception of e-learning

1. Use of E-Learning increased students' understanding.
2. Training in E-Learning should be provided for all students.
3. The use of E-learning improved the quality of the work of the students (assignment/practical/test/exams).
4. The use of E-Learning helped the students to complete the work more quickly and smoothly than usual.
5. A large majority of the respondents found E-Learning interesting and useful.
6. A large majority of the respondents did not think themselves socially isolated when using E-Learning.
7. Students of Mizoram University did not have difficulty in handling E-learning.
8. Students of Mizoram University liked E-Learning because they could work according to their own space.
9. Students of Mizoram University did not find E-Learning cost effective.

Objectives 2: To find out the e-learning resources available to the students of Mizoram University

Major findings on the availability of e-resources

1. E-Resource Centre of Mizoram University was monitored by Information Scientist.
2. Sitting capacity in E-resources center was 15.
3. Orientation Programmes for newly admitted students to use library resources including E-resource center had been conducted for all the Academic Departments.
4. Working hours or opening hours of the center is 8:00 hours in each working day.
5. E-Resources have been provided by INFLIBNET through e-ShodhSindhu, Consortia for Higher Education E-Resources.
6. E-resources are available from 22 Publishers having 7,506 numbers of e-journals.
7. IEEE All-Society Periodicals Package (ASPP) had been subscribed, providing access to the IEEE core collection of engineering, electronics, and computer science periodicals
8. The computerized bibliographic information, CD/DVD of the library holdings have also been available for users' searching throughout the campus through Local Area Network (intranet) using WebOPAC.
9. Digitization of Mizoram University's own documents and publications had been pursued setting up of an **'Institutional Repository'** which provides free access to all types of institutional research outputs within the campus network (Intranet).
10. Information and Communication Technology Centre was monitoring University Website (www.mzu.edu.in), EDUSAT Programme, and MOOCs.
11. ICT hada server room housing five high-end servers providing services such as the Internet, file sharing, etc. for the users.
12. Under the National Knowledge Network (NKN) scheme, ICT maintained the Campus Network covering all existing Academic and Administrative buildings having Internet Connection that has 1GBps bandwidth.More than

700 nodes are connected by cable and the full Wi-Fi connection is provided within the Campus.

13. The centre had a well-resourced Training Hall for conducting various kinds of ICT training programme.
14. Most of the departments under different schools had computer laboratories. But those were not well maintained and least used by the students.

Objectives 3: To find out the e-resources accessed by the students of Mizoram University

Major findings on accessing and opinion of e-learning;

1. Majority of the participants stated that they had been using a computer or laptop for more than 10 years. There were numerous participants who had been using computer or laptop for 6-10 years. A total of 11% respondents stated that they have been using a computer or laptop for 1 – 5 years.
2. Most of the participants used a smartphone for 1-3 years, a few of them used for 6 – 12 months and some of the respondents had been using a smartphone for more than 5 years.
3. Students of Mizoram University were using the Internet for recreational purpose (47 %), academic purpose (42 %) and searching jobs (11 %).
4. Large majorities of the respondents were addicted to accessing the Internet. This habit can be re-channelized for academic purposes.
5. A vast majority of the respondents hadaccess to a network through a computer or smartphones.
6. Social Networking Sites were more popular among Mizoram University students namely Facebook, Whatsapp, YouTube rather than Academic Networks. Alternatively, students also used LinkedIn (17 %), MySpace (3 %), AlmaConnect (8 %), Twitter (21 %), Instagram (65 %), Hike (45 %), Telegram (22 %), Google+ (66 %), Academia (31 %), ResearchGate (12 %).
7. Majority of the respondents did not have any online personal space other than the social network.
8. Students were often informed by their friends (56 %) about the online sources; there were some (16 %) students who came to know from their families, some

(15 %) students came to know from the Institution while a little (14 %) came to know from the media.

9. A vast majority did not know MOOCs.
10. Majority of the respondents did not know the educational channels and programmes like-Vyas, Gyan Darshan, Swayam, and Swayam Prabha introduced by the government.

Objectives 4: To find out how the students are using e-learning resources in Mizoram University

Major findings on the purposes of e-learning

1. Students of Mizoram University (68 %) used the Internet for self-study.
2. Majority of the students (67 %) of Mizoram University downloaded learning content from the Internet.
3. Most of the respondents (49 %) sometimes read an e-book.
4. A large majority (53 %) of the respondents downloaded pictures, diagrams, etc. for their projects.
5. A large number of responded (45%) they sometimes preferred to transfer material through e-mail to friends, teachers, etc.
6. A large number of the respondents (45%) found online comfortable sometimes only.
7. The majority of the respondents (51%) used different educational blogs and social media for academic interaction.
8. In general, 45% of the respondents felt satisfied when collecting learning materials from the Internet.
9. A greater number (46%) of the respondents sometimes understood course content in the e-book.
10. The majority (76%) of the respondents regularly visited the links and website related to their syllabus.
11. The content of their syllabi or courses available in Slideshare or YouTube and other Websites wereusually (42 %) liked by the students of Mizoram University.
12. On average (44%) of the respondents sometimes preferred to submit their assignment or softcopy on e-mail.

