APPLICATION OF SOCIAL MEDIA TOOLS IN CENTRAL UNIVERSITIES LIBRARIES IN NORTH EAST INDIA

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

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BY

Lalremsiama

Department of Library and Information Science

Supervisor

Prof. Pravakar Rath

Submitted

In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Library and Information Science of Mizoram University, Aizawl.

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This is to certify that **Lalremsiama**, Ph.D. scholar of the Department of Library and Information Science, Mizoram University has written his theses titled "**Application of Social Media Tools in Central Universities Libraries in North East India**" under my supervision. To the best of my knowledge and belief, the work embodies his original investigation and findings and has not been published anywhere. I consider it worthy of the Degree of Doctor of Philosophy (Ph.D.) in Library and Information Science in Mizoram University.

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DECLARATION

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

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

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Place: Aizawl *Lalremsiama*

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LIST OF ABBREVIATIONS

Term	Description
RFID	Radio Frequency Identification
ICT	Information and Communication Technology
LOCF	Learning Outcomes based Curriculum Framework
AI	Artificial Intelligence
DIY	Do It Yourself
SOUL	Software for University Libraries
OPAC	Online Public Access Catalogue
ONOS	One Nation One Subscription
ILS	Integrated Library System
HTTP	Hyper Text Transfer Protocol
HTML	Hyper Text Markup Language
IP	Internet Protocol
LAN	Local Area Network
AI	Artificial Intelligence
Wi-Fi	Wireless Fidelity
OS	Operating System
ISP	Internet Service Provider

CHAPTER 1

INTRODUCTION

1. 1. Introduction

The application of ICT and Internet in general and use of social media tools in particular has seen a rapid increase in growth of its users in the last decade. The use of social media tools has allowed users of all ages to quickly and easily share information to each other by using different communication applications. In order to keep up in our daily lives, it is safe to say that without social media tools we cannot function effectively in our work space. The popularity of social media tools has led to a rise in the number of internet users and has also affected India greatly. Studies show that India has the second largest number of internet users in the world and is having an exponential growth since 2015.

It is safe to assume that since the creation of social media applications, social media has grown exponentially and developed rapidly to the point that social media applications are created to be more user friendlier than ever, and they are here to stay and will be available throughout human history. The first ever globally popular social media application was Myspace, launched in 2003 by Tom Anderson and Chris DeWolfe and it paved the way in which social media applications would function. In 2004 another social media application was introduced into the world which was at the time known as 'Thefacebook.com' but, was only opened for students at Harvard University in Cambridge, Massachusetts. It allowed users to create their own profiles and have a network of friends which they can communicate and share information and media with, it was mainly used as an education-based network. In 2006, Facebook became available to the world and grabbed the attention of internet users everywhere and quickly rose in popularity. Due to its ease of use, new interaction options with its users and many other features, it quickly became the most used social media application in the world. However, the popularity of YouTube was also quickly rising as users were able to share videos with other users from all around the world.

Social media has changed the way in which we interact and communicate with individuals throughout the world. Even the world's most powerful leaders now rely on social media to disseminate information to their general public. X (Twitter) is the

most popular social media amongst governments as out of 193 U.N. member countries; 187 members have official Twitter accounts and rely on social media application to address its followers on important state of events and news about the government.

It can be also easily observed that even businesses have primarily used social media to promote their products and to reach a much wider audience. In the business side of social media, the consumers can get to know the specifications of the products that they are interested in without having to be physically present at the store. Everything about the products can be questioned through social media which saves the time of the users significantly. Even the biggest business in the world which is Apple (as of 2024) makes their annual launch of their latest products namely iPhone and iPad on the social media application known as YouTube. Social media has driven the way in which we buy and sell products, organize and plan events, communicate with friends and colleagues and has made life a lot simpler.

Institutions have begun incorporating social media applications for disseminating information regarding admissions that are going to opened, exam dates, important events, announcements and activities that are going to take place within the institution quickly to the students and its users. They can easily form groups using social media applications and host meetings and group discussions all within a short period. Social media applications have significantly improved the productivity of its users while both saving time and money of the users.

Social media allows the users to have closer relationships between the libraries and its users. The use of social media tools is growing among libraries by making use of different media tools such as Facebook, Twitter, Instagram, LinkedIn, WhatsApp, blogs, Flickr etc. to name a few. Using these tools the libraries can help to cover and disseminate information quickly among its users about events, exhibitions and celebrations that are occurring in the library. Social media allows its users to connect with each other by forming communities and bridge people together for social interaction. It further allows libraries to promote awareness by publicizing the library resources, its services and products and allows for interaction among the library staff

and its users as a social community. Social media is essential for reaching out to the communities and is a great tool for providing library users with information in an easy and accessible manner.

1.2 Types of social media tools

Web 2.0 and 3.0 has been made compatible with library management software in which libraries have started to provide and utilize different innovative services to the user community by the use of social media tools such as:

i. Facebook

Facebook provides a broad reach and diverse user base as it allows sharing a variety of content formats such as text, images, videos and links. Facebook groups are a valuable tool for building communities. Using these communities, students, teachers and researchers can expand their knowledge and develop collaborative learning skill through peer-learning. Studies have shown that Facebook has helped to improve students' social awareness their self-efficacy and their relations with other students.

ii. YouTube

YouTube is a powerful tool for creating educational content and videos and sharing conference presentations. It can help students, teachers and researchers to understand abstract concepts deeply and more clearly as it allows its users to experience different perspectives and relive different situations that they may not encounter such as historical events, science-based experiments and different real-life situations. YouTube can help weaker students in their studies as it allows the students to visualize their subjects in a video format, which can be useful for visual learners.

iii. LinkedIn

LinkedIn is used by researchers to showcase their expertise and field of interests by allowing to connect with peers and share their related research content. LinkedIn is a powerful tool for building collaboration, to showcase one's research achievements and for finding job opportunities.

iv. X (Twitter)

X (Twitter) is popular and known for its real-time engagement and short messaging capability. It allows for dissemination of information quickly and allows networking with different experts in their interested fields and participate on relevant discussions through the use of hashtags which twitter (X) is famous for. Twitter is one of the most popular social media tools as it is also used by powerful world leaders to communicate with the public, used by large companies and industries to promote and share their products and new features. Twitter (X) uses hashtags so that users can communicate and share their opinions and voice their concerns about certain topics and through the use of these hashtags, different powerful movements have been formed.

v. Pinterest

Pinterest is a visual bookmarking site and is primarily used for sharing and categorizing images found online. Pinterest founder Silbermann stated that." Pinterest is a catalogue of ideas rather than a social networking platform." Pinterest is a popular site for teachers as it allows them to post, collect and group teaching resources and ideas which they can use and share with others. It allows them to create theme-based pinboards which makes it easier to search for their desired topic.

vi. Blogs

Blogs are a great tool for students as it can improve their writing skills and build their confidence as writers. Blogs encourage students to experimenting, risk-taking and take ownership of their writing which will help them become better observers of others' writing. Teachers can use blogs to write their modes of teaching and its impact on their students which can be a useful tool for other teachers. Researchers make use blogs to writing their findings and state of progress on their research in a well-kept record. This can educate other researchers and facilitates collaboration among like-minded researchers.

vii. WhatsApp

WhatsApp has become a primary method of communication as it allows user to interact with their peers by send and sharing not only text but other useful digital formats such as audio, video and images. WhatsApp has the ability to create groups that are like communities where group members can interact with each other on their points of interest and knowledge. Teachers can make WhatsApp groups to communicate with their students to disseminate information about their studies and make plans and guides to help educate their students. WhatsApp is an important tool for researchers as it allows their work to be broadcasted on WhatsApp groups which can be used for reaching to a much larger audience.

viii. Instagram

Instagram is a visual-based social media tool and is more appealing to the youth as it allows users to share engaging and appealing visual contents such as short videos, images and infographics to catch the interest of its audience. It is useful for researchers by showing glimpses of their research and experiments to a younger audience who may one day be interest in the field of research.

1.3. Significance and scope of the study

The emergence, growth and popularity of social media tools have largely expanded the horizon of teaching, learning and research. With the development of library 2.0, social media tools have been effectively integrated in library websites to provide the user community to gain wide access to various information resources and services provided by the libraries. This has further improved the communication among the library staff, resources and community of users. The present research problem is limited to 9 (nine) Central Universities of North East Region excluding Central Agricultural University, Imphal which is specialized in nature and tries to make an in-depth study of University Libraries adopting social media tools in reaching the user community and optimal use of library resources and services. It is in this context the present research problem assumes great significance. The list of Central University Libraries is listed below, which are:

Sl. No.	Name of University	Library website	Using Social Media
1	North-Eastern Hill University	www.nehu.ac.in/library	No
2	Manipur University	mulibrary.manipuruniv.ac.in	No
3	Tripura University	tripurauniv.ac.in/site/index.php/en/central-library-en	No
4	Sikkim University	library.cus.ac.in	Yes
5	Assam University	www.aus.ac.in/library	Yes
6	Mizoram University	lib.mzu.edu.in	Yes
7	Nagaland University	library.nagalanduniversity.ac.in/	No
8	Rajiv Gandhi University	rgu.ac.in/library/	Yes
9	Tezpur University	www.tezu.ernet.in/Library/	Yes

Table 1.1. List of University and social media used.

Source: Data collected from concerned Central University Library Website.

i) North-Eastern Hill University (NEHU):

North-Eastern Hill University (NEHU) is a Central University located in Mawkynroh-Umshing, Shillong. It was established on 19th July 1973 and has two academic campuses, one is located at Mawkynroh-Umshing, Shillong and the other one is located at Chasingre, Tura, however Shillong is the headquarters of the academic and administrative functions. The Central University has several academic departments, central library and administrative offices. NEHU provides a wide range of general and professional courses along with doctoral programs in various disciplines. The department of Library and Information Science was established in 1985 and was the first to introduce a two-year integrated Master's degree in Library

and Information Science. Since 1986, 500 students have got their MLIS degree from the department and approximately 15 students have been awarded their Ph.D. degree.

ii) Manipur University:

On June 5th, 1980 Manipur University was established as a State University under the Manipur University Act 1980 and later became a Central University on October 13th, 2005. The Central University is located in Canchipur, Imphal. Manipur University houses nine different schools of studies, forty-seven departments and seven Centres of Studies to different Schools of Studies. 119 colleges are affiliated under the Central University. The department of Library and Information Science was established in 1986 and offers MLIS degree and Ph.D courses.

iii) Tripura University:

Tripura University is located at Suryamaninanga, Agartala. Tripura University began as a post-graduate wing of Calcutta University in 1976; it was established to a State University in 1987 through the Tripura University Act and was elevated to a Central University in 2007. The Central University is affiliated to 52 Colleges in which 27 are General Degree Colleges. 19 Professional Degree Colleges, 2 Technical Colleges and 4 Polytechnic Institutes. Tripura University has several academic departments such as Science, Literature, Social Science, Music and Fine arts, Commerce, Law and Management and Information Science. The department of Library and Information Science was established in 2016 and offers B. Lib.I.Sc courses with 30 seats, M.Lib.I.Sc with 25 seats and a Ph.D course with 6 seats. The department is actively organising and taking part in national and international seminar and conferences along with other co-curricular activities in the University.

iv) Sikkim University:

Sikkim University was established in 2007 by an Act of Parliament of India and is located in Gangtok and Yangang. The University provides various undergraduate, postgraduate and doctoral programs among the schools of Human Science, Language and Literature, Life Sciences, Physical Sciences, Professional Studies and Social Sciences. Sikkim University has implemented the Learning-Outcomes-based

Curriculum Framework (LOCF) in accordance with the National Education Policy (NEP), 2020. The Department of Library and Information Science has a seat intake of 10 seats and offers the course of Master of Library and Information Science. The department is also active in organising seminars and various activities for its students.

v) Assam University:

Assam University, established in 1994 by an Act of Indian Parliament is located in Silchar, Assam. The university provides undergraduate, postgraduate and doctoral programs on various departments. The university was established to cater to the educational needs of the diverse population of Assam as it is home to various ethnic and linguistic communities. The department of Library and Information Science was set up in 2009 and started the first batch in 2010. Master Degree in Library and Information Science course is provided with an intake capacity of 25 students and M.Phil. and Ph.D. programmes are also provided.

vi) Mizoram University:

Located on the outskirts of Aizawl in Mizoram, Mizoram University was established by an Act of Parliament and became operational on 2nd July 2001. The university comprised of seven postgraduate departments when it was established and over the years have achieved significant growth in academic programs, infrastructure and other important services and now has 39 active academic departments offering undergraduate and Ph.D. programs. 40 colleges are affiliated with Mizoram University along with one constituent college. The department of Library and Information Science was established during the 2002-2003 academic session and is offering a two-year integrated MLIS as well as Ph.D. programs. The department has a well-equipped ICT Laboratory for MLIS practical classes where students learn different softwares such as Dreamweaver, OCT software, KOHA etc.

vii) Nagaland University:

Nagaland University is the only Central University in Nagaland was established in September 6th 1994. The university has three campuses which are the headquarters at

Lumami in Zunheboto District, Kohima Campus at Meriema in Kohima district and Medziphema Campus (School of Agricultural Science) at Medziphima in Dimapur District. The university comprises of 44 departments offering Undergraduate, Postgraduate and Ph.D. programmes in different disciplines. As Nagaland has three campuses, each campus has their own Library covering different departments in each library.

viii) Rajiv Gandhi University:

The university was formerly known as Arunachal University and started functioning on 1st April, 1985 and began its academic journey in 1988 with 48 students and 18 faculty members. It was later renamed to Rajiv Gandhi University in 2005 and was converted into a Central University on 9th April, 2007. It is the oldest university in state of Arunachal Pradesh. The university currently has 44 departments of various subjects and 45 colleges are affiliated under Rajiv Gandhi University. Rajiv Gandhi University central library provides access to knowledge and information to its users through journals and e-journals, full text articles which can be browsed and downloaded. The central library is currently using KOHA which is an open-source library management software and also implements RFID technology for its circulation and security operations. The department of Library and information science started its Academic Session from 2024-2025 offering 2-year integrated Master of Library and Information Science (M.LISc) course.

ix) Tezpur University:

Tezpur University was established on January 21st 1994 and is considered to be one of the outcomes of the Assam accord. It offers approximately 70 academic programmes through different departments. Tezpur University Central library started its functions in 1994 and has become a vital hub for its users. It caters to both educational and research need of the users. The central library currently has a very vast collection of print books, e-journals, e-books, print journals and online databases along with back volumes of journals. The central library is and automated library with RFID technology integrated for circulation and security.

1.4. Review of literature

Social media has become the most effective tool among the academic community in the free flow of information which is academic in nature. The present study is an attempt to investigate and scan the available literature and fill up the gap which has not been undertaken so far.

1.4.1. Social Media: Impact On Education

Fatte (2024) explores how social media has affected the collaborative learning and performance in college libraries in Goa. The study states that college libraries have evolved into centres not only serving as repositories but also a hub for the community to engage and learn. The study further states that with the effective use of social media, libraries can help to promote initiatives for collaboration, support research projects and sharing knowledge among its users. The study finds that group learning or collaborative learning using social media has enhanced the performance of learning showing that collaborative efforts among students develop a higher level of engagement and achievement. Social media has a certain aspect of enjoyment when using it and the study finds that this can this is one factor that drives social media engagement among users. The study concludes that institutions and library services can bridge the gaps in student engagements as they provide a better and more inclusive way for learning and providing a better learning environment as they reduce the implications of remote and hybrid learning among its users.

Mali (2024) explored the ways in which social media technology has enhanced the library and information services. The study delves into how ICT has greatly impacted libraries and information centers by the use of computers, smartphones, laptops, interactive whiteboards, tables, notebooks, e-readers and scanners. The study also highlights how emerging technology and cloud-based computing has drastically changed the social and economic environment of the libraries and how different technologies such as RFID have improved the functionality and security of the library for its users. The study also further delves into Artificial intelligence and machine learning and how the implementation of AI can offer support to the library users in terms of recommendations of documents and

for providing consumer inquiries through chatbots and virtual assistants. The study finds that with the constant evolution of social media tools and technology LIS professionals as well as librarians need to keep themselves updated for promoting services between the users and the libraries.

Soans (2024) conducted a study on social media and sustainable education stating that sustainable development plays a vital role in today's developing world and that education is one of the major goals needed to be achieved in sustainable development. The study examines the impact of social media towards its contribution on sustainable education and evaluate the positive and negative impacts of social media in a sustainable educational environment.

Punith (2023) conducted a study on the use of social media in undergraduate colleges for the promotion of library resources and services and stated that in the early stages of social media, social media was very limited in its functionality as it was limited to only exchanging images and certain audio formats. Now social media has evolved so much that it has broken all boundaries for commination and the exchange of information. Social media has allowed users to reach a larger group of people in very less time and this has leh librarians to implement and promote the resources and services of the library to the communities in social media. The study further finds that the majority of undergraduate students deemed social media usage to be an important factor for library resource and services. The findings state that undergraduate students agreed that social media improves the importance and reputation of library resource and services and that social media can be a valuable provider of authenticated services to authenticated users. WhatsApp is one of the most popular social media tools used by the students and the study further finds that the implementation of WhatsApp in library services for promotion of both library resource and services as well as for quick searches of information in various fields through WhatsApp Artificial Intelligence is very useful for the users.

Omeluzor (2019) conducted a study on social networking tools in library service delivery and established that new trends are being introduced in library service delivery in using social networking tools. The study reveals that enhancing

teamwork and promoting effective communication and interaction between librarians and library users is possible through the use of social network tools. The study concludes that to attract patrons to the library and enhance the marketing of the library proper utilisation of social networking tools is needed to better provide its services to their users.

Shah (2019) conducted a study on the use of social media tools by the academic libraries in India. The study finds that social media tools are not commonly used among the academic libraries in India which may be due to lack of interest, lack of awareness, lack of skills or time among the concerned librarians. However, Facebook and Twitter are commonly used by a good number of universities to highlight their presence on social media. It states that to stay relevant in the present technological era, academic libraries need to use social media tools more to reach their users to communicate and serve their users effectively. It further states that libraries need to promote their services and products online by having a strong presence on different social media platforms.

Chitumbo (2015) studied social media tools for academic library services and found the majority of the studied users are already engaged on social media tools however instead of academic purposes social media tools are commonly used for social and entertainment purposes. Facebook, Twitter, YouTube, LinkedIn, Myspace, WhatsApp and Skype are the more popular social media tools among the users studied. It concludes that institutions need to make a proper road map on the adoption of social media tools. It further recommends that to improve the adoption process institutions need to provide adequate internet facilities sensitization programs and skill training on the use of the appropriate social media tool.

E.M.M, Chitumbo (2015) on the study of social media tools for library service delivery in higher learning institutions found that more than 60% of the students under the study were fully aware of social media tools and make use of it in their academic work. Facebook, Twitter, YouTube, LinkedIn and Myspace were the more popular social media tools among the users for their academic work. A majority of the users appreciate the benefits of using social media tools and would

greatly support its integration in their institutions. The study also highlights the potential challenges faced such as limited Internet access points, poor Internet connectivity and lack of awareness of existing and new social media tools by most librarians and its users.

Owusu-Ansah (2015) conducted a study on the application of social media and web 2.0 for research support in selected African Academic Institutions and found that social networking sites provide a new platform for reaching students beyond the traditional library building. The resources of the library can be accessed by the students in the comfort of their homes through different websites. The study shows that social media tools can be used effectively to support research. The study found that the use of social media differs in implementation and initiation among the different libraries under the study. The study concludes that academic libraries which have implemented social media tools use a number of different tools to reach the different user groups.

LeBlanc (2014) on the study of web 2.0 and social media applications for academic libraries stated that web 2.0 tools are providing a critical part for academic libraries to stay on top of the ever-changing technologies as well as new ones that are coming along. The services provided by the libraries need to evolve further into digital stage and states that implementing online environment will take a both financial and time investments and commitments on the librarian's side. The study finds that web 2.0 and social media tools are the key to providing a personalized and collaborative library that users can go to or that can come to them.

Parveen (2011) studied use of social networking sites in making awareness among the library and information science professionals of university libraries of U.P found that the majority of LIS professional are connected to one another by Facebook to share their experiences, education and views. It further states that Facebook has become one of the largest platforms in the world for sharing real time information and allows its user to communicate and collaborate with one another in a virtual community.

1.4.2. Social Media: Impact of Learning and Capacity Building

Azzahra., et.al. (2025) conducted a study on the role of social media in knowledge management and found that social media platforms allow companies to collect and share information to their desired users which can influence the user's decision making-processes. The study discusses the role of social media in knowledge management through identifying trends and gaps in the knowledge management and to provide the best practices on acquiring credible information when using social media.

Essien (2025) studied the relationship between social media multitasking, academic performance and time management as a moderate variable. The study shows that the average of teens using social media is 9 hours daily which can be linked to negative impacts in their academic performance leading to poor grades and how, through the effective use of time management can minimize these distractions to enhance their academic outcomes.