13. The majority (78%) of the respondents kept tracking of their assignments or courses online.
14. In general, 45 % of the respondents sometimes felt satisfied with the quality of the courses or content available on the internet.
15. Generally, (42 %) of the respondents clarified that the variety of audio-video materials sometimes held their attention to the course.

Objectives 5: To give suggestion to improve the services

1. The Orientation Programme should be more detailed as most of the students were not aware of the new technological innovations for academic purposes.
2. The sitting capacity in the E-Learning center should be extended.
3. The Computers in ICT must always be ready to use whenever needed and all the computers that are kept out for use should be fully functional as they meant to be.
4. Departments' laboratories should be maintained and connected with the internet.
5. Departments' laboratories should have computer instructors.
6. Students should spare more time in the campus. For this administration should take some measure by increasing facilities and stopping buses going back before closing time.

5.2 DISCUSSION AND CONCLUSION OF THE RESULT

Since the study was intended to find out the perceptions of students about e-learning, availability of e-resources, resources accessed by the students, and purpose of e-learning, the students were asked to give their response through questionnaire and interview. The feedback from the students showed that the student no problem in handling and managing e-learning services. It gave them in-depth knowledge and a better understanding oftheir academic area. The student found e-learning useful and interesting as they could work according to their own time and space. They also stated that e-learning improved the quality of their work – assignment, test, exam, practical, etc. and their work also became easier and smoother than the traditional style of education. Even though, the student did not have any difficulty in using e-learning services; still, they wantedtraining for all students. Many a times resources used to be available but lack of awareness among the users do not provide optimum benefits. It

was similar to the findings of Sharifabadi (2006). Also, they could use optimally for academic purposes. In the case of Guru Gobind Singh Indraprastha University Sharma (2009) also found the same. He writes "It is observed that the availability of e-resources on the campus was almost sufficient for all the existing disciplines but the infrastructure to use these resources was not adequate and could hinder the ability to meet the requirements of users." With regard to the availability of e-learning resources, consultation meeting and discussion were held with the System Administrator, ICT Centre and Information Scientist, Central Library, head and teachers of various departments, and students. According to theInformation Scientist, it was found that the Central Library organized Orientation Programme for every student who is newly admitted to the University. A separate room having 15 computers was provided for accessing the Internet for the student on account of their academic purposes. In this Computer Laboratory, the student can access any type of educational information using e-journal, e-ShodhSindhu, WebOPAC through Intranet facilities. Information and Communication Technology Centre monitored University Websiteand EDUSAT Programme, and also solve other ICT issues. The center also has a well-equipped training hall for different educational purposes. The study shows that most students do not make use of e-resources available in the university as compared to the number of enrolment of the students.

In the case accessing of e-learning, majorities of the students had accessed to the Internet and had been addicted to it. This addiction can be harnessed by proper orientation and trainig. Students do use internet and majority of them had no problem in handling of eloctronic gadgets but they were not using educational sites. Whearass majority of them were using social media sites and internet for the purpose of entertainmets. It is revealed through the review of literture in this area that social media can also be used for academic purpose (**Goel & Singh,** 2016); but overuse of social media may have negative impact on the academic achievement of the students (Abdulahi, Samadi & Gharleghi, 2014). Majority of themusedthe internet mainly for recreational while a few of them use it for educational purposes. The gadgets like computers, laptops, and smartphonewere used by the students and a lot of them had used for more than 10 years. They had accessed the network from their home or residence. Therefore most of them reposrted as costly service.Most students came to know the online sources from their families and friends. Here resarcher poposes

organisation of workshops, orientation and indcution type programmes by the departemnts and subjects teachers so that students can reach to the correct location. It was reported that students had attaended orientation programme by the department. Usually in the most of the institutions orienattion programmes are conducted to introduce the students about the department, course and teachers. Similarly departments of Mizoram University do also conduct orientation programmes. But here need of orienttaion programme to introduce the e-resources has emerged through this study. To confirm thisother findings of this study reveals that a vast majority of the students were not conscious of the educational programme launched by the government.

As far as the purposes of e-learning services were concerned, the students regularly visited the website consulting their academic work as they use the Internet for self-study. They collected pictures, learning materials, diagrams, etc. for their projects.Some students preferred to transfer their learning materials, assignments (softcopy) through the Internet or online to their teachers and friends. The students used the Internet for sharing files and information regarding the education. They kept tracking their learning content on the Internet, they liked the audio and video display or present on the Slideshare and YouTubethey hadwatched and observed.

Having comparison among the different courses i.e. Under-Graduate students, Post-Graduate students and Research Scholars, Under-Graduate students responses in the perception of E-Learning revealed that they made use of E-Learning services more positively. E-Learning services helped them in having a good quality of learning material and their work/assignment/test./exam became better, easier and smoother than before. Therfore a few reserch scholars who were not visiting websites related to their subject. They reported absolutely negative. Though this number was not higher than 5% to 14%, but resaercher think it a very negative finding from the university. As per the present scenario, even a research on local topic can not be important without having connection with global scenario. Therefore if a few researcher are not net-savvy, it is very gloomy.

Information and Communication Technology (ICT) Centre and E-Learning centre though it was located at the centre of the University; some departments were facing difficulties in reaching and accessing the centre easily as it was far from their

departments. Each department should have a computer laboratory with an internet connection. Even though students could access the internet through their phones and laptop; not all students could afford such advanced technological appliances.

With the advent of information technology, the system of education had been introduced with such new innovations and the method of teaching and learning process has also been upgraded involving that new technology. Different schemes and policy have been made by the Government of India for the upliftment of various institutions. Keeping in view of the advancement of the technology, the study had also been conducted. The study reveals that most students used the Internet for academic purposes. But practical use of e-resources is not up-to the worth in comparison to investments made in acquiring these resources; secondly, infrastructure and training programs should also be revised as per requirements. It is observed that the availability of e-resources on the campus was almost sufficient for all the existing disciplines but the infrastructure to use these resources was not adequate and could hinder the ability to meet the requirements of users.

5.3 EDUCATIONAL IMPLICATION OF THE STUDY

- From the study of the perception of e-learning, it is obvious that it improves the quality of the students' work, increases students' understanding, makes it easier and smoother. Studnets find it interesting and wants to have an in-depth knowledge on using e-learning services. So the university can invest more in line with the national policy.
- Various E-learning resources likecomputer laboratory, e-journal, e-ShodhSindhu, CDs/DVDs, periodicals package, and laptopsare beneficially used by the students in so such kind of equipment needs to be rightly available.
- The study brings to the light the reality of how students used the E-Learning tools such as the internet.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

- A similar study including teachers and non-teaching staff of Mizoram University can be conducted to find out the purposes of using internet by triangulating data available withthe system administrator.
- A study on Students' attitude, interest, and perception of Social media with regard to Academic performance can be conducted.
- Impact of E-Learning in Academic performance can be studied in Mizoram University.

5.5 LIMITATIONS OF THE STUDY

1. Since most of the research scholars were not having formal classes and were not available during the time of visit and collection of data; only 20 scholars each from M.Phil and Ph.D. research scholars were selected(total 40).
2. Some statements were not properly answered by the some participants. That is why researchers could not come to a final conclusion and removed those items from analysis.
3. As reseracher could not make all departmental resources open for observation therefore data was collected through interview of teachers and students.

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APPENDIX – A

Questionnaire for students

INSTRUCTIONS: - The following statements are about E-Learning practices among the students of Mizoram University. The answers and information given to you will be treated confidential. Hence you can express yourself freely and honestly. Your opinion and suggestions may bring some better changes.

Please put a tick mark in a box provided indicating your agreement or disagreement with the following statement.

PERCEPTION

Sl. No.	**STATEMENTS / ITEMS**	**RESPONSES** *(in percentage)*	
		Agree	**Disagree**
1	The use of E-Learning increases the students understanding		
2	E-Learning training should be provided to all students		
3	The use of E-Learning improves the quality of the work of the students (assignment / practical / test/exams)		
4	The use of E-Learning helps to complete the work more quickly and smoothly than usual		
5	I find E-Learning interesting and useful		
6	I think socially isolated when using E-Learning		
7	E-Learning is difficult to handle and therefore, frustrating		
8	I like E-Learning because I can work according to my own space		
9	I find E-Learning cost effective		

ACCESS

Sl. No.	STATEMENTS / ITEMS	LABEL	RESPONSES (In percentage)
1	I have been using computer/laptop for	1-5 years	
		6-10 years	
		More than 10 years	
2	I have been using a smartphone for	6-12 months	
		1-3 years	
		More than 5 years	
3	I am using the Internet for	Job	
		Recreational	
		Educational purpose	
4	I have access to the Internet	Very rarely	
		Occasionally	
		A few times a week	
		Every day, I'm addicted!	
5	I have access to a network through computer/smartphone	Home / student residence	
		University / Learning center	
6	Which of the following social/academic networks are you using?	LinkedIn	
		Facebook	
		Whatsapp	
		YouTube	
		MySpace	
		Almaconnect	
		Twitter	
		Instagram	
		Hike	
		Telegram	
		Google+	
		Academia	
		ResearchGate	
		Bharat students	
7	I have an online personal space other than a social network	Yes	
		No	
8	How do you come to know about the online sources?	Friends	
		Family	
		Institution	
		Media	
9	Is any orientation about online sources has been done by the department?	Yes	
		No	
		Don't know	
10	Do you know MOOC?	Yes	
		No	
11	Which of the following are you using?	Vyas	
		Gyan Darshan	
		Swayam	
		Swayam Prabha	
		None	