Maligga (2025) studied the role of social media in education finds that social media has played a significant impact on education by enhancing communications, collaboration and access to print and digital resources which leads to the improved learning for students and educators. The study concludes that integration of social media and newer technologies can improve education, promote innovation and make the students ready for the digital era.

Sahoo (2025) explored the influence of social media in promoting collaborative learning and revealed the advantages and challenges faced when using social media for learner engagement, user interaction and knowledge and information sharing. The study finds the importance of instructor involvement in structures activities and selection of the right platform for enhancing educational outcome and provides guides for educators to integrate social media into learning environments.

Shabbir., et.al. (2025) conducted a study on social media as a learning tool and found that institutions and schools need to develop social media training and rules to help students on the use of social media platforms for their education as students struggle to focus on their studies due to the distractions from social media.

Shareef (2025) studied the impact of social media on education and exploring the role of social media in learning and engagement and finds that the future of learning will increasingly be connected to social media and can be used to greatly enhance education. The study finds that social media encourages students to engage in projects with the implementation of search and learn method. The study suggests active participation of teachers through groups on social media.

Wang (2025) studied the impact of social media on project-based learning and found that social media played a crucial role in project-based learning by enhancing communication and by promoting sustainable education. The findings of the study indicate that social media enables real time collaboration, sharing of resources which leads to the increased motivation of students, teachers and researchers and also found that effective integration of social media can greatly enhance learning in project-based learning.

Ramos (2024) found that social media encourages collaborative learning among students and the active participation of educators to act as facilitators and researchers can greatly enhance the learning capacity of students. The study also finds that the active participation of teachers has a great positive consequence on a student's education.

Alshalawi (2022) conducted a study and found that students appreciate and accept the educational advantages provided by social media for their studies as they enhance the understanding and pinpoint areas that require attention for their future studies. The study further outlines the trends in demographics, the methods and theories which include educational levels and different areas of learning.

Kondagurle (2018) conducted a study on the use of social media networking in academic libraries and services in modern age and finds that social networking sites are new technology which offers different outreach options for academic librarians. Social networking provides a new platform to reach the users beyond the traditional library building. The study further states that outreach attempts are likely to be effective if they are not based on targeted and well thought out programs. The study further shows that quantitative and qualitative research needs to be done on the

use of social networking tools as a form of student outreach program to determine the effectiveness within the academic libraries.

1.4.3. Social Media: Impact on Research Development

Raffael (2026) studied social media platforms' influence on academic research to state that social media platforms are playing a crucial and central role in shaping today's information ecosystem however access to internal data and even publicly visible content still remains tightly restricted for academic researchers. It further studies and examines how the industry influence operates and how researchers' reliance on platform may amplify the industry influence. The study suggests that the science community needs to adopt a stronger ethical standard so that they can ensure the research provided on social media platforms serves the interest of the public rather than the platform's priorities.

Hapsari., et.al. (2023) found on his study that universities, library and departments need to include, design, develop and provide education to users on the use of social media for scientific communication and also highlights the features and advantages of social media. The study also suggests the use of social media in academic especially for researchers in their research activities.

Kumar (2023) analysed and studied the impact of social media in context to research and development and states that social media has become a crucial element for research and development. Different social media platforms have been implemented by educational institutions for instructional purposes. The study also states that scholars must use social media cautiously and recognize the advantage and disadvantage of the utilization of social media in research and innovation

Shiloh (2022) conducted a study on the usage pattern and preference of social media tools among researchers and academicians using a structured questionnaire and found that the majority of the researchers are aware of social media tools that promote scholarly communication such as Bit.ai, CiteULike, EduGeeksClub and SSRN. The study finds that the major deterrent of social media is addiction however, if used right, social media can be a viable tool which can enhance collaboration and contribute quality research.

Gorska., et.al. (2020) studied the impact of social media on global research efforts. The study further finds that social media can act as a means to create a digital presence in both academic and business and also finds that the younger generation of researchers are more active on social media platforms.

Divya (2019) studied the use of social networking tools and services among research scholars at the University of Kerala and found that the majority of the respondents access social network sites from the department or university library. Showing that the internet facility needs to be strengthened at the campus library. Majority of the respondents are daily users of the internet for research and further found that emails are preferred by the research scholars. It concludes that social network sites are an important area of study and has become an important component in the academic activities of research scholars.

Kapoor.,et.al (2007) on studying the advances in social media research in context to the past, present and future state the social media comprises of the communication website which facilitates forming relationships between users from diverse backgrounds for enriching social structure. The study finds multiple emerging themes in the existing corpus which will further enhance the understanding of the advances in social media research. The study is made to help avoid duplication by future researchers to help shape researchers for this field.

Anuradha (2016) conducted a study on social networking and its application to academic libraries in this digital era and found that before implementing social networking tools in libraries a suitable and strong evaluation plan needs to be looked into first. Conducting research and experiment on social networking from the different point of view on libraries can lead to successful implementation of social networking tools in academic libraries. The study concludes that LIS professional need to be aware of cyber laws as they can provide awareness programs relating on the effective use of the different social networking sites.

Ashraf (2016) investigated the scholarly use of social media by doctoral students by collecting data through a structured questionnaire and found that the majority of the student are aware of and use social media for scholarly use however,

the awareness of social media is confined to the popular social media applications. The study also finds that there is significant disciplinary difference in the use of social media among the students where specific social media platforms such as BiomedExperts are the more popular social media in science.

Boateng (2016) on the study of the impact of social media on student academic life in higher education states that social media has rapidly change the communication setting in today's social world. The popularity of social media has greatly influenced the student's academic life. The study finds that social media is widely used by the students of higher education institutions and that social media is a great contributor to the development of a student's academic life.

1.4.4. Social Media: Information Dissemination and Marketing

Madhusudhan (2024) on the study of social media in libraries, reviewed 25 studies between 2018-2023 has found the importance of implementing social media for library resource and services. The study highlights how social media is three dimensional in which communication, promotion and services are the important parts. The study finds that the reference service is the most used library service and that libraries need to catch up on implementing social media for effective use in the library and its services. The study also addressed that even though library professional positively perceive implementing social media, lack of training, management and skill obstructs them. The study concludes that libraries need to prioritize using different forms of social media application on multiple platforms as this can generate new ideas for future library strategies and change the image of libraries to learning hubs for its users rather than just information centres.

Sahu (2024) conducted a study on the significant role of social media tools for library services and how social media has changed not only our daily lives but also the way we interact, communicate and access information. The study dives deep into the evolution of social media, the origins of social media and how the term 'social media' was first used in the early 2000s. The study further categorized social media into six types which were social networking, microblogging, media sharing, bookmarking, forums and messaging apps and how they enable users to share

information among themselves through the use of these applications. The study finds that social media has increased the visibility and reach of its user base. It also notes that social media is a very cost-effective marketing tool for promoting the library services as it allows libraries with limited budgets to advertise their services to a larger audience without overspending on marketing. The study also finds that social media tools provide better engagement with its users, and can be a great tool for receiving feedback for library events and programmes.

Saputra (2024) studied how social media can be used as an effective tool for promoting and raising public awareness to the services of the library and how they can build stronger relationships between the library users and its services. The study shows the different social media tools such as Canva, Adobe Spark, Piktochart, Animaker, Trello and Google Analytics which can be used by the library to create content for promotional, educational and entertainment purposes as these social media tools are well equipped to provide visually appealing content for the promotion of the library services. The study also highlights other social media tools such as Instagram, Twitter and TikTok and how they are the most popular social media used along with the advantages of each social media tool. The study finds that libraries need to strategize to use eye-catching visuals and interact actively with its users to build a more engaged community to increase the public's interest in reading.

Goswami (2021) explored the role of social media in the library and listed the characteristics of social media to being easily accessible, the ability to design and distribute audio and visuals and opens up the ability for direct access for its users. The study also notes that social media is inexpensive and a powerful as it allows users to communicate with a large number of people simultaneously. It further states that social media is needed to enhance the outreach of the library and its services by spreading awareness of events and programs conducted by the library through different social media applications. As social media has no time and physical boundaries, the users can search and gather information quickly through popular social media platforms such as Facebook, WhatsApp, X (formerly known as Twitter) etc. The study concludes that social media allows libraries for marketing their resource and services, sharing library events, news, research among many other

activities and that social media can be used as both an important medium for communication as well as a medium for information about the library services and resources.

Shashikiran (2021) studied the impact of social media services and its use in libraries and library services and how users engage with library services through the use of social media. The paper focuses on popular social networking sites such as Facebook, Twitter, Wikis, Library thing, LinkedIn and Myspace. The paper suggests that social media can be used in the library for multiple purposes such as promoting library events, the different types of library services available for its users, the resources and collections available within the library, for enhancing the delivery service of resources and services for receiving complaints, suggestions, enquiries and for feedback of its users. The implementation of social media services in library services comes with challenges that are mentioned in the study some of which include wasting the time of library staff and personnel as social media requires a considerable amount of time and commitment, the need for a technical expert as certain social media services require some amount of technical knowledge for proper use of its services, limited funds can hinder the growth and proper implementation of social media services and the constant need for a stable internet connection. The study concludes that although there is large number of social media and social networking sites to be used, if one is familiar in the smooth operation of a particular social media tool there is limited differentiation between how they operate and one can quickly familiarize itself on their use. It also found that social media is a powerful and important tool for the dissemination of library services, updates, news and content collection for its users.

Aina (2019) on the study of use of web 2.0 tools and services by the library professionals in Lagos state and tertiary institution libraries found that web 2.0 tools are available and are used to deliver service by librarians in Lagos state. They are mostly used for communication with each other for entertainment and leisure. The study shows that web 2.0 tools are an important source of knowledge and that technology should be employed better for use by librarians to provide better essential and innovative services to its users.

Chakrabarti (2019) studied social media and libraries on a symbiotic relationship for the 21st century librarianship and found that a symbiotic relationship among the libraries and social media is needed to work together to present the best of the physical and digital environment. The study further states that social media can help the libraries to promote and develop their services, resources and events and to communicate with their users on a larger scale. With the rise of popularity on using social media, librarians need to be properly trained to be updated so that all problems faced can be easily resolved. The study concludes that printed documents still play an important role and that social media can be used as a powerful tool to provide additional pathway to content acquisition for the users.

Booker (2017) on the study of how academic libraries can leverage social networking to popularize their services found that social networking has become and integral part of people's lives. Social media has provided libraries new opportunities to communicate with its users and market library services without the need of much capital. However, for social networking to be successful, a strategy needs to be maintained and created to provide users with relevant information in a short period of time. The study concludes that libraries like other organizations need to consider different strategies of marketing to get the maximum exposure to its users on a wider scale.

Jones (2016) conducted a study on library 2.0 and finds that social media has become a key tool for marketing, promotion and communication among organisations and their users. Social media can be utilised by libraries in the modern information world where users are seeking new information on a regular basis. Libraries can make use of social media as an effective tool for the promotion and marketing of libraries and its services to further the education environment of its users. It further states that library staff needs to be fully aware of the protocol and potential of different social media tools. It concludes that involving students' opinion can be beneficial in terms of coming up with content for the library.

Parabhoi (2017) on studying the availability of different types of social media tools and social media applications in library services states that ICT has made

revolutionary changes in the field of library information science and also greatly contributed to the growth of library management software. The study further dives deeper into different social media tools such as social networking sites like Facebook, myspace, YouTube, LinkedIn and blogs, wikis, podcasts, forums. The study finds that although some social media tools may be hard to understand at first, the majority are using user friendly interfaces for easier understanding of their operations. The study concludes that although social media tools have significant importance in the field of library science and library, it gives importance on the need of knowledge regarding social media tools for LIS professional in both the field of library science and library.

Singh (2016) on the study of applications of social networking sites in marketing and promotion of library services finds that need of library users must be changed with the impact of technological changes and every changing needs of the library users. Libraries can promote their service and resources through their library websites. The study claims that people are highly active on social networking sites such as Facebook, Twitter, LinkedIn, blogs etc. so libraries need to make use of these popular sites and use it as a platform to reach new and old users and to be able to reach the maximum users of the library.

1.5. Research Gap

After reviewing the relevant literature, although some research studies have been undertaken on Social Media Application in the libraries, very few publications are available on social media application in University Libraries of India in general and the North East region in particular. Since no research work has been undertaken on this topic the scholar has attempted to take up this research problem to fill up the research gap.

1.6. Research Design

1.6.1 Statement of the problem

Social Media Application in libraries in general and University libraries in particular connects its communities in providing access to library resources and services. This

has made the dissemination of information to become very easy through Social Media tools. Considering its present-day importance, the scholar is motivated to take up the research problem on Application of social media Tools in Central University Libraries of North East Region in the greater interest of students, faculty and research scholars.

1.6.2 The objectives of the study:

1. To assess the present scenario of social media tools and its applications in the 9 (nine) Central Universities of North East India.
2. To elaborate the benefits of social media tools in teaching, learning and research.
3. To present the technologies associated with social media tools and its application through library web sites.
4. To propose the most relevant social media tools for Central Universities which are dedicated to the development of academic and research activities.

1.7. Research Methodology:

The present research uses a structured questionnaire to collect the data from the users, along with two other methods which are survey method and case study method for studying and research of the different library websites and applications incorporated by the Central Universities under the study.

1.7.1. Data Collection:

i. Questionnaire Method:

A questionnaire was designed and was distributed to 100 students of each Central University to get their feedback of the effective use of social media Tools for their teaching and learning activities. This has further facilitated to know the deficiencies and problems in offering these tools and library services from these 9 Central Universities.

ii. Survey Method

The scholar on the study investigated a detailed survey on the present library websites of 9 Central Universities in North East India and make an assessment

of the effective use of social media tools. The survey identified the strength and weaknesses of the libraries under study.

iii. Case Study Method

The scholar attempted to make a detailed study of the best University Libraries in India adopting social media tools for teaching learning and research. The experiences gained from other libraries were useful to suggest the appropriate social media tools which can be implemented by the Central Universities of North East region.

1.7.2. Data analysis and interpretation

Data collected from the study were properly analysed and interpreted so as to derive the appropriate findings and special emphasis is given for user's satisfaction, frequency of use and most demanding social media Tools for the academic development.

1.8. Chapterization

The present study comprises of the following chapters:

Chapter 1: Introduction

A brief introduction of the research topic, introduction to social media tools and how they are utilised in different aspects of life, it's definitions and impact on libraries, different types of social media tools, significance and scope of the study, statement of the problem, the objectives of the study, methodology and review of literature

Chapter 2: Social media: It's impact on Teaching, Learning and Research.

This chapter explained the different types of social media used and what kind of impact does social media have in the scope of teaching, learning and research.

Chapter 3: Central Universities Libraries and their Application of social media in North East India

This chapter discussed the different types of social media tools implemented by the Central University Libraries for its users.

Chapter 4: Data Analysis and Findings.

This chapter provided details about the method of data collection, the details of the collected and analysed data, the findings according to the objectives of the study etc.

Chapter 5: Suggestions and Conclusion

The present research problem as a whole made some suggestions needed for better utilization of social media tool in teaching, learning, research to make use of library services effectively and efficiently.

Bibliography:

The bibliography is provided and arranged based on A.P.A. 7th edition style manual

After discussing the need, significance and thorough review of literature searched on the present chapter, the next chapter shall discuss the present scenario of Central University Libraries in North East region.

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CHAPTER 2

SOCIAL MEDIA: IT'S IMPACT ON TEACHING, LEARNING AND RESEARCH

2.1. Introduction

Social media has become a powerful tool that surpasses borders to bring people together. It has changed the reach of research by making complex topics more accessible and open to everyone and has also bridged the gap between researchers and the general public as scientific knowledge and research was confined to academic journals and conference before the boom of social media tools.

In this digital age, social media has become one of the most powerful tools extending far beyond entertainment and personal communication. Social media tools have seen a rapid growth over the years which have revolutionized the way in which we create, share and consume information for teaching, learning and research. Social media tools have become an indispensable tool in the field of teaching, learning and research as platforms such as YouTube, WhatsApp, Facebook, X (Twitter), Instagram provides a space where users can interact with other students, teachers or scholars and they can access multimedia resources from different platforms, arrange study or work collaboration with other students, teachers or scholars. It has enabled its users to engage in discussions beyond the walls of the classroom. Social media tools enable researchers to disseminate information and findings rapidly by connecting to global networks to enhance the visibility and the impact of their work. Social media tools encourage active learning, creativity and develop the users' essential skills in digital literacy and critical thinking.

Social media tools have significantly reshaped the way in which we communicate, share and receive information for teaching, learning and research. YouTube is a video sharing social media tools which provides access to a wide variety of demonstrations, tutorials, lectures on different topics and subjects. It is a user driven social media platform where users help other users in understanding complex topics and subjects more understandable and easier to engage for the learners. WhatsApp is one of the most popular social media tool and messaging application as it supports instant communication along with the ability to create groups for group discussions and sharing of related study materials. Facebook and LinkedIn are very popular social media platforms where users can join professional groups and associations to

gain access to a wide network of like-minded researchers, educators and practitioners. X (twitter) has a micro-blogging format and is one of the most powerful social media tools regularly used by even Presidents on different nations to convey their messages quickly to the general public. It also plays an important role in teaching, learning and research as it allows quick and easy sharing of ideas, updates and resources and allows its users to post announcements, short lessons and links to other important educational content. X (twitter) discussions are often followed by popular hashtags and threads which enables researchers to disseminate their findings rapidly by connecting to a global audience. Blogs provide a platform for sharing ideas, resources and discussions for teachers, students and researchers and also promotes critical thinking, improve writing skills and encourage creativity among its users by expressing their opinions and engaging in discussions.

2.2. Social media tools used by students, teachers and researchers

Among the many social media tools available these following are the most widely used social media tools by students, teachers and researchers.

i. **Facebook:** Facebook is primarily used by academic librarians to advertise library hours, its location and the website of the library. It is also used to post reminders of the available resources at the academic library. Since the majority of library users are on Facebook, it is a simple but powerful tool for creating event invitations for programs and can also serve as an additional forum for promoting library activities and services. Library catalogues can be embedded into the Facebook page which can allow the users to access the library catalogue contents without the need for the student to visit the library's website. Academic librarians make use of Facebook to market library services through the library fan page.

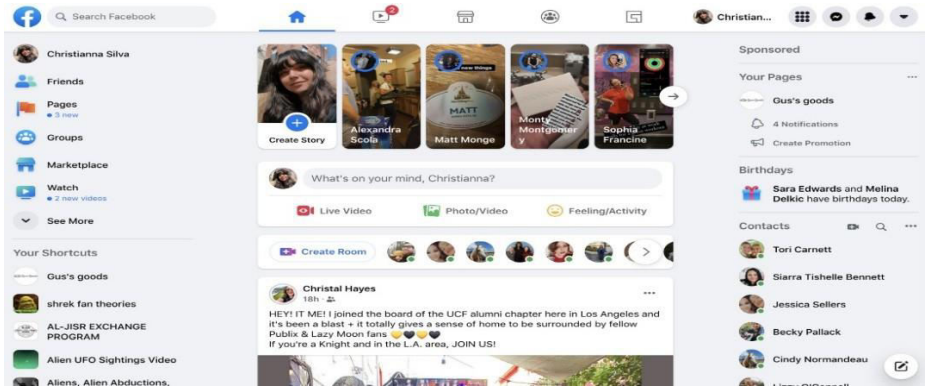


Figure 2.1 Facebook Home page

(Source: https://in.mashable.com/tech/24761/how-to-create-a-business-page-on-facebook)

ii. **YouTube:** Academic libraries make use of YouTube for uploading and sharing instructional and educational videos. The videos are then attached with links to the library website for users requiring additional information on their interested topic or subject. Videos can be uploaded to provide a virtual tour of the library, its services and different sections without the need of the user to actually be present in the library. Video guides on how different sections of the library work can be seen through the educational videos posted by the library. YouTube is a powerful social media tool which allows its users to upload videos of any content on different formats.