PURPOSES

Sl. No	STATEMENTS / ITEMS	RESPONSES *(in percentage)*		
		Always	**Sometimes**	**Never**
1	I use the Internet for self-study			
2	I download learning content from the Internet			
3	I prefer to read an e-book			
4	I download pictures, diagrams, etc. for project			
5	I prefer to transfer material through e-mail to my friends, teachers, etc.			
6	I find online learning much more comfortable			
7	I use different educational blogs and social media for academic interaction			
8	I feel satisfies when I collect learning materials from the Internet			
9	I could understand course content better in e-book			
10	I regularly visited the links/websites related to my syllabus/research area			
11	I like the content of my syllabus/course available in Slideshare / YouTube and other websites			
12	I prefer the online submission of assignment/softcopy on e-mail			
13	I keep tracking of my assignments/course online			
14	I am satisfied with the quality of the course/content available on the Internet			
15	The variety of audio-video material helps to hold my attention to the course			

APPENDIX – B

Interview Schedule

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i. Separate room / building

_____

ii. Maintenance of the center

_____

iii. Orientation programme

_____

iv. Sitting capacity

_____

v. Working hours / opening hours

_____

vi. Availability of E-resources

_____

_____

_____

vii. Types of e-resources available

_____

_____

_____

viii. Subscription of periodicals

_____

_____

_____

ix. Availability of Internet and Intranet connection

_____

_____

_____

x. Equipment or materials provided

_____

_____

_____

E-LEARNING PRACTICES AMONG THE STUDENTS OF MIZORAM UNIVERSITY

A Research Abstract

Supervisor

Dr. KRISHNA KANT TRIPATHI

Submitted by

V. VANLALRUATI

MZU/M.Phil./414 of 26.05.2017

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SCHOOL OF EDUCATION AND HUMANITIES

MIZORAM UNIVERSITY, AIZAWL

JULY, 2018

INTRODUCTION

Time and again it has been reiterated that the traditional system of education is burdensome and dreary for the learners (Govt. of India, 2004); consequently, resulting in a lot of anxiety and mental diseases among the students. Answer to this issue has led us to technology-based education. Use of Educational Technology can build motivation and make learner oriented. Technological advancements have evolved from time to time. The development of science and technology has changed the mode of living; not only in urban areas but also in each and every corner of the country. The technology, which emerges and dwell with everyone, must be of something which is very useful. At the same time, it can bring a great catastrophe for those who are not aware enough in handling such innovations. Each new technology aims to address questions of improving information delivery, quality of teaching and learning outcome in relation to precise problems and circumstances. Enormous developments have been made as the growth and development of science and technology has emerged from time to time. The new innovation has an effect and changes the education system by different means. An internet empowered technology has become more readily available and accessible, in formal and informal contexts.

E-learning is one wide-ranging term which encompasses all new technology used for learning or education and it is gaining more and more importance in the present times. E-learning has become an increasingly popular learning approach in educational institutions due to the rapid growth of Internet technologies. E-Learning is a learner-centered instructional strategy which provides students with the opportunity for an in-depth investigation of a given topic. This model encompasses both the ideology open learning and innovations in information and communication technology. Besides, ICT has brought radical changes even in the face to face, traditional model of learning. On the other hand this has given platform to virtual classes rooms or virtual campuses and has made distance learning real alike. E-Learning model is very much near to the concept of inclusion and equity. Anyone can have access to the world class teachers available in any institutions.

The Ministry of Human Resource Development (MHRD) and the Ministry of Information and Broadcasting jointly evolve a long-term perspective for media usage. The Department of Electronics (MEIT, Govt. of India), as the policy-making body in

the field of computers, closely involved in the planning and development of various manpower programmes as at present, and in identifying the hardware needs of different educational institutions. The States government and their agencies, UGC and other statutory bodies governing professional education share responsibility for bringing about necessary changes; accreditation and providing infrastructural requirements. The central government continues to play a substantial role in the planning and implementation of the programmes.

In line with the central government's initiatives Mizoram government has also recognised power of IT and took up Mizoram IT Policy 2001 (Cabinet decision no.13 dated 28.05.2001). The policy supports for the promotion of IT in several fields including Education. Main goals were two,

i. ICT litracy and Education;
ii. ICT based education.

All above mentioned initiatives taken by Central or State Governments leads to development of E-Learning climate in the country, which is the only solution to cope with the ever growing and fast flowing knowledge streams. Living in aperiod of stable change; the knowledge achieved by a person during his formal education is becoming outdated at a very rapid rate. Speedy development in computer technology has hit the arena of education. The development in computer technology has resulted in e-learning practices. E-learning is believed a more effective way of teaching a large number of students, thereby providing stability in educational quality. Now the opportunities made available through e-learning are both significant and numerous.

Considering the increases of information technology, it is the utmost need of the students to develop with the knowledge of E-Learning services to efficiently use it in their academic field and to have a competent career. The researcher felt the need to conduct as researches have not been conducted in Mizoram University to ensure the perception, purposes, and opinion of E-Learning among the students. For every student, learning/tutoring can be done at any time and from anywhere. Online materials can be updated, and learners are able to see the changes at once.

NEED OF THE STUDY

Increasingly, organizations are adopting online learning as the main delivery method to train employees. At the same time, educational institutions are moving toward the use of the Internet for delivery, both on campus and at a distance. Government of India has also put impetus to use of digital technology in different sphere of life including education through Digital India Progaramme. Not only in India technology is being promoted for education across the world (Buzzetto, 2008; Azad, 2009). Consequently, many research works have been conducted and ongoing for optimum utilization of E-learning resources in the country (Agarwal &Pandey, 2013; Sahu and Pradhan, 2017) as well as abroad (Lip San, 2015; Sadowski, Pediaditis& Townsend, 2017). Studies conducted in India had population area in mainland India, such as Delhi (Bhuvaneswari & Padmanaban, 2012). Hence this study targeted an institution in North East India to assess the reach of Central Governments policy in remote Central Government Institution.

Technology leverages positive (Zor and Oye, 2012) as well as negative (Gok, 2016) impacts on the students' learning, therefore It developed curiosity in the researcher to find out how the students of Mizoram University were using technology based E-learning resources and what they perceive about this. Hence this study targeted to fulfill this knowledge gap.

Moreover, Mizoram is special state in terms of its geographically scattered places and pupulation, thirst for education and lack of institutions of higher learning for all subjects at all places. Mizoram University is the one and only institution in the state running post-graduation and research programmes. Not only it runs advance courses in its campus but also provide leadership in the state to other higher education institutions by giving affiliations. To address the geographical chalnges and demands of pupulation in remote areas, the University has recently launched it websites for MOOCs i.e. http://www.mzuict.in/. On the otherside E-learning tools available and used by the in-campus students can be parameter of inquiry to test the progress of the university in the line of ICT based education and leadership. Importance of E-leaning resources in today's world, status of Mizoram University as premier institutions in the state and geographical challenges in the area raises some questions to be answered empirically.

STATEMENT OF THE PROBLEM

A study of E-Learning practices among the students of Mizoram University

RESEARCH QUESTIONS

(i) What types of e-learning resources are provided to the students of MZU?

(ii) How the ICT resources are utilized by the students?

(iii) What are the areas of e-learning services and practices which are to be improved?

OBJECTIVES OF THE STUDY

i. To find out the perception of students about e-learning.

ii. To find out the e-learning resources provided to the students of Mizoram University.

iii. To find out the e-resources accessed by the students of Mizoram University.

iv. To find out how students are using e-learning resources in MZU.

v. To give suggestions to the University administration regarding the improvement of services.

OPERATIONAL DEFINITIONS OF KEYWORDS

- *E-learning:* In this research, E-learning includes –use of a computer, mobile phone and other electronic gadgets for academic purpose. As internet services are key component of the concept of e-learning, therefore, accessing, surfing, browsing, emailing, sharing, social media features have also been included here.
- *Mizoram University:* The only University in Mizoram where different courses are running.
- *Students:* All the UG, P.G. students and M. Phil., Ph. D. research scholars studying in various departments in Mizoram University Campus

DELIMITATIONS OF THE STUDY

The delimitations of the study are as follows:

(i) This study was delimited to the students admitted in various degree courses in Mizoram University Campus.

(ii) This study was confined to the use of the researcher-developed tools.

(iii) This study confined to the qualitative analysis of the data.

METHODOLOGY

The Research Approach

The present study aims at studying the E-Learning practices among the students of Mizoram University. The researcher attempts to draw in-depth comprehension on how the students handle the new innovations that have been introduced. The study also aimed at examining the perceptions, purposes and accessing by the students. Consequently, a descriptive survey (Best & Kahn, 2009) type method was followed for the present study. It is also a qualitative type research (Best & Kahn, 2009) as data are collected and mainly analyzed qualitatively. As this study was concerning only one institution i.e. Mizoram University, hence it can also be termed an institutional case study (Opie, 2004). As the purpose of the study was an assessment of e-learning services and case study is considered as the most suitable method to evaluate the quality of services in an educational institution. This is the method used in such type of studies (also used by Azad Isik, 2009; Gamal & Aziz, 2011; Rhema, Amal & Iwona, 2014; Lip San (2015))

SOURCES OF DATA

A collection of valid and reliable data is indeed a must in any kind of research study. Primary and secondary sources were considered suitable for gathering relevant data for the present study.

i. Primary sources of data: To find out the practices of E-learning and collecting the appropriate data, a self-made structured questionnaire was administered among the students; personal interview and observation were conducted in the midst of extreme cases.

ii. Secondary sources of data: policy documents, e-sources, were considered reliable by the researcher for the present study.