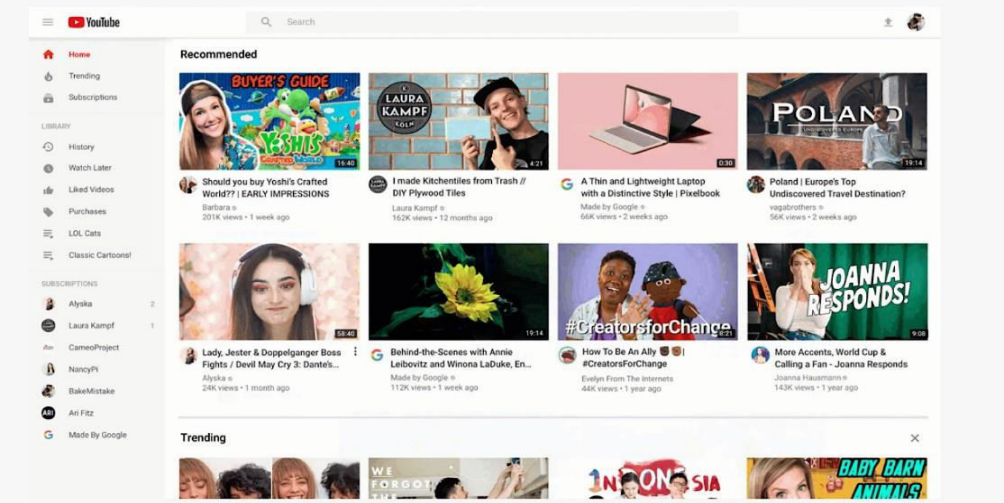


Figure 2.2. YouTube Home page

(Source: https://www.searchenginejournal.com/youtube-launches-a-redesign-of-its-desktop-homepage/334527/)

iii. **LinkedIn:** LinkedIn is a social network much like Facebook but targeted towards professionals. It allows the professionals to connect with each other by adding them as "connections". Private messaging is integrated and it also allows the users to neatly lay out their professional experiences and achievements in their profile to show off to other users. LinkedIn serves as a resource to assist library users and also as a tool for career development. It is intended to cater the platform for professional members to find jobs, people and business opportunities to the interest of the users.

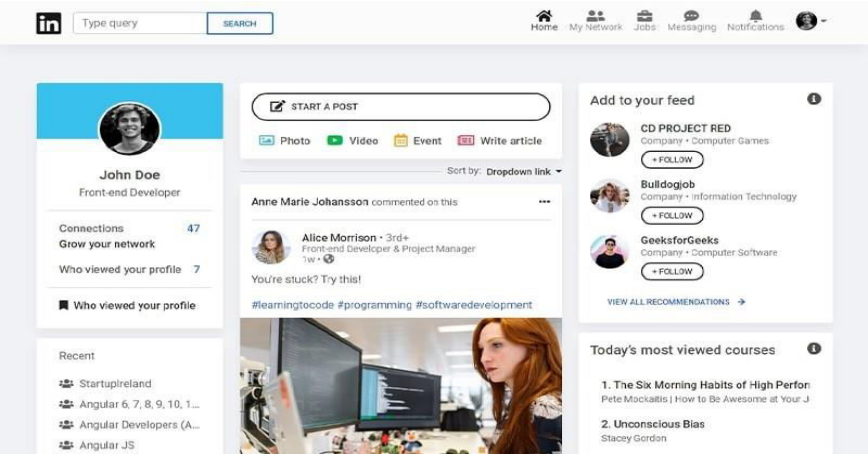


Figure 2.3. LinkedIn Home page

(Source: https://mdbootstrap.com/docs/standard/lab/linkedin-homepage/)

iv. **X (Twitter):** X (Twitter) is an online news and social networking site where people communicate in short messages called tweets. Tweets are short messages for its users and shared to anyone who follows you on Twitter. Twitter can also be described as micro blogging. Twitter has an active user base of millions of people and libraries are using twitter to disseminate information about the activities and services of the library to the library users. People use Twitter to disseminate information such as links to news articles about themselves and provide links to their blog posts.

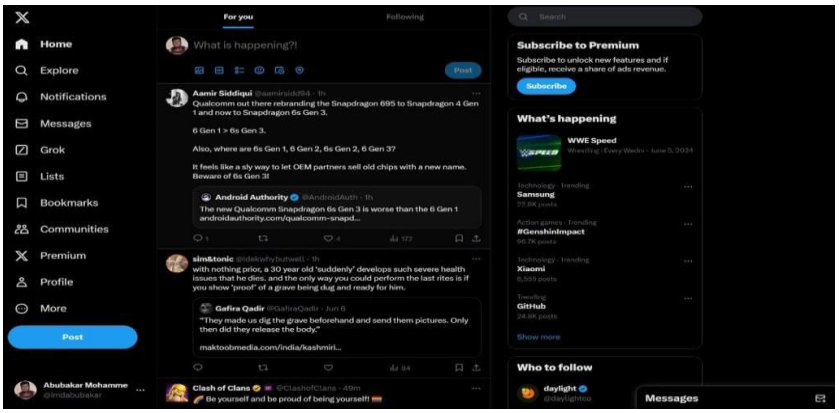


Figure 2.4. X (Twitter) Home page

(Source: https://beebom.com/what-is-x/)

v. **Pinterest:** Pinterest was launched in March 2010 and it is a social media tool which allows its users to share images of goods, projects and services and to visually discover the same or new interests by browsing images that other users have posted. It is a photo sharing website can be defined as a web-based pinboard or bulletin board but with a much greater and more powerful organizational functionality. Users can save, upload, sort and manage their images which are known as pins and other media content through collections known as pinboards. User can browse other user's contents in their feed and save their individual pins to their own boards using the "Pin it" function.

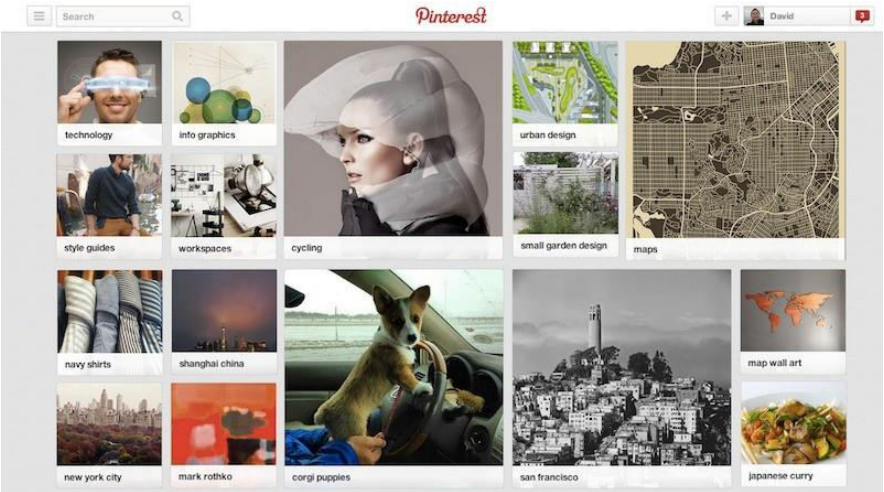


Figure 2.5. Pinterest Home page

(Source: https://techcrunch.com/2014/01/27/pinterest-rolls-out-a-sneak-peek-of-its-new-interest-based-homepage/)

vi. **Blogs:** Blogs which means “Web log” is an online journal or informational website that follows an outline of reverse chronological collection of personal commentary and links. It displays information in which the latest posts appear first. Blogs are easy to create and can include text, pictures and videos. Blogs can be easily accessed from anywhere with an internet connection. Blogs can be of different types and the more popular ones are Fashion blogs, Food blogs, Travel blogs, Music blogs, Lifestyle blogs, Fitness blogs, DIY blogs and Sports blogs. Blogs can be community blogs, personal blogs, family blogs, liblogs to name a few. Word Press, Type Pad and Blogger are popular blogging tools.

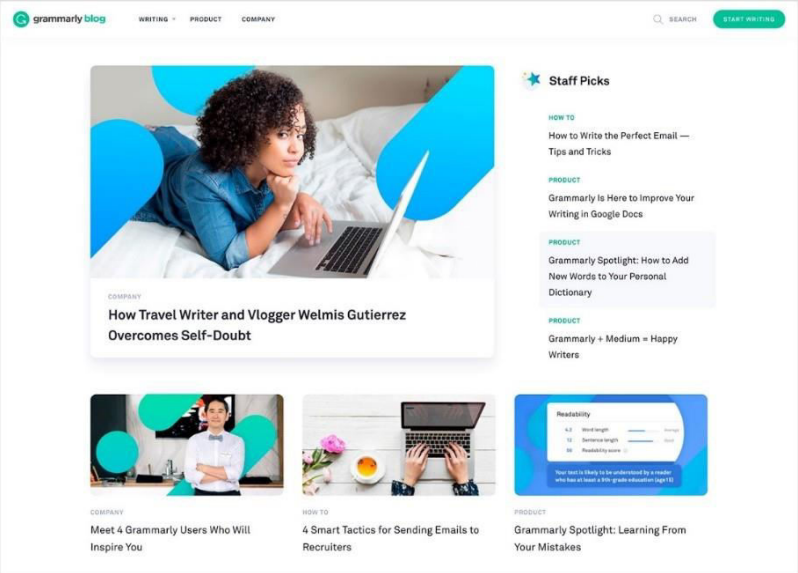


Figure 2.6. Blog

(Source: https://www.mockplus.com/blog/post/blog-design-examples)

vii. **WhatsApp:** WhatsApp is a cross-platform instant messaging application that allows smart phone users using different operating systems to exchange text, image, video and audio messages for free. Messages are end-to-end encrypted. It allows its users to make audio and video calls and also send text messages, videos, images, user location, audio files and voice notes.

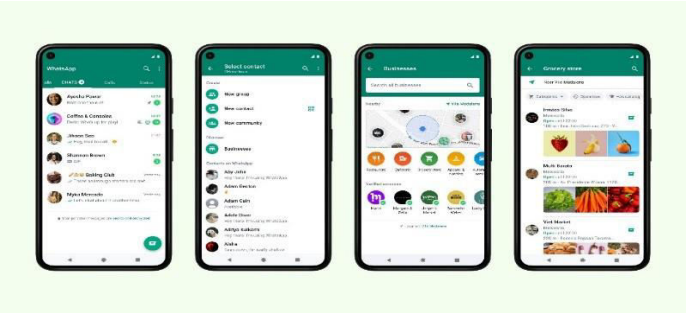


Figure 2.7. WhatsApp

(Source: https://www.forbes.com/sites/angelicamarideoliveira/2022/11/17/whatsapp-picks-brazil-to-launch-in-app-business-directory-and-shopping/)

viii. **Instagram:** Instagram is a social media tool made for sharing photos and videos. Like other social media tools, it allows users to follow other users with the same interest which creates a feed on their designated homepage showing recent posts from everyone which they followed. Instagram users can "Like" posts and comment on them. User can share their pictures and videos either publicly or privately and has a built-in instant messenger. Earlier versions of Instagram had a unique identity in which pictures posted are confined to square shape in the 4:3 aspect ratio however, with recent updates it allowed its users to upload pictures on any aspect ratio. Instagram became popular because of their integrated photo and video filter which was very popular among the youth.



Figure 2.8. Instagram

(Source: https://www.businessinsider.com/instagram-redesign-with-reels-and-shop-2020-11)

ix. **Instant Messaging (IM):** Instant messaging also known as synchronous messaging is a real-time text communication which takes place between the users and the library chat reference services. Instant messaging allows the user to see if a friend or co-worker is online, connected or ready to chat. Popular Instant Messaging clients are Facebook Messenger, Skype, Discord, WhatsApp, WeChat, Yahoo Messenger and Viber. SOUL 2.0, a library management software is also embedded with Instant Messaging service.

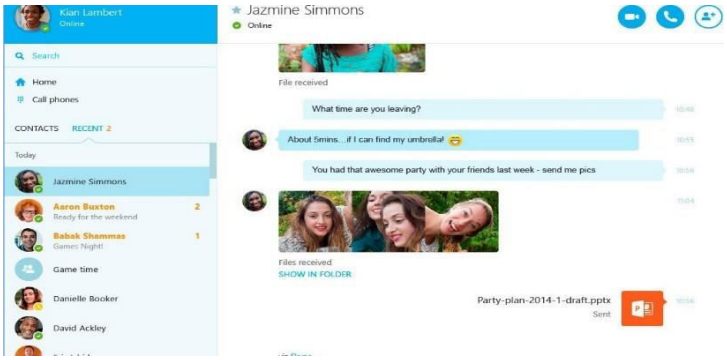


Figure 2.9. Instant Messaging

(Source: https://www.windowscentral.com/microsoft-releases-preview-version-new-skype-windows-desktop-app)

x. **Library App:** Library apps are developed to transfer the physical library to a digital world where users can explore all the library resources in printed and digital formats. It is easy to use and less time consuming as the users can search through the library and its resources on their hand-held devices and easily be able to refer to resources whenever and wherever needed. A library app offers its user the ability to search and download digital content right from the app, to login to their OPAC account and renew books easily, to get the latest news and information regarding the library.

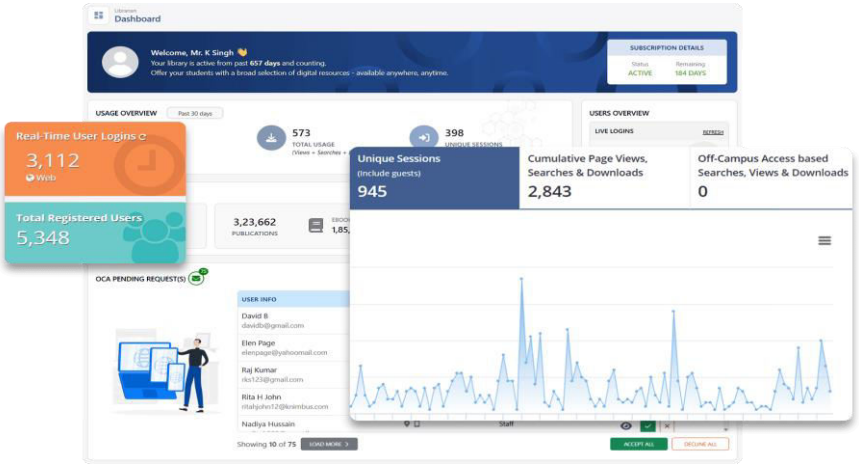


Figure 2.10. Library App (Knimbus)

(Source : https://d2ctavleamkpz.cloudfront.net/images/auth-sign-in-slide1.png)

2.3. Impact of social media tools in Teaching

Social media tools are also used for educational platforms as they provide easy and short forms of information about serious and complex topics which can be further expanded and researched by selecting provided links from the short feeds of information provided to the users. Social media tools are not confined to text-based information as they can use engaging visuals, interesting videos and infographics to simplify their data information for consumption by students and learners.

Social media tools have significantly influenced teaching by making education more accessible, collaborative and interactive. It has increased and enhanced the engagements between teachers and students by the use of different social media tools such as YouTube, WhatsApp, Facebook and Instagram. Social media tools have emerged as a powerful tool that can enhance the learners experience through study groups and collaboration to expand the access of educational resources of its users. It provides a major contribution to education as it allows teachers and students to connect with other peers across geographic and cultural boundaries through platforms like Facebook, X (twitter), Instagram and WhatsApp. Using these social media tools students and teachers can engage in discussions on various subjects and topics, share their queries, answers and experiences to gain new and fresh

perspectives and information from different parts of the world all from the comfort of their school and home.

The implementation of social media tools in education has created an ever-evolving ecosystem of educational content which can easily be accessed. Social media tools enable students to tailor their individual interests and needs by curating contents and recommendations based on the student's interest and needs.

2.3.1. Positive impact of social media tools in teaching

Social media tools have evolved significantly to cater the needs of its users and provide various educational benefits for students and teachers. It has become a beneficial tool for both students and teachers for learning, improving communication, to building connections between peers and improving social skills, expressing creativity through the use of group chats and discussion and it is also a great tool for seeking guidance on different topics and subjects quickly and accurately. Social media tools have the power to renew and refresh teaching practices by promoting the best practices of education dissemination through collaborative approaches such as group chats and discussions. Teachers can use social media tools for online polls, quizzes and group discussions to improve student's comprehension and later identify the areas that are in need of further clarification.

2.3.2. Negative impact of social media tools in teaching

Social media tools have become deeply integrated in our lives and this has led to both positive and negative impacts in our lives. Social media tools have negative impacts on students as it is one of the major contributors to academic distractions, sleep deprivation, mental health issues, lack of social skills and addiction to social media. Social media tools are designed in such a way that they can capture the user's attention and keep the user engaged for long periods of time by endless stream of content. These contents are quick and short 15 to 30 second videos which studies the users' patterns to provide the most relatable content of the user. Excessive use of social media tools for entertainment has led to lower academic performance and it distracts the students and decreases the amount of focus they can give on their education.

2.4. Impact of social media on teaching and learning

The growth and popularity of social media have resulted to a great impact on teaching and learning and have changed the access to learning resources which was not possible before.

The impact are as follows:

1. Curriculum development:

Social media has been able to provide the curriculum and syllabus being implemented at Undergraduate, Postgraduate and Doctorate levels which can be easily transmitted from one person with another. This has further eased information transmission across the globe.

2. Impact on learners:

The learners are at an advantage in accessing and sharing their assignment, projects and interactions with teacher and mentors easily. Teachers further facilitate students to access the latest reference material for their study, tests and examinations more smoothly.

3. Connecting the community:

Teachers, students and research scholars form a community in information sharing of study materials, educational instructions and helping each other for many competitive examinations. In other words, social media is an appropriate platform for career development and other promotional avenues.

2.5. Impact of social media on building of training capability

Social media tools have significantly enhanced training capabilities and are becoming a very powerful tool in education and organizational learning by enabling networking among peers, sharing of knowledge and the ability for real-time collaboration with peers without any constraints. Social media tools have greatly impacted the way in which we acquire information. Education and training have become commercial products as online learning is more appealing to the newer generation of learners. Online training using social media tools are growing popular

because people living in areas without educational institutes, field workers, mothers and people with disabilities can access the educational contents any time at any place and further provides the ability to communicate with the teacher and other learners at their own pace and time.

2.6. Impact of social media in research development

Social media tools can be defined as web-based communication tools that enable users to interact with each other for sharing and consuming information and knowledge. They have transformed research development by enhancing the visibility of a researcher's work, providing the ability for researchers to collaborate on a project and further enhance the way in which researchers engage with the general public for data collection and experimentation. Social media tools fostered collaboration and enabled networking for research and development.

2.6.1 Dissemination of knowledge in research

Social media tools have become an integral part of the academic research as it has significantly transformed the way in which we communicate and disseminate information and has also affected how researchers conduct their work and state the findings of their research. It has enabled researchers to quickly share their findings with their intended audience which helps to increase the visibility and progress of the researcher's work. Social media tools such as X (Twitter), LinkedIn, ResearchGate act as informal publishing channels. ResearchGate allows researchers to share their work to connect and interact with other researchers in their field. It allows their publications to be uploaded, to share the publication with others and receive immediate feedback from their peers. LinkedIn is also another popular social media tool as it provides a space for researchers to work and collaborate with other researchers and allows users to link with potential collaborators and employers. Social media allows researchers to support their respected fields of research and raise awareness about critical issues and problems that are present in their research.

2.6.2. Collaboration and networking research

Social media tools allow researchers to conduct cross-disciplinary research collaboration by providing a space where researchers from different fields of subjects can connect and share information, data and findings. Popular social media tools such as Facebook, Twitter and YouTube have made it easier for researchers to connect with each other across different disciplines and subjects which leads to collaborations on new projects and topics. It also promotes the flow of communication and the need to share knowledge, data and findings with other researchers. Social media tools are used for promoting global research collaborations by providing researchers with a platform to establish their presence and interact, share and connect with other researchers. It is a powerful tool for amplifying project exposure by enhancing communication and encouraging collaborative efforts through online interactions using social media tools.

Social media tools connect research enthusiasts, students and curious minds from different walks of life by acting as a virtual bridge which births the creation of online communities to encourage conversations and collaborations that would not have been possible without social media tools. Researchers and the general public benefit social media as it acts as a two-way street for the exchange of knowledge, information and ideas.

2.6.3. Public engagement

Social media tools have become an important tool for enhancing the public's engagement in research by increasing the visibility of research, the accessibility of research to the public and collaboration with the general public audience. Social media tools have revolutionized the way in which we communicate and have reshaped how we create, share and interact with information. Popular social media tools such as Facebook, X (Twitter), Instagram and WhatsApp have become personal networking tools for stating a person's opinions and views on news, politics and other topics of interest. Researches can use these social media to collect data, conduct experiments, to solve scientific challenges and gather the collective intelligence and opinions of the community.

Conclusion

In conclusion, social media tools have made substantial impact on teaching, learning and research by creating a more accessible, collaborative and interactive academic environment. These tools help to enhance communication between teachers and learners beyond the traditional classroom boundaries and also support teaching practices through online discussions, quizzes and collaborative learning activities. The chapter also highlights the negative aspects such as distractions reducing academic focus which can lead to potential mental health concerns and the need for a balanced usage of social media is highlighted.

Social media has simplified the sharing of curriculum, improved access to learning resources and strengthened the academic communities by connecting students, teachers and researchers globally. It is also enhanced training capabilities by enabling flexible, inclusive and lifelong learning opportunities for individuals with limited access to traditional educational institutions. When used effectively and responsibly social media tools can serve as powerful instruments for education and research.

The next chapter will discuss the application of social media tools by the 9 Central University Libraries under the study.