Population and Sample

The population of the study comprised all the students and scholars of Mizoram University studying in various departments and courses (U. G., P. G., M. Phil., & Ph. D.) The following table (Table nos. 01) indicates the enrolment of students studying at Mizoram University. *(As in 2016-2017 Session)*

Table 1: Population for the present study

Sl. No	Field of Study	No. of Students
1	Under-Graduate	576
2	Post- Graduate	1482
3	Research Scholar	761
	TOTAL	2819

Sample: All the representatives of the population are Sample of the study (Sindhu, 2014).A multi-phased sampling technique was used for collecting the relevant data. At first, all departments were automatically selected. At the second stage, proportionate numbers of students from each course were selected by using *stratified random sampling* and questionnaire was administered. After observation and finding the pattern of the data, the researcher conducted interviews with extreme cases and information-rich respondents only. Besides, physical verification of e-learning resources was also done to *triangulate the data* by using an observation schedule.

Sample Size: With a careful thought, it was decided to take randomly only 20% of the total population as a sample for the study in the case of UG &PG students' responses; and 40 scholars (20 each from M.Phil and Ph.D. courses) were also selected by incidental sampling technique, hence this study followed a mix sampling design.

Table 2: Sample-size:

PROFILE	LABEL	ENROLMENT
Field of Study	Under – Graduate	115
	Post – Graduate	293
	Research Scholar	40
	Total	448

Besides the above-mentioned sample size selected strategically, System Administrator, Information Scientist and other staff of ICT Centre and Central Library of Mizoram University was part of the total sample of this study.

TOOLS AND TECHNIQUES USED

The researcher used a self-constructed questionnaire, discussion and semi-structured interview schedule as the main tools for the collection of relevant data for the study.

- **Questionnaire:** The questionnaire was used to collect relevant data among the students (U.G. P.G. & Research programmes) of Mizoram University.
- **Interview Schedule:** Semi-structured interview and discussion were conducted with the Information scientist from the Central Library and the System Administrator from Information and Communication Technology (ICT) Centre; and the extreme type respondents among students.
- Besides, the researcher maintained a diary for noting and records various relevant secondary data.

DATA COLLECTION PROCESS

In this study, the researcher used a self-made Questionnaire for collecting relevant data from the students, visiting the entire department personally. The investigator also conducted a semi-structured interview with the Information Scientist and the System Administrator with regard to the resources available for the students. Before administering the questionnaire and interview, rapport formation was established with the participants through informal discussion and explaining the intention of the study. The participants were also informed that the collected data would be kept strictly confidential and be used only for research purposes. After a

good rapport was formed and the consent of the participants was obtained, each participant completed the demographic information sheet and the questionnaire. Approximately 15 minutes were taken for completing the questionnaire. The individual response sheet is carefully screened, sealed and tabulated for statistical analysis.

ANALYSIS OF DATA

The study is descriptive in nature; the data were analyzed and presented in percentage only. Qualitative data analyzed in categories, themes, and codes. General patterns evolved were described and interpreted side by side outlier cases were also presented there. The major findings are given below in respect of the five (5) objectives of the study.

FINDINGS OF THE STUDY

Objectives 1: To find out the perceptions of students about E-Learning

Major findings on the perception of e-learning

1. Use of E-Learning increases student's understanding.
2. Training in E-Learning should be provided for all students.
3. The use of E-learning improves the quality of the work of the students (assignment / practical / test/exams).
4. The use of E-Learning helps to complete the work more quickly and smoothly than usual.
5. A large majority of the respondents find E-Learning interesting and useful.
6. A large majority of the respondents did not think themselves socially isolated when using E-Learning.
7. Students of Mizoram University did not have difficulty in handling E-learning.
8. Students of Mizoram University like E-Learning because they can work according to their own space.
9. Students of Mizoram University did not find E-Learning cost effective.

Objectives 2: To find out the e-learning resources available to the students of Mizoram University

Major findings on the availability of e-resources

1. E-Resource Centre of Mizoram University is monitored by Information Scientist.
2. Sitting capacity in E-resources center dedicated is 15.
3. Orientation Programmes for newly admitted students to use library resources including E-resource center has been conducted of all the Academic Departments.
4. Working hours or opening hours of the center is 8:00 hours in each working day.
5. E-Resources have been provided by INFLIBNET through e-ShodhSindhu, Consortia for Higher Education E-Resources.
6. E-resources are available from 22 Publishers having 7,506 numbers of e-journals.
7. IEEE All-Society Periodicals Package (ASPP) had been subscribed, providing access to the IEEE core collection of engineering, electronics, and computer science periodicals
8. The center has been made available in the machine-readable catalog.
9. The computerized bibliographic information, CD/DVD of the library holdings have also been available for users' searching throughout the campus through Local Area Network (intranet) using WebOPAC.
10. Digitization of Mizoram University's own documents and publications had been pursued setting up of an **'Institutional Repository'** which provides free access to all types of institutional research outputs within the campus network (Intranet).
11. The System Administrator is the Head of Department of Information and Communication Technology Centre.
12. Information and Communication Technology Centre is monitoring University Website (www.mzu.edu.in), EDUSAT Programme, and MOOCs (faculty@mzuict.in)
13. ICT has a server room housing five high-end servers providing services such as the Internet, file sharing, etc. for the users.

14. Under the National Knowledge Network (NKN) scheme, ICT maintains the Campus Network covering all existing Academic and Administrative buildings having Internet Connection that has 1GBps bandwidth.
15. At present, more than 700 nodes are connected by cable and the full Wi-Fi connection is provided within the Campus.
16. The center has a well-resourced Training Hall for conducting various kinds of ICT training programme.
17. For online meeting both for official and academic-related matters, Video Conferencing System is installed in the hall.
18. The Centre also installed ceiling mount projectors and laptops for facilitating the teaching-learning processes in all the academic classrooms.

Objectives 3: To find out the e-resources accessed by the students of Mizoram University

Major findings on accessing of e-resources

1. Majority of the participants stated that they have been using a computer or laptop for more than 10 years. There are numerous participants who have been using computer or laptop for 6-10 years. A total of 11% respondents stated they have been using a computer or laptop for 1 – 5 years.
2. Most of the participants used a smartphone for 1-3 years, a few of them used for 6 – 12 months and some of the respondents have been using a smartphone for more than 5 years.
3. Students of Mizoram University were using the Internet for recreation (47 percent), academic purpose (42 percent) and searching jobs (11 percent).
4. Large majorities of the respondents were addicted to accessing the Internet.
5. A vast majority of the respondents have access to a network through a computer or smartphones.
6. Social Networking Sites are more popular among Mizoram University students namely Facebook, Whatsapp, YouTube rather than Academic Networks. Alternatively, students also used LinkedIn (17 percent), MySpace (3 percent), AlmaConnect (8 percent), Twitter (21 percent), Instagram (65 percent), Hike (45 percent), Telegram (22 percent), Google+ (66 percent),

Academia (31 percent), ResearchGate (12 percent) and no response was received in using Bharat Students.

7. Majority of the respondents did not have any online personal space other than the social network.
8. Students are often informed by their friends (56 percent) about the online sources; there are some (16 percent) students who came to know from their families, several (15 percent) students came to know from the Institution while a little (14 percent) came to know from the media.
9. Some (65 percent) of the respondents said to have an orientation about online sources through their department, a few (32 percent) responded that they did not have any orientation about online sources through their department while 3 percent responded that they did not know whether there is an orientation programme or not.
10. A vast majority did not know MOOC.
11. Majority of the respondents did not know the educational channel and programmes-Vyas, Gyan Darshan, Swayam, and Swayam Prabha introduced by the government.

Objectives 4: To find out how the students are using e-learning resources in Mizoram University

Major findings on the purposes of e-learning

1. Students of Mizoram University (68 percent) used the Internet for self-study.
2. The students (67 percent) of Mizoram University downloaded learning content from the Internet.
3. Most (49 percent) of the respondents sometimes read an e-book.
4. A large majority (53 percent) of the respondents downloaded pictures, diagrams, etc. for their project.
5. A large number (45 percent) responded they sometimes prefer to transfer material through e-mail to friends, teachers, etc.
6. A large number (45 percent) of the respondents sometimes find online comfortable.
7. The majority (51 percent) of the respondents sometimes used different educational blogs and social media for academic interaction.

8. In general, 45 percent of the respondents felt satisfied when collecting learning materials from the Internet.
9. A greater number (46 percent) of the respondents sometimes understand course content in the e-book.
10. The majority (76 percent) of the respondents regularly visited the links and website related to their syllabus.
11. The content of their syllabus or course available in Slideshare or YouTube and other Websites are normally (42 percent) liked by the students of Mizoram University.
12. On average (44 percent) of the respondents sometimes prefer to submit their assignment or softcopy on e-mail.
13. The majority (78 percent) of the respondents kept tracking of their assignment or course online.
14. In general 45 percent of the respondents sometimes felt satisfied with the quality of the course or content available on the internet.
15. Generally, (42 percent) of the respondents clarified that the variety of audio-video materials sometimes hold their attention to the course.

Objectives 5: To give suggestion to improve the services

1. The Orientation Programme should be more detailed as most of the students are not aware of the new technological innovations for academic purposes.
2. The sitting capacity in the E-Learning center should be extended.
3. The self-checked machine should be maintained.
4. The Computers in ICT must always be ready to use whenever needed and all the computers that are kept out for use should fully function as they meant to be.
5. Departments' laboratories should be maintained and connected with the internet.
6. Departments' laboratories' should have computer instructors.