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CHAPTER 3

CENTRAL UNIVERSITY LIBRARIES AND THEIR APPLICATION OF SOCIAL MEDIA TOOLS IN NORTH EAST INDIA

3.1. Introduction

Social media tools are tools used for communication and networking and has shaped the modern society by its influence on business, politics, education etc. Britannica defines social media as," a form of mass media communication on the Internet (such as those on website for social networking and microblogging) through which users share information, ideas, personal messages and other contents such as videos. Social networking and social media concepts overlap however; social networking is usually understood as user building communities among themselves while social media is more about using social networking sites and related platforms to build an audience." Social media is a digital communication tool that enables its users to create, interact, share their content with others in online communities and their desired networks. It can broadly be defined as a set of interactive internet applications for creating, curating and sharing of user generated content, social media is mostly user-generated content.

In this digital era, every aspect of our lives is interconnected through the internet and its social media applications. They provide a way in which the user can acquire their desired information anywhere on the go accurately and seamlessly through social media without wasting the users' valuable time and money. As Libraries are places to receive information and to disseminate information, social media has become an important factor for information to reach the right user at the right time.

Social media tools have the potential to create a closer relationship between the libraries and their users. The use of social media tools in libraries is rising and will likely play and important role in the provision of library resource and services and will enhance the outreach of libraries in the future. Social media provides a platform to maximize the use of libraries resources and services. University libraries are now using social media tools such as Facebook, X (Twitter), LinkedIn, WhatsApp, Instagram and others for communication with their users by promoting new arrivals in the library, to advertise the services offered by the library and to create a platform to inform its users on the current and upcoming events such as seminars and conferences hosted in the library.

Central University Libraries have incorporated social media to ease the access of information to their users. Through social media, libraries can get feedback of the different services offered by the library and promote library resources using their social media accounts. Social media groups can be created by the library such as book discussion groups to get a better understanding of its users' requirements. Through social media posts, libraries can update the library users on the arrival of new materials such as books, e-resource contents, articles etc. Social media tools have enabled libraries to communicate with each other to provide and share their services to other libraries within their network.

These are Central Universities under the study:

3.2. Assam University

Assam University was established in 1994 by an Act of Parliament of India and is located in Silchar, Cachar district, Assam. It has a well-maintained campus and the university offers a variety of undergraduate, postgraduate and research programs. Assam University is the second central university in Assam next to Tezpur University.



Fig 3.1. Assam University

(Source: https://mybharat.gov.in/KnowledgeInstitutions/university/4/assam-university-silchar)

3.2.1. Assam University Central Library

Assam University Central Library is also known as Rabindra Library and it was established in the year 1994. The library has implemented digitization for its collections and it is one of the first university libraries in North East India to receive ISO:9001:2015 certification of excellence in 2021 for providing quality infrastructure and services. It also aims to meet the informational requirements of the academic community of the university.



Fig 3.2. Rabindra Library, Assam University

(Source: https://tinyurl.com/p93ea6uu)

The library functions in the collection of knowledge resource, technical processing, retrieval and dissemination of information to its users of the Barak Valley academic community and the entire North Eastern region. It is well equipped with Wi-fi and modern facilities. The library is fully automated and implements KOHA as the main library management software. The library is well equipped with state-of-the-art technologies such as RFID for transactions and security and also houses a vast collection of e-books, e-journals, audio-books and an e-ink reader device known as KINDLE for its users.

The library makes use of different social media tools for dissemination of information to its users. The library has a dedicated library blog, a library Facebook page, a (X (Twitter) page and a YouTube channel for teaching, learning and research.

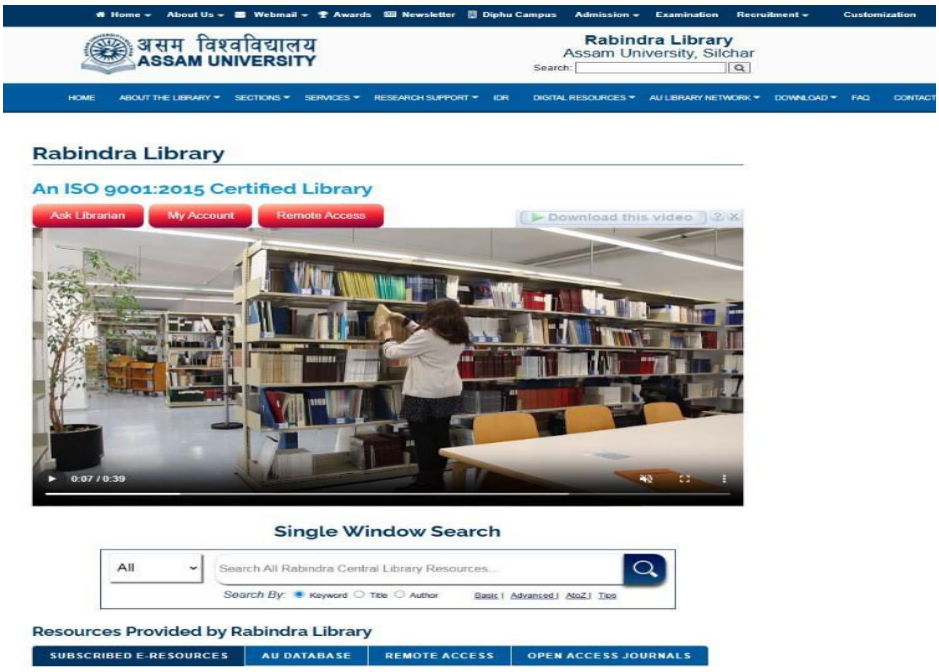


Fig 3.3. Central Library website, Assam University.

(Source: http://www.aus.ac.in/library/)

3.2.2 Social media tool implemented by Assam University Central Library

Assam University Central Library implements the use of Facebook are their primary social media tool to communicate with the library users on the events and programmes held in the library. The Facebook page posts pictures of events such as Librarian's Day events hosted in the library, book discussion programs like Modi@20: dreams meet delivery, Webinar programs on CAS SciFinder for Academic Research.

Rabindra Library also has a dedicated Mobile App for Digital Library Applications known as EBSCO Mobile App which was launched on 16th June 2022 by then Vice Chancellor, Prof. Rajive Mohan Pant. The application is implemented to strengthen the work of its researchers by providing search, read, listen and save article functions for the reference of researchers.

3.3. Manipur University

Manipur University Library is located in Imphal, Torban and was established on 5th June 1980 under the Manipur Act 1980. It functioned as a teaching and affiliating

institution and transitioned into a central university in 2005. The university campus spans 287.53 acres. The university has 119 affiliated colleges, including three medical colleges of regional and national significance.



Fig 3.4. Manipur University

(Source: https://idp.manipuruniv.ac.in/)

3.3.1 Manipur University Central Library

Manipur University was established on 19th November 1972. The library is considered as an important component and asset as it has become the lifeline of academic activities of the university. The library has adopted digitzation and is now a fully automated library with EM-RFID (Electro Magnetic – Radio Frequency Identification) for different services such as security, self-issue and return and automatic inventory control. The library implements KOHA as the main software for the library automation services such as circulation, cataloguing, acquisitions and OPAC.



Fig 3.5. Central Library, Manipur University

(Source: https://mulibrary.manipuruniv.ac.in/)

The university library has a well-designed library website which consists of a well thought out layout displaying different pictures of functions within the library and its users. The website has a unique marquee display of new arrivals not just in text, but in the cover images of the books. The home page is very user friendly with a list of Useful Links of the left side which are hyperlinks to National Digital Library of India, SWAYAM, VIDYA MITRA, e-Gyankosh, e-PG Pathshala and DELNET.

The services section on the library website shows the different services that are available within the library for its users which are circulation, web-OPAC, web-scale discovery service, reference and information services, remote access to e-resources, A to Z list of the resources available in the library, library orientation and information literacy program, inter library loan, CAS/SDI service etc.

Through the research assistance function in library website users are treated to information about Plagiarism Detection Software (PDS) as Manipur University is a member of INFLIBNET centre. For grammatical corrections the library has a subscription to 'Grammarly: An Academic Writing Tool' for its communities and a detailed guide on how to use it. Through the library website users can find the reference managements tools suggested by the library which are Mendeley, Zotero, EndNote, BibTeX to name a few. It also has a section which displays the different

citation styles for citing sources of information accurately for the academic writings of its users.

The website has unique feature where its users can sign up and login to their library account, where they can check their summary, suggest purchase of books for the library and users can renew their issued books online through the library website which can greatly save the time of the users. A form download option is also available which contains a library membership form download for students and outsiders.The library website has a direct chat to the librarian function known as 'Ask Librarian' where users can interact with the librarian through the website chat function.

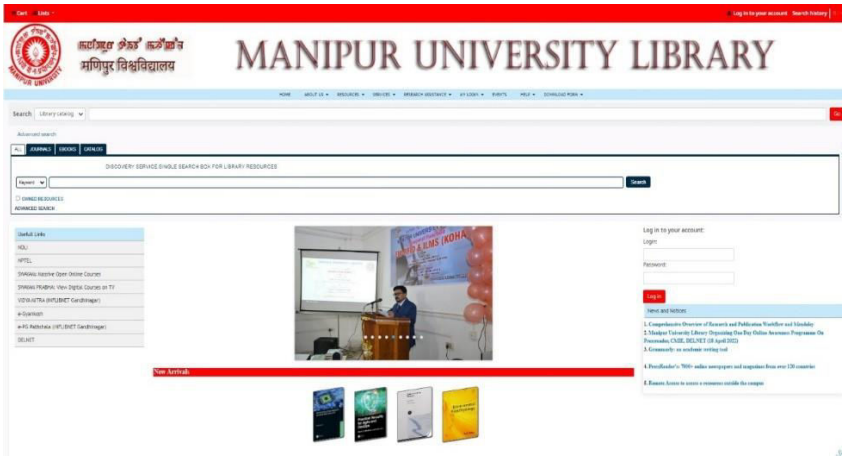


Fig 3.6. Library website, Manipur university

(Source: https://mulibrary.manipuruniv.ac.in/)

3.3.2 Social media tools implemented by Manipur University Central Library

Manipur University Central Library has implemented digitization in the library to help the users of the library to procure their desired information quickly and accurately however, the library has yet to implement any social media tools for the library which can benefit the users as social media tools have now become one of the easiest and quickest ways to gather information.

3.4. Mizoram University

Mizoram University became operational on 2nd July, 2001, it was established by an Act of Parliament. It is located in the outskirts of Aizawl, the capital of Mizoram and functioned as the Mizoram Campus of the North Eastern Hull University (NEHU) before it became an independent institution. Mizoram University currently has approximately 39 active academic departments offering undergraduate, postgraduate and Ph.D. programs organized under 10 Schools of study and approximately 40 colleges are affiliated along with one constituent college.



Fig. 3.7. Mizoram University

(Source: https://commons.wikimedia.org/wiki/File:MZU_Gate.png)

3.4.1. Mizoram University Central Library

The Central Library of Mizoram University was established in 2001 with an area of 4,496.62 sq.m with a collection of approximately 1,17,959 printed books and other reading materials. The library conducts orientation programs for new admitted students each year, so that the students can have an understanding of how the library operates, how different sections of the library work and how to get their desired knowledge and information.



Fig. 3.8. Central Library, Mizoram University

(Source: https://tinyurl.com/y3uv98ke)

The entire collection of the library and its holding has been converted into a machine-readable catalogue. Using WebOPAC through the Local Area Network, the users can search the bibliographic information of the collection of the library holding anywhere throughout the campus. Barcode technology is implemented by the library which provides easy and prompt services for its users as well as for the security of the collections within the library. The library also provides a lending and reprographic section and is a very popular section for its users. Best Library User Award in both student and teacher categories was introduced from 2014 – 2015 academic session. The library is opened on regular hours on Monday to Friday from 9:00 AM to 5:00 PM, from 9:30 AM to 4:30 PM of Saturday and is closed on Sunday.

The library provides different type of services which are lending services through the use of RFID and Electro Magnetic (EM) technologies for easier circulation, reprographic services for printing, lamination etc, a well-equipped computerized Braille system for blind students, a self-check-in and check-out facility using RFID.

The library implements social media tool such as SMS, e-mail alert and WhatsApp notification for its users. These services allow the users of the library to receive information about their transactions such as, issue, return, renewal of books and other

important information. Reminders about the overdue of books, as well as fines accumulated will be sent to the users.

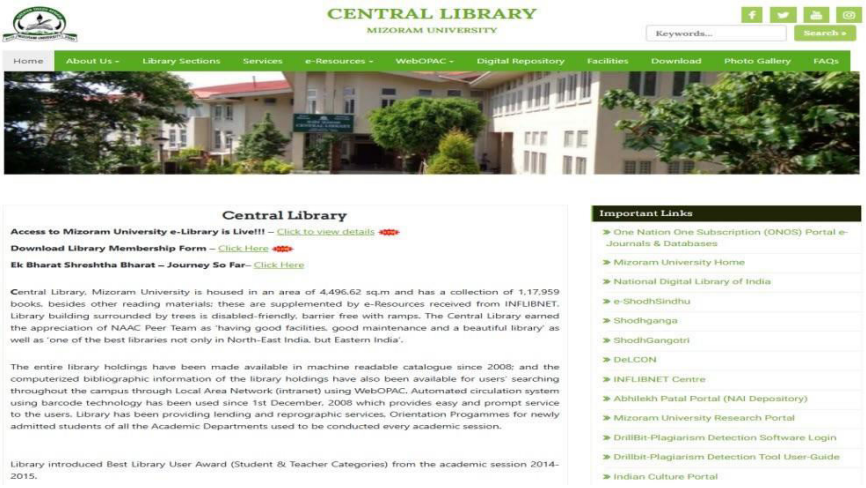


Fig. 3.9. Central Library Website, Mizoram University

(Source: https://lib.mzu.edu.in/)

Central Library, Mizoram University provides useful information for its users on the website. Students, researchers and teachers can find important and useful links for gathering information and knowledge such as One Nation One Subscription (ONOS) which is a Government of India initiative to provide nationwide access to scholarly journals, a link to National Digital Library of India which is a single-source knowledge repository. Research based resource links such as e-ShodhSindhu, ShodhGangotri and Shodhganga are available for easy access to its users.

The library has implemented a new initiative for ease of access to the electronic resources subscribed for its users which is an app known as “knimbus”. The app allows users to gather data and information from different sources such as IEEE, JSTOR, Knimbus Open ebooks, Knimbus Open Journals, Science Direct, Springer, Taylor and Francis, Wiley Online Library etc. It holds sources form different Institutional Repositories, Library WebOPAC, Project Gutenberg, The Directory of Open Access Journals. It allows users access to contents of course materials, databases, eBooks and journals for learning, teaching and research.The library also integrates a Plagiarism detection software, DrillBit is available for the users of the

library and the library provides a detailed description of the user-guide for the software.

3.4.2. Social media tools implemented by Mizoram University Central Library

Mizoram University Central Library has implemented Instagram and Facebook as their main social media tool for interacting sharing information about the library to its users. Through these social media tools, the library can share the different events hosted in the library such as training, national and international seminars, webinars and national and international conferences. Mizoram University Central Library has a library app known as Knimbus which is a mobile library application which is available in both Android and iOS. The Knimbus app allows full access to the subscribed e-resources of the library which is accessible from anywhere and from any device for the library users.

3.5. Nagaland University

Nagaland University was established in 1994 by the Act of Parliament of India; it was the 13th Central University established and the only Central University in Nagaland. Nagaland University has campuses in Lumami, Zunheboto District, Kohima Campus at Meriema in Kohima District and Medziphema in Dimapur district and its main campus being Lumami in Zunheboto district. The university hold 44 departments with Undergraduate, Postgraduate and Ph.D. programmes in different subjects.



Fig. 3.10. Nagaland University

(Source : https://kohima.nagalanduniversity.ac.in/)

3.5.1. Nagaland University Central Library

The central library of Nagaland University is located in Lumami, Zunheboto district and was established in 1994. The library building is a very spacious and reader-friendly library and covers an area of about 1,662 sq. The library serves as a knowledge and resource hub for the university for supporting academics in teaching, learning and research across all departments.

The library is fully automated and uses KOHA for library management. RFID technology is implemented by the library and is integrated with the KOHA software for enhancing the security and efficiency of the library. Automated check-in and check-out kiosks are available with an anti-theft detection system at the entrance using the RFID technology.

The library has a collection of books, journals, periodicals, newspapers and other reading materials. It currently has approximately 25000 printed documents. The library is a member of the e-ShodhSidhnu Consortium, DELCON Consortium, DBT-Electronic Library Consortium and provides its users access to 3500 e-journals and is currently rising.



Fig. 3.11. Central Library, Nagaland University

(Source: https://www.collegebatch.com/931-nagaland-university-campus-tour-zunhebotto)

The central library website provides its users with helpful links and services for teachers, students and researchers. The library has a dedicated digital repository which preserves and provides access to the digital materials by the researchers and teaching faculty of the university and holds a collection of M.Phil dissertations and Ph.D. Theses. The library has access to several e-resources such as journals, databases, e-books and other useful resources and is also subscribed to ONOS (One Nation One Subscription) for accessing e-resources.

The library provides users to two Anti-Plagiarism softwares which as DrillBit and iThenticate. It provides the login link for the desired Anti-Plagiarism software along with guides on how to properly operate them. The library provides its users with one interesting service which is QuillBot, a tool that can assist users in enhancing grammar, rephrasing sentences, detecting of AI and plagiarism and also offers translation services. The library has an Ask-A-Librarian service where users can ask queries to the librarian through this feature.

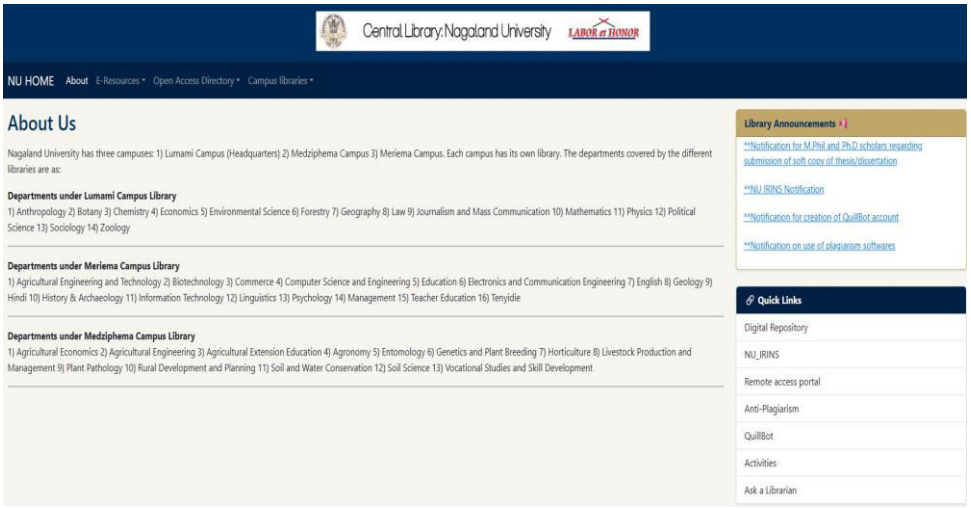


Fig. 3.12. Central Library website, Nagaland University

(Source: https://library.nagalanduniversity.ac.in/)

3.5.2 Social media tools implemented by Nagaland University Central Library

Although Nagaland University Central Library is fully automated, the central library has not yet implemented any social media tools for providing and promoting the resources and services of the library.

3.6. North-Eastern Hill University (NEHU)

The North-Eastern Hill University is located in Shillong, Meghalaya and has two academic campuses, one at Mawkynroh-Umshing, Shillong and another at Chasingre, Tura. The headquarters of academic and administrative functions is located at Shillong, and was established in 1973 and was serving as a regional university for the north-eastern states of Arunachal Pradesh, Mizoram, Meghalaya and Nagaland. Since Nagaland University and Mizoram University were later established as independent entities.



Fig. 3.13. North Eastern Hill University

(Source: https://themeghalayanexpress.com/nehu-lecture-focuses-on-making-ner-a-new-growth-pole-by-2047/)

3.6.1. North-Eastern Hill University (NEHU) Central Library

North Eastern Hill University Central Library was established in 1973 and is now regarded as the premier university library in the north eastern region of India. The library has a collection of approximately 2.9 lakh volumes of books and bound journals. The central library has made major efforts to provide the best resource and services for the library users by launching innovative services and initiatives for reaching out to the user community through different programmes. NEHU Central

Library is located in Shillong and the NEHU Campus Library is located in Tura and implements the library management software LIBSYS for maintaining the functions of the library and to satisfy the needs of the students, researchers and teachers of the university.

The library has access to a vast collection of electronic resources through e-SodhSindhu consortium and other useful links to global information resources and services. The library is well equipped with high-end computers and it is a fully automated library.



Fig. 3.14. Central Library, NEHU

(Source: https://www.borderlens.com/2024/11/20/the-nehu-mess-the-shukla-era-of-incompetence-arrogance-and-unfulfilled-promises/)

The Central University has a well-developed website called nehu.ac.in, in which different news, events and occasions about the Institution are posted and highlighted on a regular basis. The website consists of 8 main sections which are About, Admission, Academics, Students, Cells, Services, Journals and Associations.

The Institution has a separate library website which is well maintained and updated for users regularly. The home page of the library website shows the important history of the library such as how the library started with only 600 books in 1973 and now has more than 2.9 lakh volumes of books and bound periodicals supplemented to the university through e-ShodhSindhu Consortium.

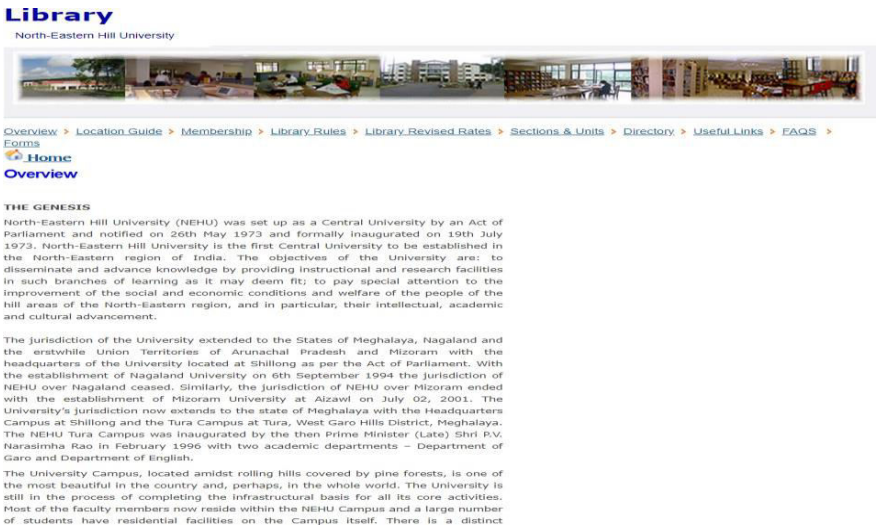


Fig. 3.15. Central Library website, NEHU

(Source: https://library.nehu.ac.in/)

3.6.2 Social media tools implemented by North Eastern Hill University Central Library

The NEHU Central Library in Shillong and Tura are both fully automated in providing library functions and services to their uses using KOHA, LIBSYS and RFID technology however, both the central libraries have yet to implement social media tools to cater the needs of their library users.

3.7. Rajiv Gandhi University

Rajiv Gandhi University is located int Rono Hills, Doimukh, Arunachal Pradesh, it was formerly known as Arunachal University and renamed to Rajiv Gandhi University in 2005. It was established in 1984. The university offers a wide range of programs and courses of under-graduate, post-graduate and research. The university way named in honor of the former Prime Minister Rajiv Gandhi and has played an important role in the advancement of education and research of Arunachal Pradesh and its regions.



Fig. 3.16. Rajiv Gandhi University

(Source: https://campuspro.co.in/colleges/9842/rajiv-gandhi-university-itanagar)

3.7.1. Rajiv Gandhi University Central Library

The Rajiv Gandhi University Central Library was established in 1984 and provides access to information and knowledge for the users of the library. The library has approximately 64,400 books, it is subscribed to a number of national and international journals and is subscribed to 17 daily newspapers and 10 magazines. The library has a collection of over 343 Ph.D. theses and approximately 353 dissertations which can be used for consultation for the library members. The library also provides access to a huge collection of e-journals and e-book from by its subscription to various consortiums. KOHA is used as the main library management software for library services and RFID (Radio Frequency Identification) technology has been implemented for security, as well the smooth functioning of the circulation of reading materials in the library.



Fig. 3.17. Central Library, Rajiv Gandhi University

(Source: https://rgu.ac.in/library-home/)

The central library is equipped in Radio Frequency Identification for the security of the library and for the circulation services within the library. CCTV (Closed-Circuit Television) is also implemented as part of the library automation and digitization process.

The central library has a Facebook page for posting the events and programmes held in the library for the knowledge of its users. Through this Facebook page, users can easily acquire information of upcoming events in the library and well as information of the documents that are available within the library. The Facebook page is frequently updated by sharing to its users the unique and rare collections available for its users.



Fig. 3.18. Central Library website, Rajiv Gandhi University.

(Source: https://rgu.ac.in/library/)

3.7.2 Social media tools implemented by Rajiv Gandhi University Central Library

Rajiv Gandhi Central Library uses Facebook as their main social media tool for providing users with information about the new books available in the library, awareness programmes held in the library. It is also used to provide the library users with awareness and information about the important national and international events and workshops conducted in the library.

3.8. Sikkim University

Sikkim University was established in 2007 by an Act of Parliament of India and is located in Gangtok and Yangang, Sikkim in India. A permanent campus is currently being developed in Yangang, Namchi district but as of now operations are taken from various locations in Gangtok, while several departments and officed have begun to start functioning from the University main campus. Sikkim University provides a wide range of Undergraduate (UG), Postgraduate (PG) and doctoral programs from different school of studies such as, Human Sciences, Languages and Literature, Life Sciences, Physical Sciences, Professional Sciences and Social Sciences. Sikkim is rich in natural resources as well as having diverse cultures which provides unique opportunities for research, in environmental science as well as cultural studies and sustainable development. Sikkim University has implemented the Learning Outcomes-based Curriculum Framework (LOCF) in accordance with the National Education Policy (NEP) 2020, therefore Sikkim University has the potential of becoming a leading centre for academic excellence in the Eastern Himalayas.



Fig. 3.19. Sikkim University

(Source: https://campuspro.co.in/colleges/6354/sikkim-state-university)

3.8.1. Sikkim University Central Library

Sikkim University Central Library is known as Teesta-Indus Central library and it is located at the heart of the University providing a huge collection of materials for teaching, learning and research. The library currently has two division which are Teesta-Indus Central Library and Science Library. The Central Library is 1000 sg. Metres and is capable to accommodate 70,000 books.

Teesta-Indus Central Library is fully automated and equipped with the latest IT Infrastructures for library automation. KOHA a Library Automation System is used for the main operations of the library, Radio Frequency Identification (RFID) is implemented for the management of library materials. Faculty Publication Profile (IRINS) is used for showcasing the strength of research, an Institutional repository for managing in-house publications, these and dissertation.

The library houses a collection of 52685 books, 3285 gifted books, 8954 e-journals, 3964 e-books, 14 e-databases, 170 e-Theses, 72 print journals and 575 print these and dissertations as on 30th March 2023. The sheer number of collections of both electronic and print media shows that the Central Library will provide information and knowledge for teaching, learning and research.

Teesta-Indus Central Library provides three very unique library services. These services are 1. Library services for Study, 2. Library Services for Research, 3. Library Services for Teaching.

1. Library services for Study provides links to different study resources such as library catalogue, where students can browse the collections of the library for their desired subject study, competitive examination resources link where students are given specific direct links for UPSC exams along with the specific subjects important for civil service exams. Off campus access to electronic resources is available for faculty, scholars and students of Sikkim University which can be accessed by the username and password provided to them by the library. A subject support service is available for students in which subject guides are properly categorised for easy access to the users.
2. Library services for research provides links for researchers such as database list by subject in which subjects are categorised for easy access for researchers. A reference management section provides the users with information about reference management tools, a copyrights and patents section is available where researchers can easily understand what copyright, patents and creative commons mean. Under this section there are guides for researchers on how to write a research paper and a plagiarism detector is also readily available.
3. Library services for teaching provides important links such as NPTEL Courses, Swayam courses to access knowledge and education for different courses and subjects, links to Swayam Prabha which provides free Channels for education through DTH, WhatsApp or YouTube. e-PG Pathshala is available for teachers as this provides useful e-books for Post Graduate courses and UGC MOOCs (Online courses) for its library users.

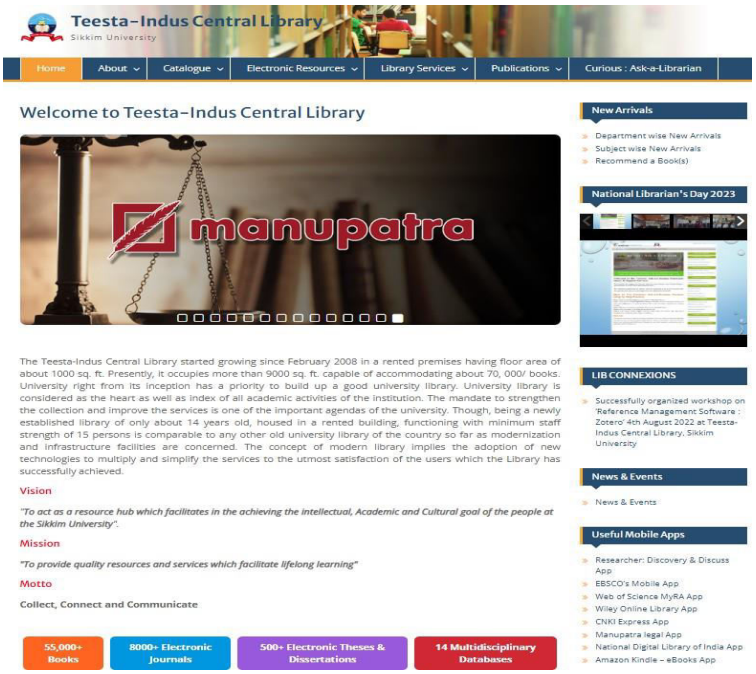


Fig. 3.20. Central Library website, Sikkim University

(Source: https://library.cus.ac.in/)

3.8.2 Social media tools implemented by Sikkim University Central Library

Teesta-Indus Central University Library makes use of Facebook as their main social media tool to inform library users on the events, programmes, conducting orientation programmes and information on national and international conferences, seminars and webinars hosted in the central library. The central library has a dedicated library app known as Teesta-Indus Central Library app where users can create a profile and gain access to the digital resources such as e-books, e-journals and other electronic resources provided by the library. This library app enables users to search the library collection and to know whether their desired book is available within the library.

3.9. Tezpur University

Tezpur University is a central university and established on 1994, as per the Tezpur University Act enacted by the Parliament. The University campus is located at Napaam which is 15 km from Tezpur in the Sonitpur District of Assam. The University currently offers 63 academic programmes through 19 departments from Schools of Engineering, Humanities and Social Sciences, Management and Sciences.

The University has a vision of developing human excellence and inculcate leadership to its students through hard work and creativity.



Fig. 3.21. Tezpur University

(Source: https://www.tezu.ernet.in/tu_codl/welcome.html)

3.9.1. Tezpur University Central Library

Tezpur University Central Library started functioning in 1994, it is the central hub of academic research and has been the focal point for the community of the university. The central library is fully automated with the implementation of KOHA Integrated Library System (ILS) for handling the library functions and services of the central library. RFID (Radio Frequency Identification) technology has been implemented which allows for self-service KIOSK's to be implemented for self check-in and check-out, self-book drop units and for security such as anti-theft detection systems and flap barriers. The library has a collection of approximately 1,22,821 print books, 13,077 e-journals through ONOS, 1,107 subscribed e-journals and 8 print journals with 6 online databases and 11,488 back volumes of journals.



Fig. 3.22. Central Library, Tezpur University

(Source: https://www.tezu.ernet.in/Library/index.php/about-us/about-library)

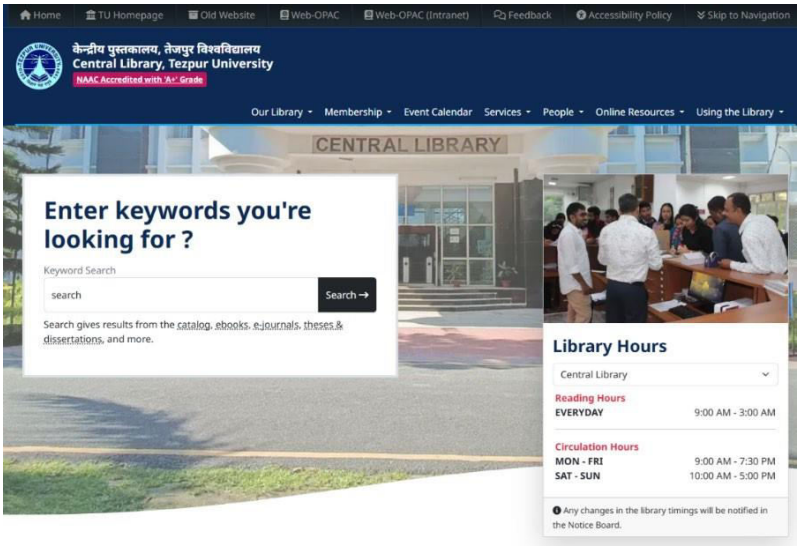


Fig. 3.23. Central Library website, Tezpur University.

(Source: https://library.tezu.ernet.in/)

3.9.2 Social media tools implemented by Tezpur University Central Library

Tezpur University Central Library has implemented social media tools such as Facebook, Instagram, X (Twitter), YouTube to inform the library users of different functions and events hosted in the library. Through these social media tools, the

library users can easily get information on the national and international, events, workshops, seminars and conferences held in the library. Through the library YouTube channel, the library users can get visual information on guides and tutorial videos on using different research tools and other useful information for students, researchers and teachers.

3.10. Tripura University

Tripura University was established in 1987 as part of the Calcutta University Post Graduate Centre (CUPGC), it was later elevated to the status of central university on 2nd July 2007. The University is dedicated to developing and empowering the people of the state and region by imparting quality education and technological innovations the research and academic activities. The university has plans of ICT enabled classrooms and expansions of the campus for employing of modern technological tools.



Fig. 3.24. Tripura University

(Source: https://campuspro.co.in/colleges/8958/tripura-university-tripura-university)

3.10.1. Tripura University Central Library

The central library was established in 1987 and currently houses approximately 160,000 printed materials along with 31,628 e-books and also provides access to well over 25 databases.

Tripura University has a library website located within the main University website The ‘About Central Library’ section contains sub sections which are the vision and mission, library rules, working hours, library dashboard, library team, library committee, organizational chart and library floor plan.

Institutional repository section contains the Institutional Digital Repository (IDR) of the library to access the materials of the library in digital formats. The forms section contains the library membership form for employees and students.

The central library has a remote access tool known as KNIMBUS which provides remote access to the online resources purchased and subscribed by the university from any location with internet access.

An institutional repository is implemented in which the library acquires, preserves and provides access to documents in digital form which are useful for teaching, learning and research. The library hosts an Institutional Digital Repository (IDR) to provide open access to the collected research materials curated by the Tripura University community and can be accessed through the university’s INTRANET.

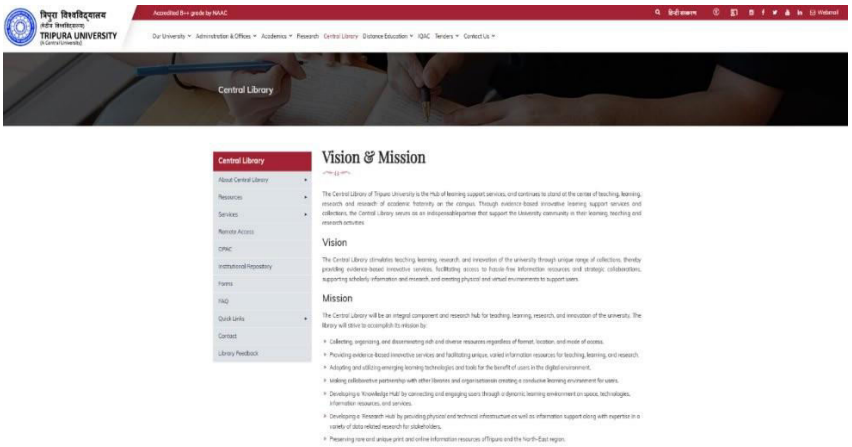


Fig. 3.25. Central Library website, Tripura University

(Source: https://tripurauniv.ac.in/site/index.php/en/central-library-en)

3.10.2 Social media tools implemented by Tripura University Central Library

Tripura University Central Library has implemented many useful library automation services and function for the smooth operation of the library to provide its users with

the best services they can attain. Although Tripura University has integrated social media tools such as Facebook, X (Twitter), Instagram, YouTube and LinkedIn for disseminating academic and important announcement, the central library has yet to implement these social media tools to provide assistance and information to the users of the library.

Conclusion

In conclusion, the analysis on the implementation of social media tools across the studied Central University Libraries in North East India reveals the diverse pattern of adoption. All the libraries studied have successfully integrated library automation such as KOHA, RFID, OPAC and digital repositories however the integration of social media tools varies significantly among the institutions. The chapter further highlights that social media tools play a crucial role in bridging the gap between libraries and their users by providing real-time communications, increasing visibility of resources, fostering a more interactive academic environment, which highlights the strong need for libraries that have not adopted social media tools to incorporate these tools into their library services. The effective use of social media tools combined with the existing digital tools can significantly enhance the quality, accessibility and outreach of library services. The next chapter will focus on the analysis of data from the studied universities along with the significant findings.

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CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Introduction

The advancement of technology has shaped the way in which we use social media tools. Social media tools were invented for the sole purpose of exchanging pictures and information over a small closed network such as a Local Area Network. However, technology has seen a rapid growth and development in recent years and this has in turn led to the evolution of social media tools. Social media has become an integral part of our lives as it has become the main way in which we communicate with each other, how we share information, knowledge and moments with each other. Social media tools have allowed us to gather information quickly in different formats of our choosing. Libraries have implemented social media tools for reaching out to its users and informing its users with information and knowledge about the programs, events, workshops, new arrivals, changes and on-going projects happening within the library. This chapter aims to showcase the responses of the effective use of social media tools of library users in central university libraries for their teaching, learning and research activities and highlight the deficiencies and problems faced in offering social media tools in the 9 Central Universities under the study.

The study collected primary data using a structured questionnaire which was formulated and distributed to 100 students of the 9 Central Universities under the study. A survey study method is employed on the library websites of the 9 Central Universities to assess the effective use of social media tools to strengthen and also identify the weaknesses of the Central University Libraries under the study. A case study method was also used to study the best University Libraries in India which have implemented social media tools for their users in regards to teaching, learning and research. The knowledge from the case study can be used to suggest the appropriate social media tools for the Central University Libraries.

4.2 Data Analysis

The following table shows the selected 9 (nine) central university libraries under the study along with their year of establishment and the type of social media tools that they implement for the advancement of teaching, learning and research.

Name of the University	Social media used	Year of Establishment
Manipur University Library	Nil	1972
NEHU, Central Library	Facebook	1973
Mizoram University Central Library	SMS, WhatsApp, Instagram, Facebook, Knimbus (Library app)	1980
Rajiv Gandhi University, Central Library	Facebook	1984
Tripura University, Central Library	Knimbus (Library app)	1987
Assam University, Rabindra Granthagar Library	Facebook, EBSCO (Library app)	1994
Tezpur University, Central Library	Blog, Facebook, Twitter, YouTube, Instagram	1994
Nagaland University, Central Library	Nil	1994
Sikkim University, Teesta-Indus Central Library	WhatsApp, Teesta-Indus Library app	2007

Table 4.1. Central Universities with their year of establishment.

From the given table we can easily find the impact of social media in central university libraries as the majority of the libraries under the study have already implemented social media tools for dissemination of information to the library users. Facebook is the most common social media tool used as it is one of the most popular social media tools with the most active user base. WhatsApp is the second most popular social media tool as the rise of smart phones have made social media communication applications easy to acquire and the user interface of WhatsApp is made easily understandable for all ages. YouTube and Instagram have gained a lot of users in recent years as short form video contents are becoming popular. This kind of video allows the users to quickly get information and knowledge in a very short time as the content creators shorten the information to less than 30 second videos and if the user is interested in a certain topic, related links to longer videos are readily available for the users.

4.2.1 Respondents under the study

A total of 900 questionnaires was distributed to the students of the selected 9 Central Universities in which 570 (63%) were answered and regarded as valuable. The questionnaire consisted of social media tools related questions, frequency of using social media for personal entertainment and an educational tool, and questions regarding the impact of social media tools in the university library along with questions on the implementation of social media tool for accessing library contents and services.