DISCUSSION AND CONCLUSION OF THE RESULT

Since the study was to find out the perceptions, availability of e-resources, accessing and opinion on e-learning practices, and purpose of e-learning, the students were asked to give their response through questionnaire and interview. The feedback

from the students showed that the student had no problem in handling and managing e-learning services. It gave them in-depth knowledge and a better understanding of their academic area. The student found e-learning useful and interesting as they could work according to their own time and space. They also stated that e-learning improved the quality of their work – assignment, test, exam, practical, etc. and their work also became easier and smoother than the traditional style of education. Even though, the student did not have any difficulty in using e-learning services; still, they want training for e-learning services so that the newly admitted students became familiar with the new technology and did not feel isolated with the services. Also, they could use optimally for academic purposes.

With regard to the availability of e-learning resources, consultation meeting and discussion were held with the System Administrator, ICT Centre and Information Scientist, Central Library. According to Information Scientist, it was found that the Central Library organized Orientation Programme for every student who was newly admitted to the University. A separate room was provided having 15 computers for accessing the internet for the student on account of their academic purposes. In this Computer Laboratory, the student can access any type of educational information using e-journal, e-ShodhSindhu, WebOPAC through Intranet facilities. Information and Communication Technology Centre monitored University Website (www.mzu.edu.in) and EDUSAT Programme with Internet Connection, 1GBps. The center covered the Campus with full Wifi connection. The center also has a well-equipped training hall for different educational purposes. For assisting the teaching-learning process, the center has set up ceiling mount projectors and laptops in every academic classroom. The study shows that most students do not make use of e-resources available in the university as compared to the number of enrolment of the students.

In the case of the opinion and accessing of e-learning, majorities of the students have access to the Internet and have been addicted to it. Majority of them used the internet mainly for recreational while a few of them use it for educational purposes. The gadget like computers, laptops, and smartphone are used by the students and a lot of them have used for more than 10 years. They have accessed the network from their residences – home or hostel. Facebook, YouTube, Instagram, and Whatsapp are generally the social media use by the students, most of them were not

aware of using an academic network like Academia, LinkedIn, Research Gate, Bharat Students, etc. Most students came to know the online sources from their families and friends. It is found that a vast majority of the students were not conscious of the educational programme launched by the government.

As far as the purposes of e-learning services were concerned, the students regularly visited the website consulting their academic work as they use the Internet for self-study. They collect pictures, learning materials, diagrams, etc. for their projects and use for learning purpose. Some students prefer to transfer their learning materials, assignments (softcopy) through the Internet or online to their teachers and friends. The students use the Internet for sharing files and information regarding the education. They kept tracking their learning content on the Internet, they like the audio and video displayed or present on the Slideshare and YouTube they have watched and observed.

Information and Communication Technology (ICT) Centre and E-Learning centre though it was located at the center of the University; some departments were facing difficulties in reaching and accessing the centre easily as it was far from their departments. Each department should have a computer laboratory with an internet connection. Even though students could access the internet through their phones and laptop; not all students could afford such advanced technological appliances.

With the advent of information technology, the system of education has been introduced with such new innovation and the method of teaching and learning process has also been upgraded involving that new technology. Different schemes and policy have been made by the Government of India for the upliftment of various institutions. Keeping in view of the advancement of the technology, the study had also been conducted. The study reveals that most students used the Internet for academic purposes. But, in reality from the feedback of the questionnaire, it was clear that most students used it for recreational purposes and addicted to it. This does not mean that all the students neglect the use of the Internet for academic purpose. But practical use of e-resources was not up-to the worth in comparison to investments made in acquiring these resources; secondly, infrastructure and training programs should also be revised as per requirements. It is observed that the availability of e-resources on the campus was almost sufficient for all the existing disciplines but the infrastructure

to use these resources was not adequate and can hinder the ability to meet the requirements of users.

EDUCATIONAL IMPLICATION OF THE STUDY

1. From the study of the perception of students about e-learning, it was obvious that it improves the quality of the students' work, increases students' understanding, makes it easier and smoother, finds it interesting and wants to have an in-depth knowledge on using e-learning services. So, the university can invest more in line with the national policy.
2. Various E-learning resources like computer laboratory, e-journal, e-ShodhSindhu, CDs/DVDs, periodicals package, computerized bibliographic information, wifi connection, ceiling mount projectors, and laptops are beneficially used by the students in so such kind of equipment needs to be rightly available
3. The study brings to light the reality of how students used the E-learning tools such as the internet.

SUGGESTIONS FOR FURTHER RESEARCH

1. Similar study including teachers and non-teaching staff of Mizoram University can be conducted to find out the purposes of using internet by triangulating data from the system administrator.
2. A study on Students' attitude, interest, and perception of Social media with regard to Academic performance can be conducted.
3. Impact of E-Learning in Academic performance can be studied in Mizoram University.
4. A comprehensive study can be conducted by including all the affiliated colleges of the University.

LIMITATIONS OF THE STUDY

1. Since most of the research scholars were not having formal classes and were not available during the time of visit and collection of data; only 20 scholars each from M.Phil and Ph.D. research scholars were selected.
2. Some statements were not properly answered by some participants. That is why researchers could not come to a final conclusion.