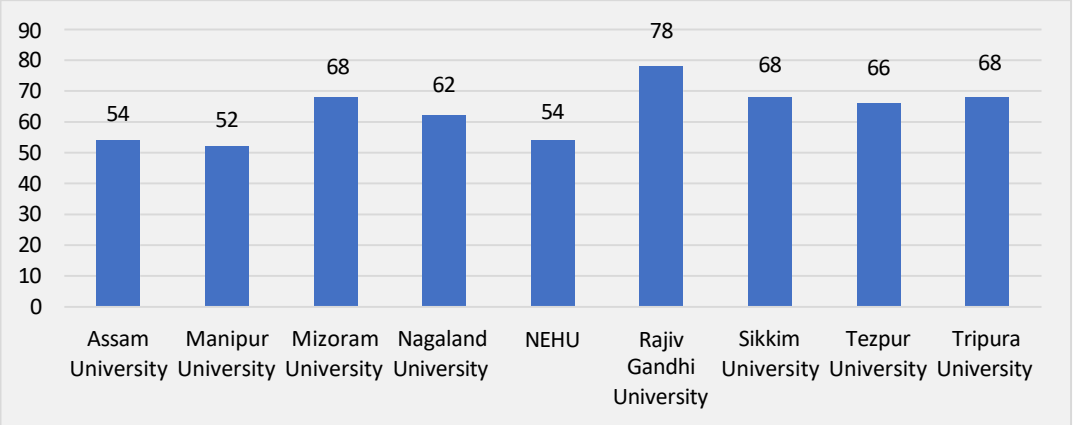


Fig 4.1 Total number of respondents

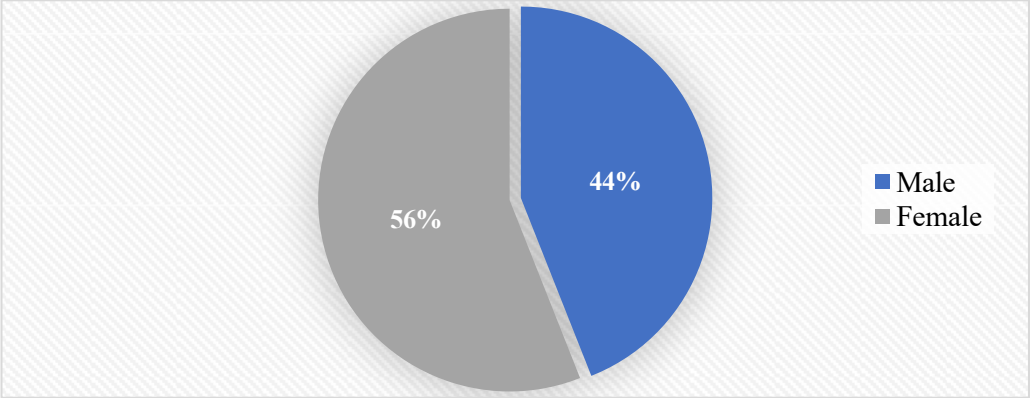


Fig 4.2 Gender wise response.

Figure 4.1 provides information on the amount of response gathered from the 9 Central Universities under the study. 100 questionnaires were randomly distributed to the library users among the 9 central universities. Rajiv Gandhi University has the highest respondents with 78 respondents which indicates the active and keen

engagement from the students. Mizoram University, Sikkim University and Tripura University all have 68 respondents and are the second highest respondents. Followed closely by Tezpur University, 66 respondents and Nagaland University, 62 respondents. Assam University and NEHU has 54 respondents which makes it the second lowest response of the distributed questionnaire and Manipur University has 52 respondents making it the lowest number of respondents from the 9 central universities.

Figure 4.2 shows that out of the 570 questionnaires answered, there were 321 (56%) female respondents and 249 (44%) male respondents.

4.3 Social media tools popular among users in the 9 Central Universities

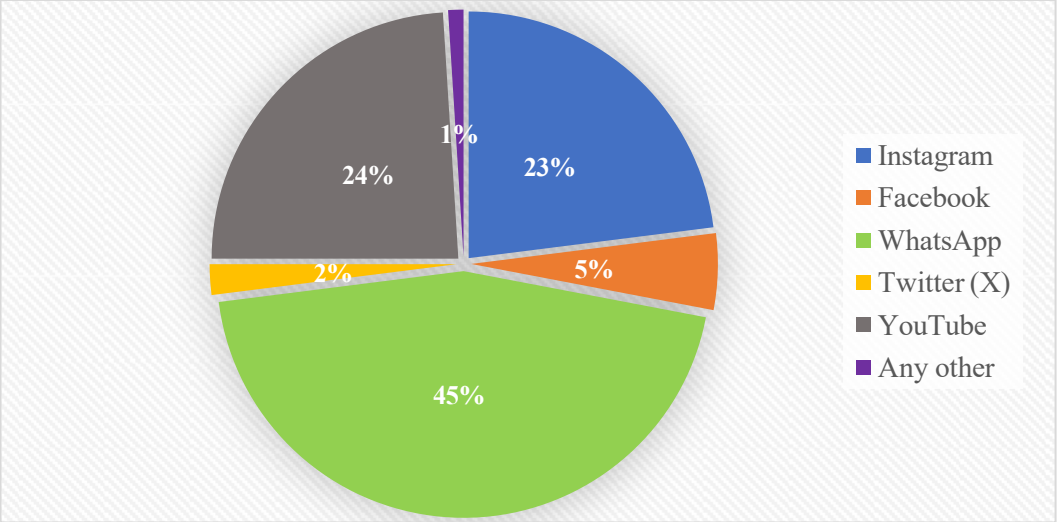


Fig.4.3. Most popular social media tools overall.

All the users have access to social media tools through their phones where they can install common applications such as WhatsApp, Instagram, YouTube, Twitter etc.

Figure 4.3. shows that even though there are many popular social media tools available, the majority of the respondents 255 (45%) reported using WhatsApp as their primary social media tool. 138 (24%) respondents preferred YouTube while only ten respondents (2%) reported using X (Twitter). From this, we can conclude that WhatsApp is the most popular social media tool used by the respondents of the 9 Central Univerisites.

4.3.1 Social media tools popular among users in Assam University

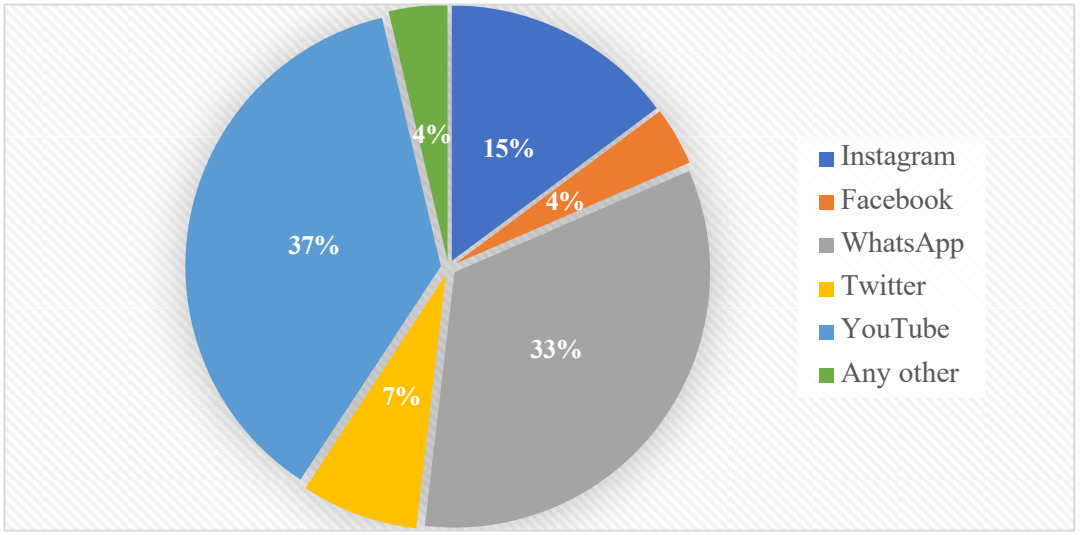


Fig. 4.3.1. Most popular social media tool in Assam University

Figure 4.3.1. shows that the majority of the respondents 20 (37%) use YouTube as their primary social media and 18 (33%) of the respondents preferred WhatsApp while two respondents (4%) report Facebook as their preferred social media tool. We can conclude that YouTube is the most popular social media used in Assam University.

4.3.2. Social media tools popular among users in Manipur University

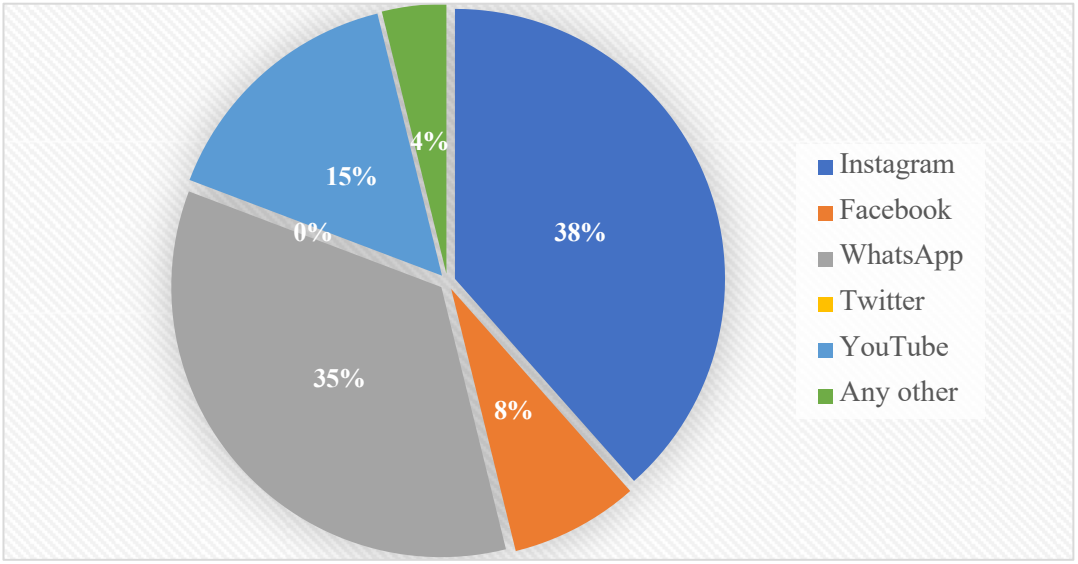


Fig. 4.3.2. Most popular social media tool in Manipur University

Figure 4.3.2. shows that the majority of the respondents 20 (38%) reported Instagram as their main social media tool and 18 (35%) respondents prefer WhatsApp while only 4 respondents (8%) reported using Facebook as their primary social media tool. From this, we can conclude that Instagram is the most popular social media among users in Manipur University.

4.3.3 Social media tools popular among users in Mizoram University

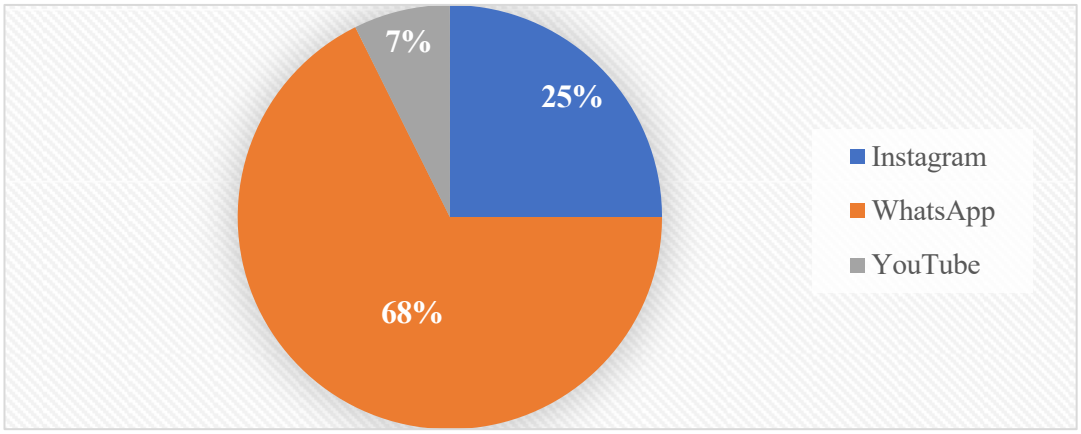


Fig. 4.3.3. Most popular social media tool in Mizoram University

Figure 4.3.3. shows WhatsApp being used by the majority of the respondents 45 (68%), 17 (25%) of the respondents prefer Instagram while only 5(7%) prefer YouTube as their most used social media tool. We can conclude that WhatsApp is the most popular among users in Mizoram University.

4.3.4 Social media tools popular among users in Nagaland University

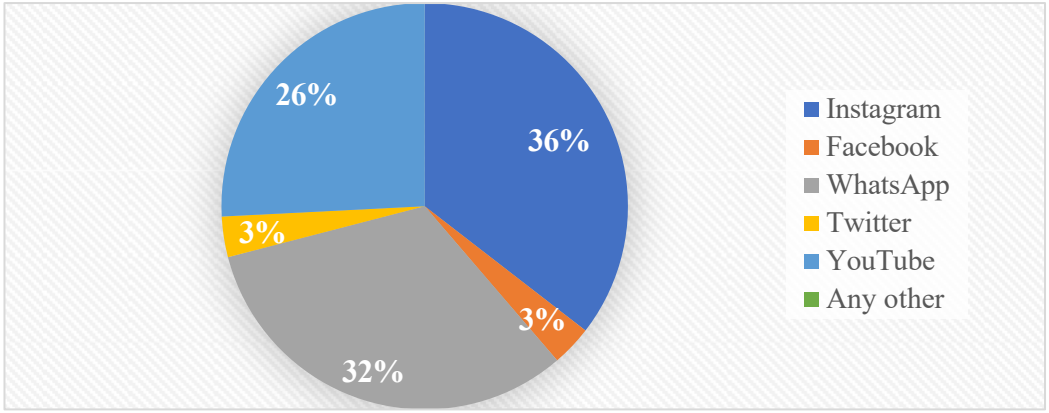


Fig. 4.3.4. Most popular social media tool in Nagaland University

From figure 4.3.4 we can find that the majority of the respondents 22 (36%) prefer Instagram as their main choice of social media and 20 (32%) respondents choose WhatsApp. Facebook and X (Twitter) are the least popular among respondents as only 6% i.e. 3% prefer using them over other social media tools.

4.3.5 Social media tools popular among users in North Eastern Hill University

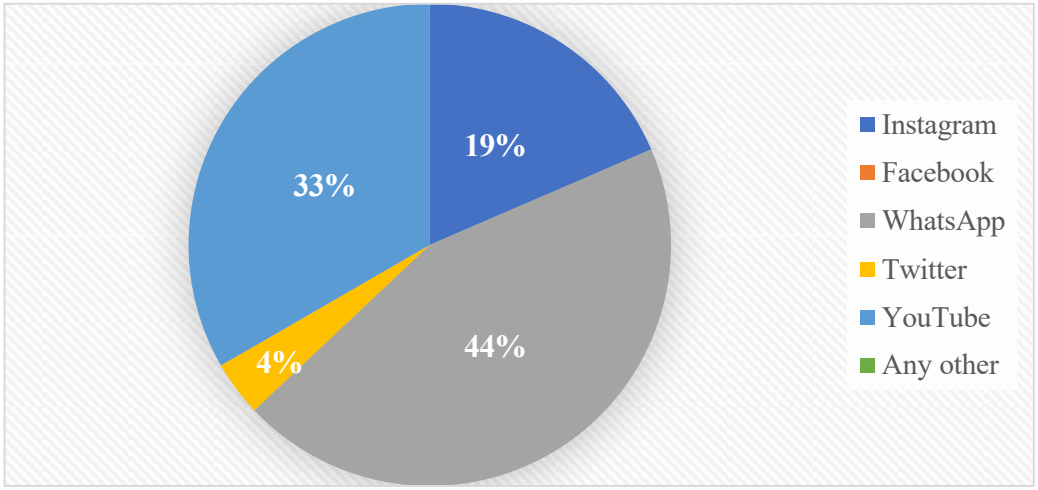


Fig. 4.3.5. Most popular social media tool in NEHU

Figure 4.3.5. shows that the majority of the respondents 24 (44%) prefer WhatsApp as their primary social media, 18 (33%) respondents prefer YouTube and only 2 (4%) choose X (Twitter) as their main social media tool.

4.3.6 Social media tools popular among users in Rajiv Gandhi University

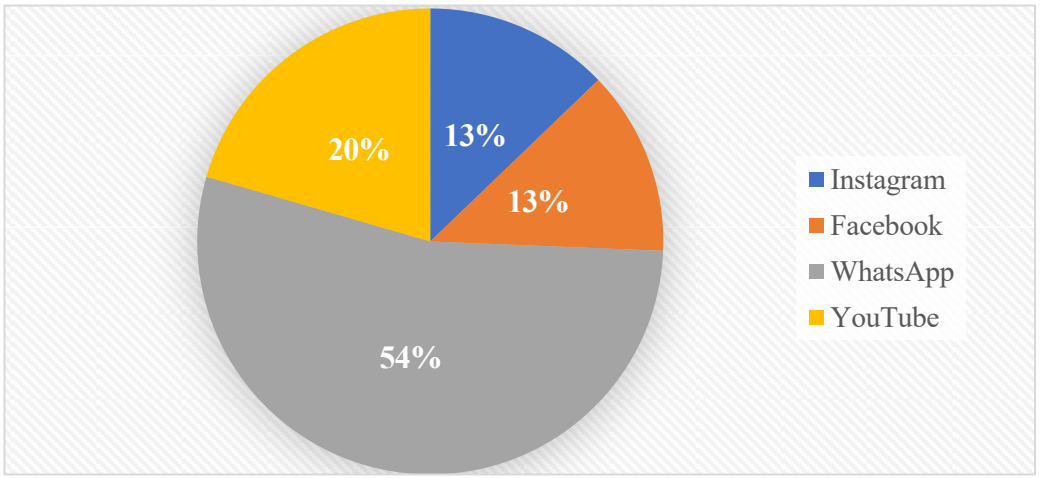


Fig. 4.3.6. Most popular social media tool in Rajiv Gandhi University

From figure 4.3.6. shows that 42 (54%) the majority of the respondents prefer WhatsApp and 16 (20%) respondents prefer YouTube. 10 (13%) of the respondents prefer Instagram while the other 10 (13%) respondents prefer Facebook.

4.3.7 Social media tools popular among users in Sikkim University

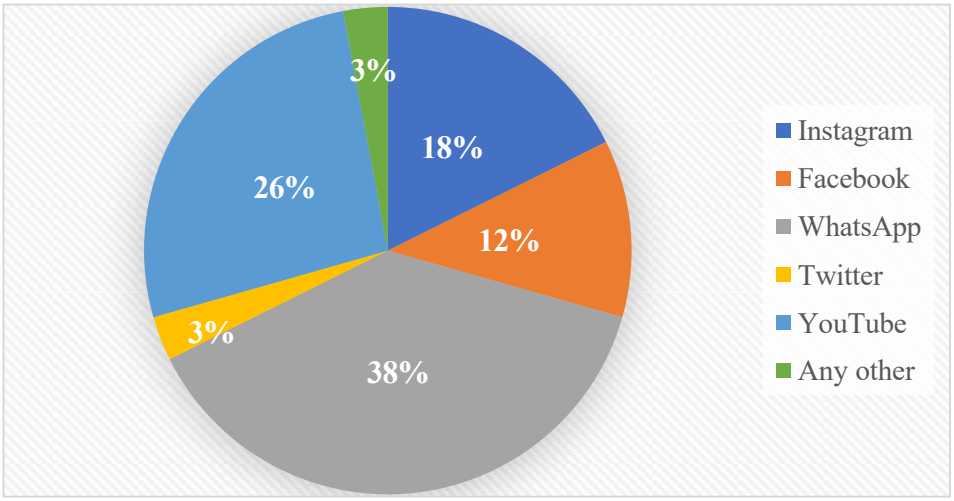


Fig. 4.3.7. Most popular social media tool in Sikkim University

Figure 4.3.7. shows that the majority of the respondents 26 (38%) prefer WhatsApp, followed by 18 (26%) respondents preferring YouTube. Only 2 (3%) of the respondents prefer X (Twitter) as their primary social media tool

4.3.8 Social media tools popular among users in Tezpur University

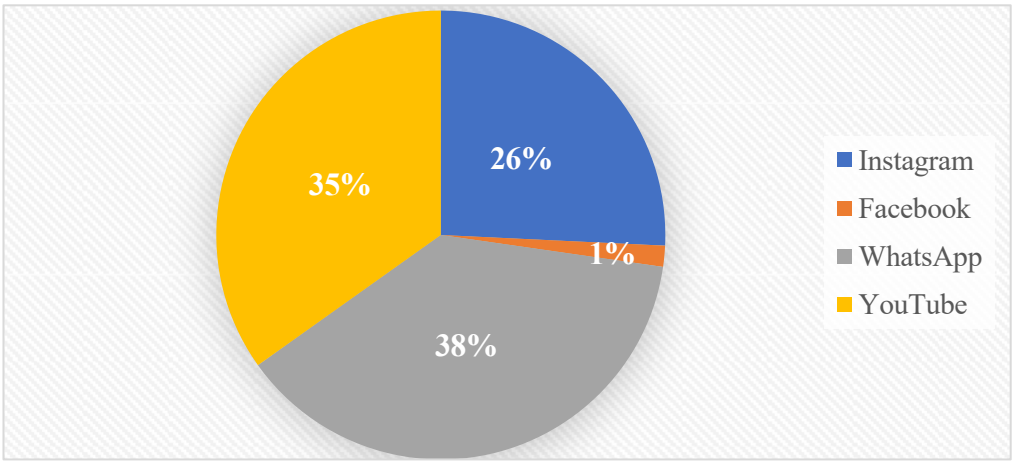


Fig. 4.3.8. Most popular social media tool in Tezpur University

Figure 4.3.8. shows that the majority of the respondents 25 (38%) prefer WhatsApp as their main social media tool and 23 (35%) prefer YouTube. Facebook is only preferred by 1 (1%) of the respondents.

4.3.9 Social media tools popular among users in Tripura University

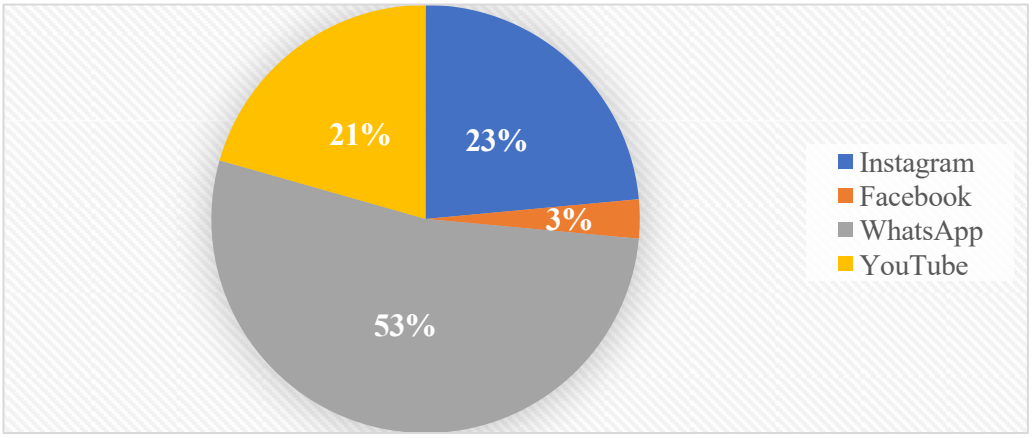


Fig. 4.3.9. Most popular social media in Tripura University

Figure 4.3.9. shows WhatsApp as the preferred social media by the majority of the respondents 36 (53%) and 16 (23%) prefer Instagram. Facebook is the least popular with only 2 (3%) respondents preferring it over other social media tools.

4.4. Overall skill of using social media tools.

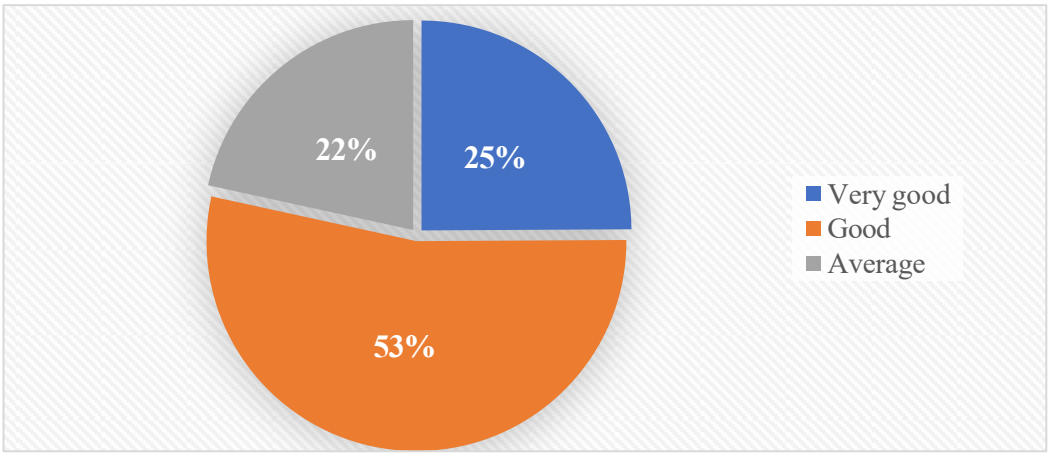


Fig. 4.4. Overall social media skill

From figure 4.4., it is evident that the majority of the respondents 305 (53%) have a good understanding of how social media tools operate and have and can use social

media tools to their full extent. 142 (25%) of the users have very good knowledge of social media tools while 123 (22%) of users have average skill in using social media tools. Out of all the users none have answered Poor skill in using social media tools.

4.4.1 Skill of using social media tools in Assam University

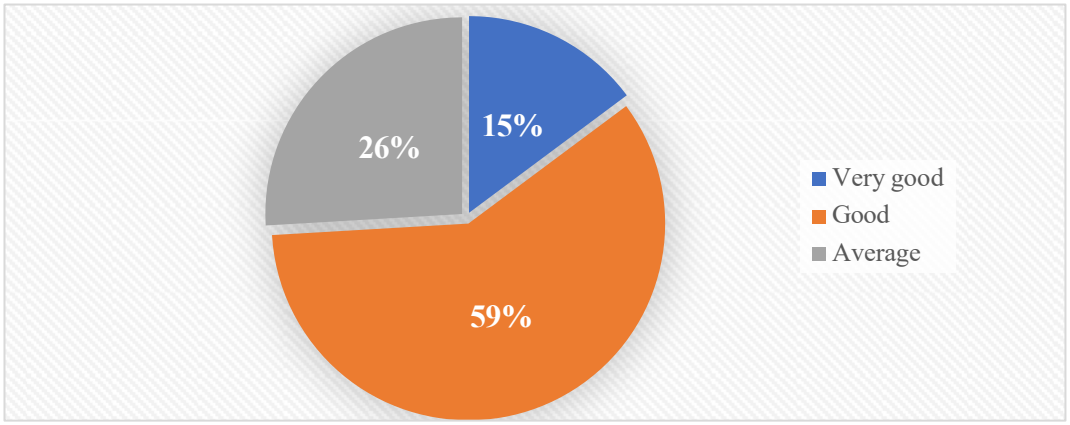


Fig. 4.4.1. Assam University social media skill

From the above figure we can see that the majority of the respondents 32 (59%) are having good skills in using social media while 14 (26%) of the respondents have average skills and only 8 (15%) of the respondents have very good social medial skills.

4.4.2. Skill of using social media tools in Manipur University

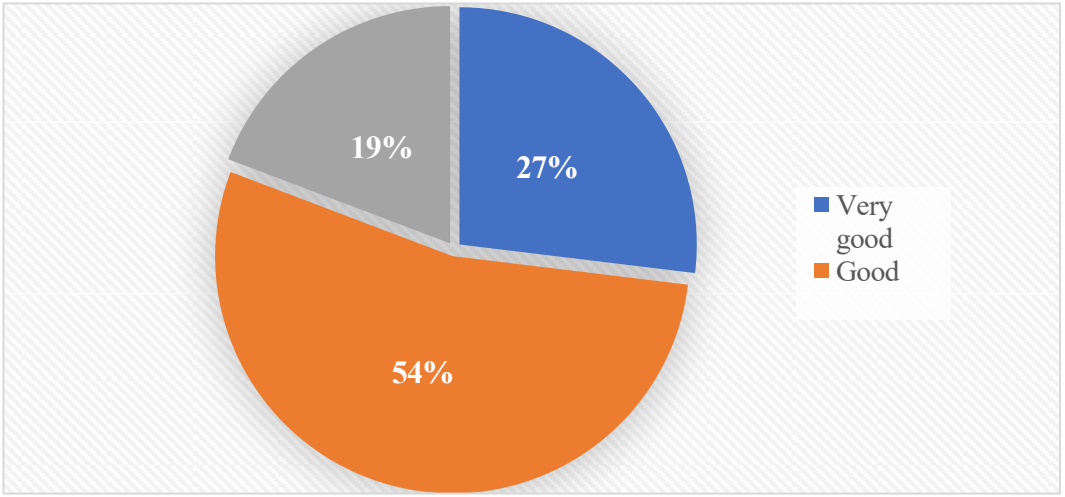


Fig. 4.4.2. Manipur University social media skill

The figure 4.4.2. indicates that the majority of the respondents 28 (54%) have good skills in using social media while 14 (27%) have very good skills and 10 (19%) of the respondents have average social media skills.

4.4.3. Skill of using social media tools in Mizoram University

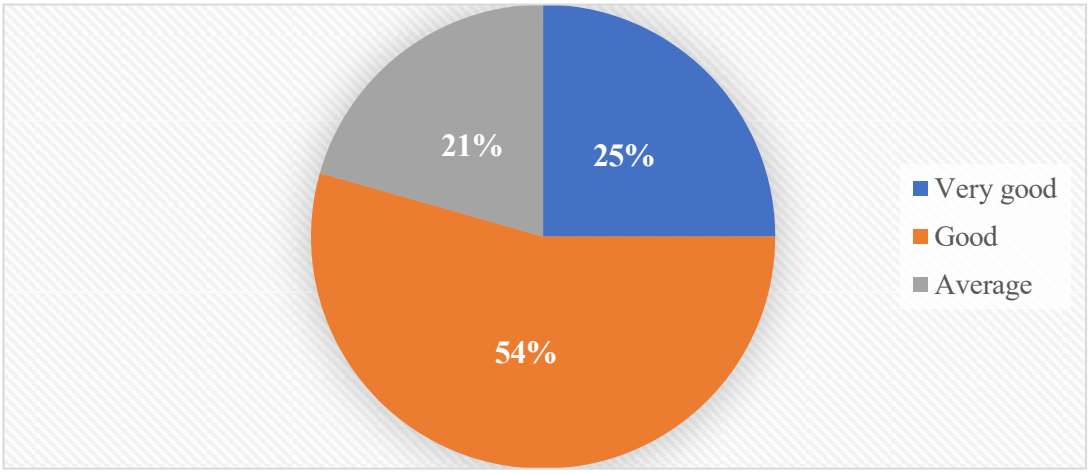


Fig. 4.4.3. Mizoram University social media skill

The figure 4.4.3. clearly shows that the majority of the respondents 37 (54%) have good social media skills while 17 (25%) of the respondents have very good skills and 21% of the respondents have average social media skills.

4.4.4. Skill of using social media tools in Nagaland University

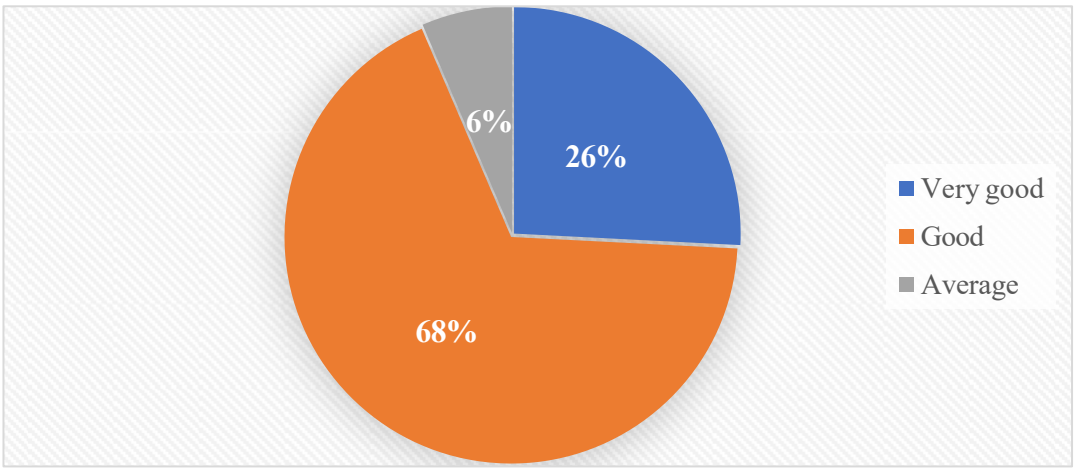


Fig. 4.4.4. Nagaland University social media skill

Fig. 4.4.4. shows that the majority of the respondents 24 (68%) have good social media skills and 16 (26%) of the respondents have very good social media skill while only 4 (6%) of the respondents have an average social media skill.

4.4.5. Skill of using social media tools in North Eastern Hill University

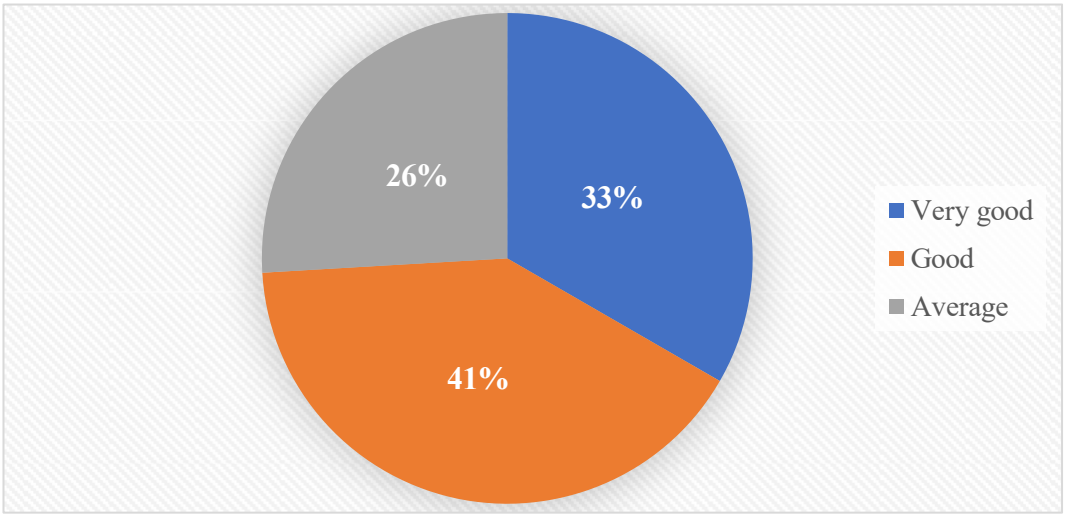


Fig. 4.4.5. NEHU social media skill

The above fig.4.4.5. shows that the majority of the respondents 22 (41%) have good social media skills and 18 (33%) of the respondents reported having very good social media skills and only 14 (26%) of the respondents have average social media skills.

4.4.6. Skill of using social media tools in Rajiv Gandhi University

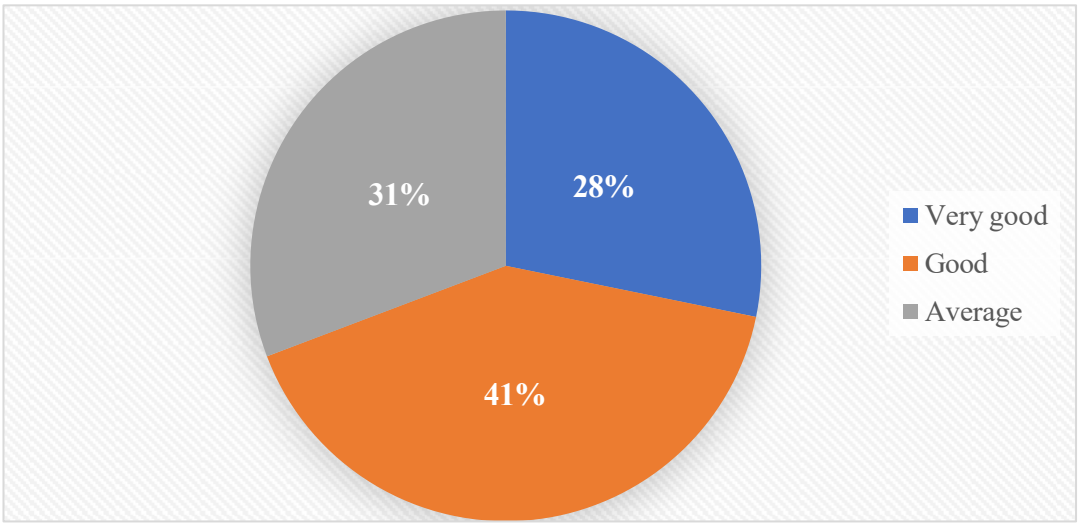


Fig. 4.4.6. Rajiv Gandhi University social media skill

Fig. 4.4.6. shows that the majority of the respondents 32 (41%) have good social media skills while 24 (31%) of the respondents have average and 22 (28%) of the respondents reported having very good social media skills.

4.4.7. Skill of using social media tools in Sikkim University

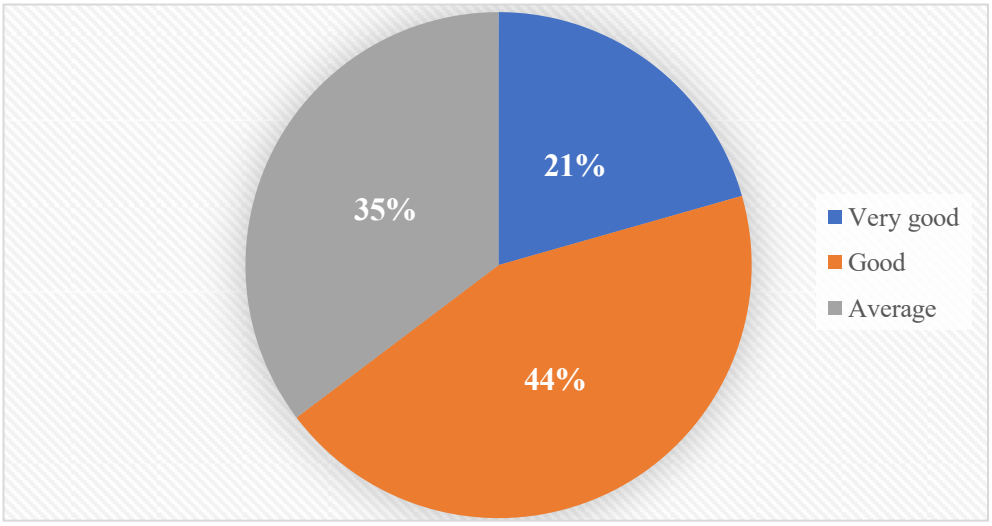


Fig. 4.4.7. Sikkim University social media skill

The fig. 4.4.7. shows that the majority of the respondents 30 (44%) report to have good social media skills, 24 (35%) have average skills while 14 (21%) of the respondents have very good social media skills.

4.4.8. Skill of using social media tools in Tezpur University

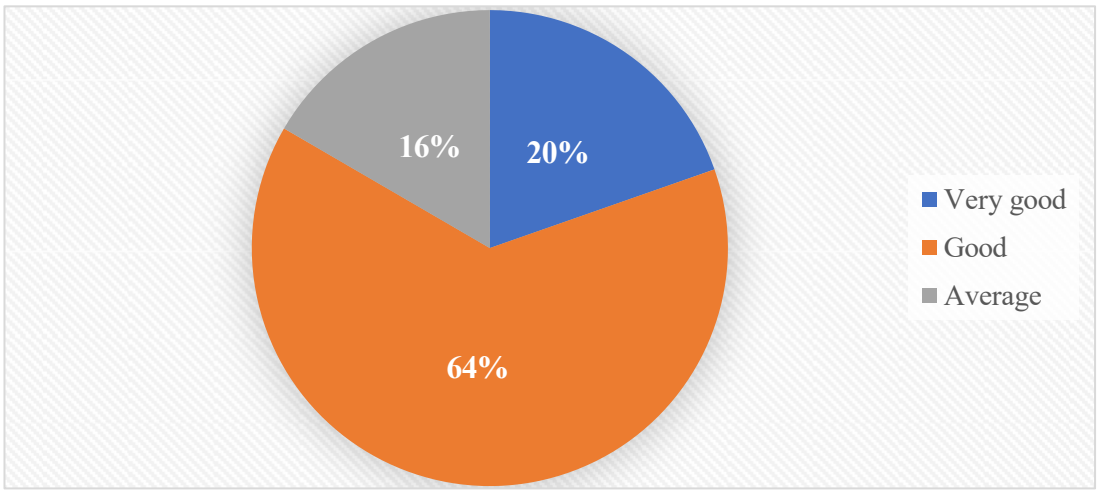


Fig. 4.4.8. Tezpur University social media skill

Fig. 4.4.8 shows that the majority of the respondents 42 (64%) have good social media skills while 13 (20%) of the respondent report to have very good skills and 11 (16%) of the respondents reported having average social media skills.

4.4.9. Skill of using social media tools in Tripura University

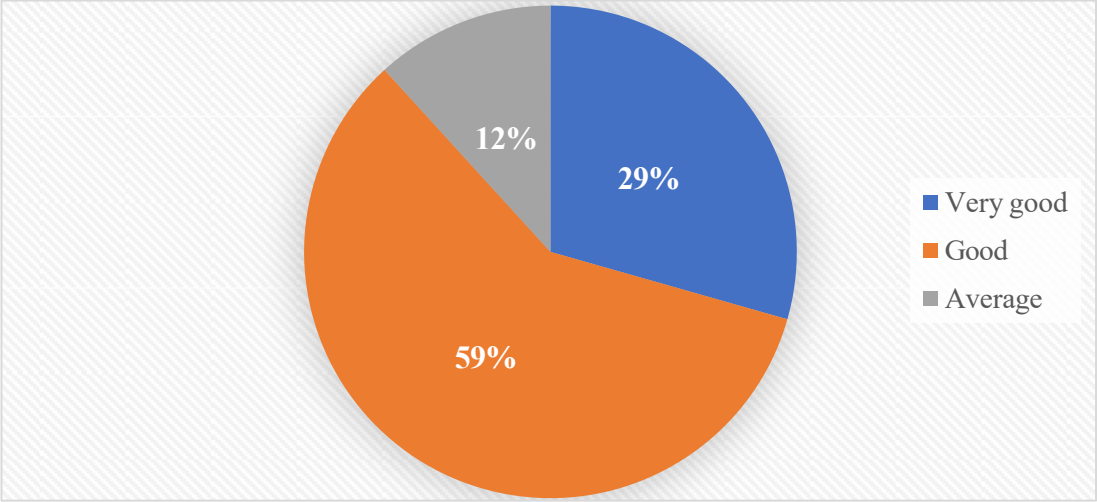


Fig. 4.4.9. Tripura University social media skill

From the above figure 4.4.9. we can see that the majority of the respondents 40 (59%) have good social media skills, 20 (29%) of the respondents reported to have very good skills and only 8 (12%) have reported having average social media skills.

4.5. Overall daily hours spent using social media tools

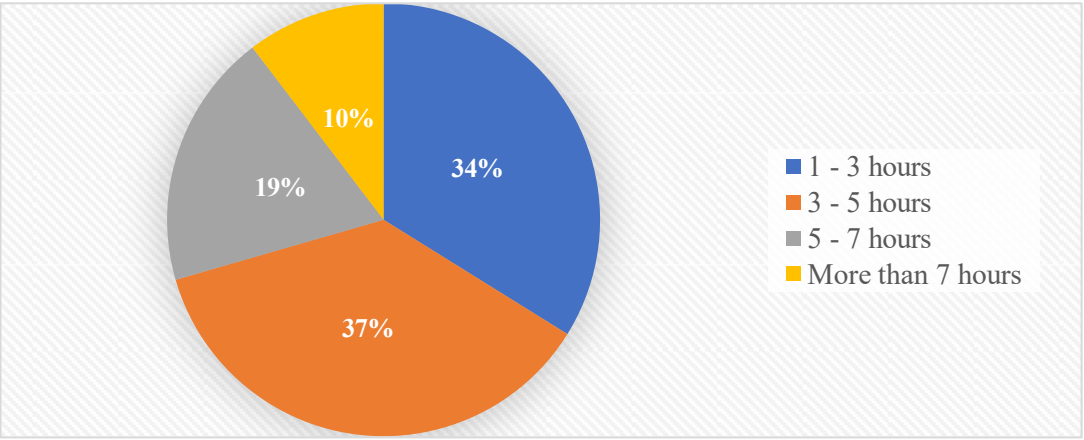


Fig. 4.5. Overall hours on social media

As technology has advanced over the years, we are more inclined to use social media in our daily lives and figure 5.5 clearly shows that the majority of the respondents 209 (37%) use social media tools for 3 – 5 hours on a daily basis, 193 (34%) use social media for 1 – 3 hours,109 (19%) use social media for 5 – 7 hours and only 59 (10%) of the respondents report using social media for more than 7 hours on a daily basis.

4.5.1. Daily hours spent using social media tools in Assam University

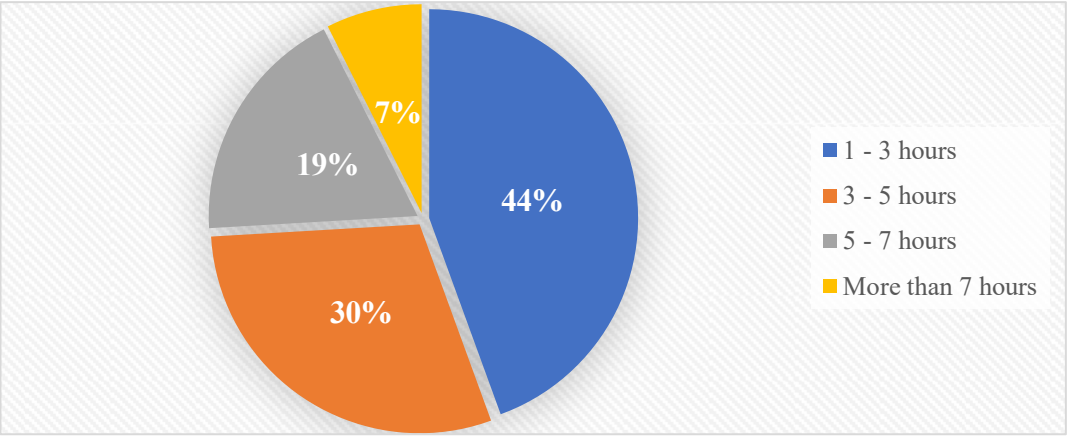


Fig. 4.5.1. Assam University hours on using social media

According to fig. 4.5.1 the majority of the respondents 24 (44%) report to use social media for 1-3 hours daily followed by 16 (30%) of the respondent using it only 3-5 hours daily, while only 4 (7%) of the respondents use social media for more than 7 hours.

4.5.2. Daily hours spent using social media tools in Manipur University

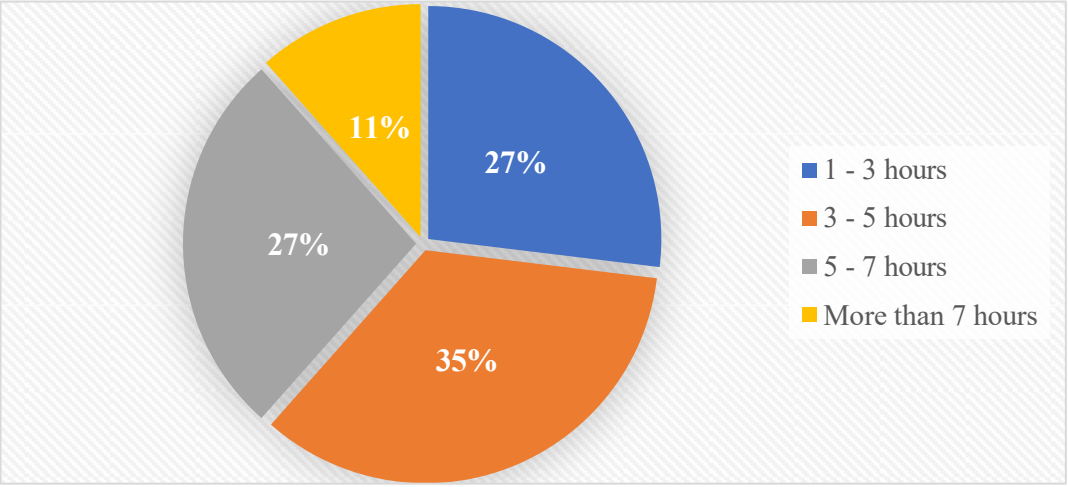


Fig. 4.5.2. Manipur University hours on using social media

From fig. 4.5.2 we can see that the majority of the respondents 18 (35%) use social media for 3 – 5 hours daily while only 6 (11%) of the respondents reported to use social media for more than 7 hours daily.

4.5.3. Daily hours spent using social media tools in Mizoram University

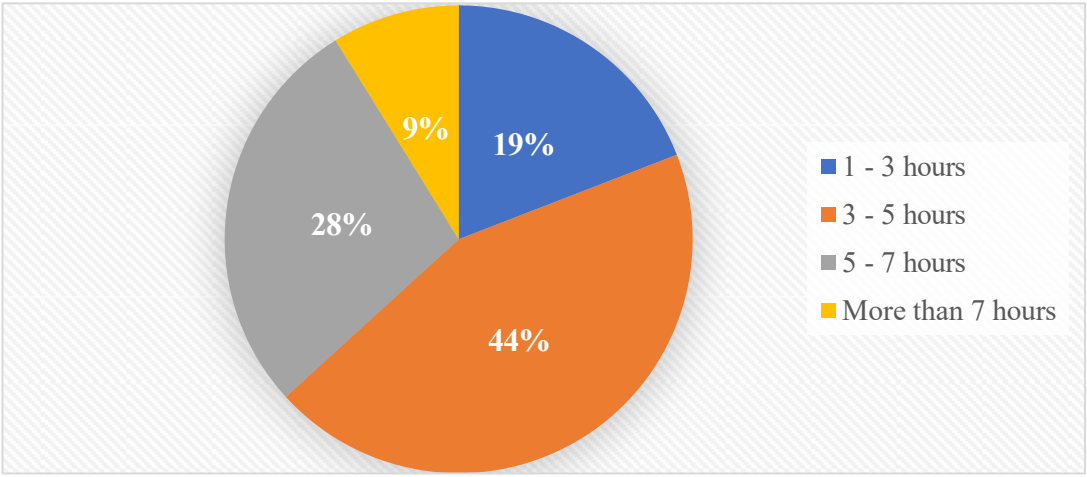


Fig. 4.5.3. Mizoram University hours on using social media

The figure 4.5.3. shows that the majority of the respondent 30 (44%) are using social media for 3-5 hours and that only 6 (9%) use social media for more than 7 hours on a daily basis.

4.5.4. Daily hours spent using social media tools in Nagaland University

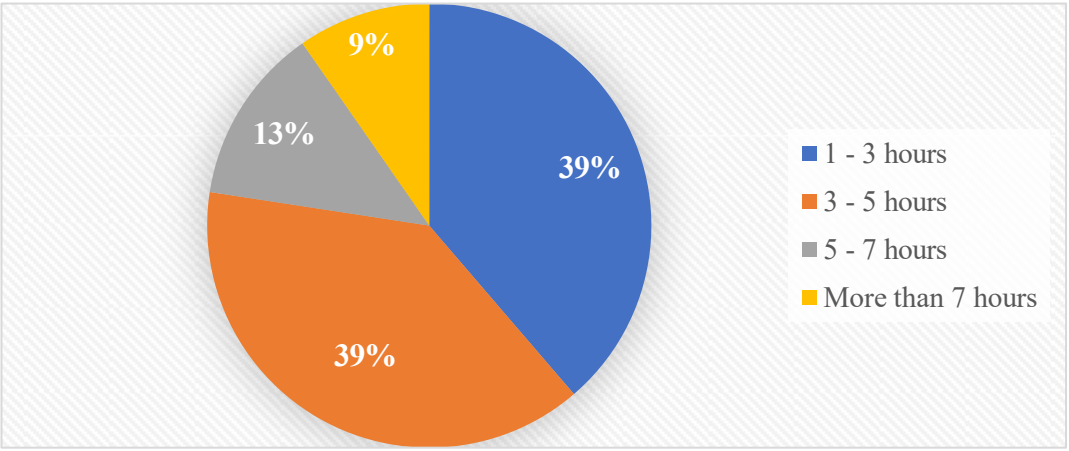


Fig. 4.5.4. Nagaland University hours on using social media

The figure 4.5.4 shows the daily usage of social media in which two groups of respondents 24 (39%) each reported using social media for 1-3 hours and 3-5 hours. 8(13%) of the respondents used social media for 5-7 hours and only 6 (9%) used social media for more than 7 hours daily.

4.5.5. Daily hours spent using social media tools in North Eastern Hill University

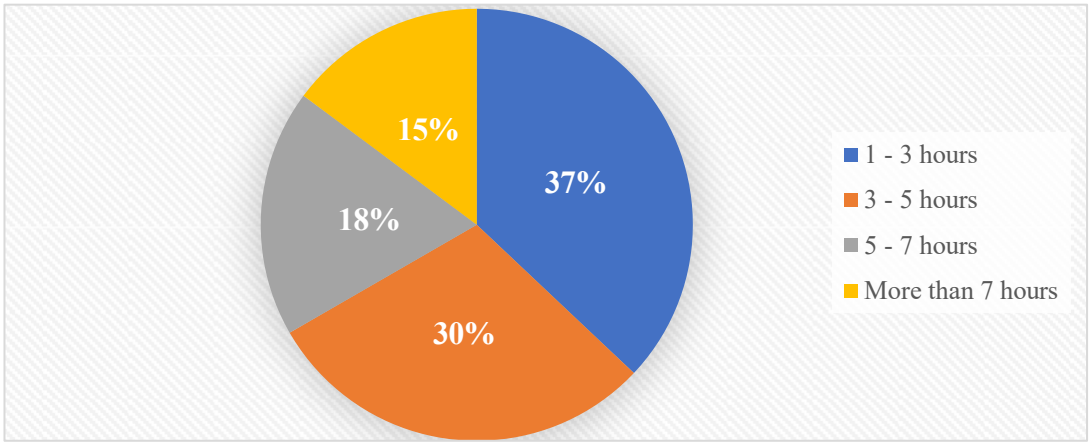


Fig. 4.5.5. NEHU hours on using social media

The figure 4.5.5. shows that the majority of the respondents 20 (37%) are using social media for 1-3 hours daily and only 8 (15%) of the respondents reported using social media for more than 7 hours daily.

4.5.6. Daily hours spent using social media tools in Rajiv Gandhi University

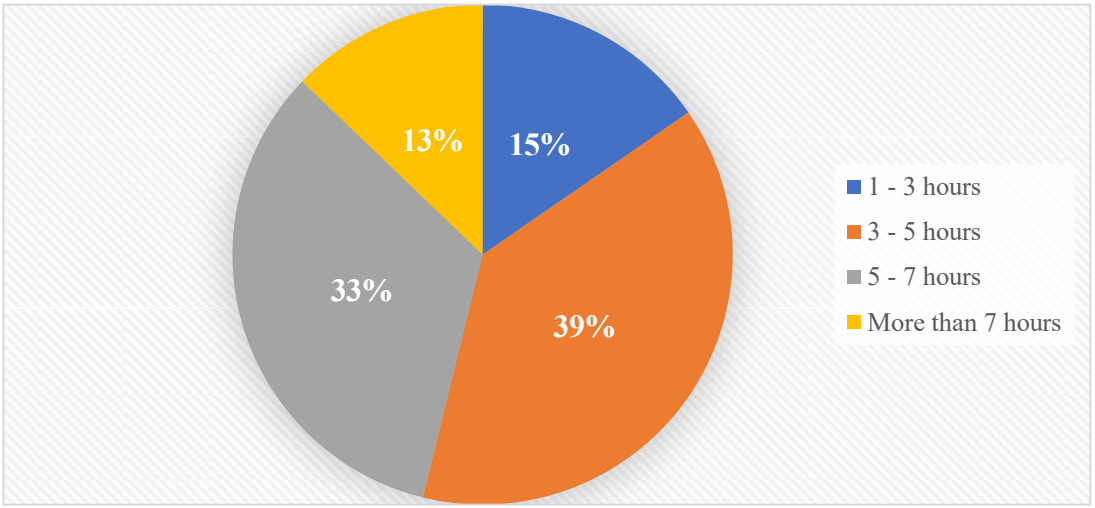


Fig. 4.5.6. Rajiv Gandhi University hours on using social media

From the figure 4.5.6. we can see that the majority of the respondents 30 (39%) reported using social media for 3-5 hours daily and only 10 (13%) of the respondents report to use social media for 7 hours daily.

4.5.7. Daily hours spent using social media tools in Sikkim University

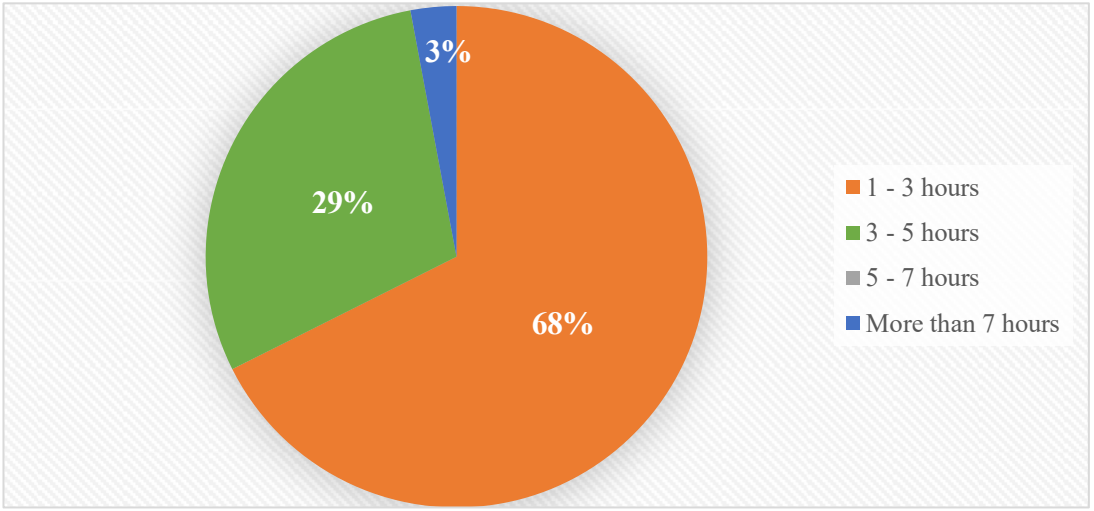


Fig. 4.5.7. Sikkim University hours on using social media

Fig. 4.5.7. shows that the majority of the respondents 46 (68%) use social media for 1-3 hours daily and 20 (29%) respondents used social media for 3-5 hours daily. 2 (3%) of the respondents reported to use social media for more than 7 hours daily.

4.5.8. Daily hours spent using social media tools in Tezpur University

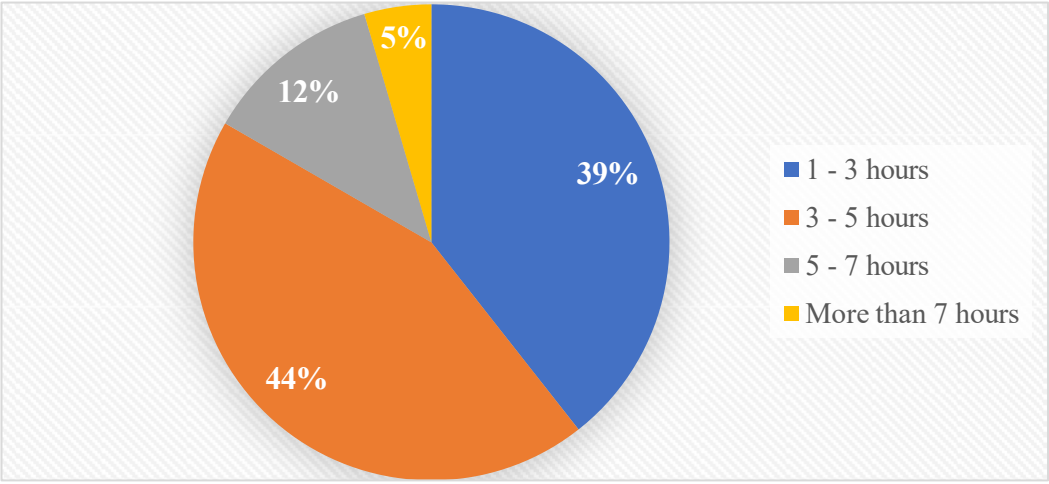


Fig. 4.5.8. Tezpur University hours on using social media

According to fig. 4.7.8. the majority of the respondents 29 (44%) use social media for 3-5 hours daily, 26 (39%) report to use social media for 1-3 hours daily. 3 (5%) of the respondents reported using social media for more than 7 hours daily.

4.5.9. Daily hours spent using social media tools in Tripura University

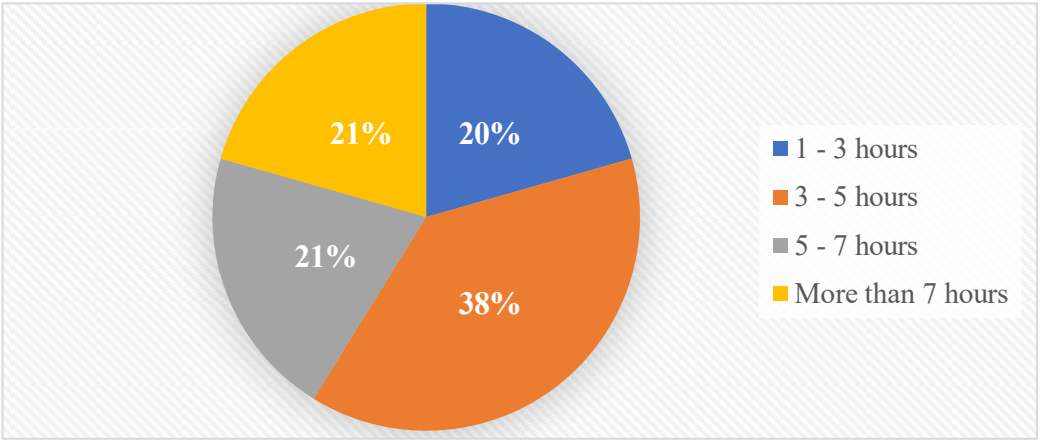


Fig. 4.5.9. Tripura University hours on using social media

Fig. 4.5.9. shows that the majority of the respondents 26 (38%) report to use social media for 3-5 hours and 14 (20%) of the respondents reported to use social media for 1-3 hours daily.

4.6. Overall use of social media for educational purposes

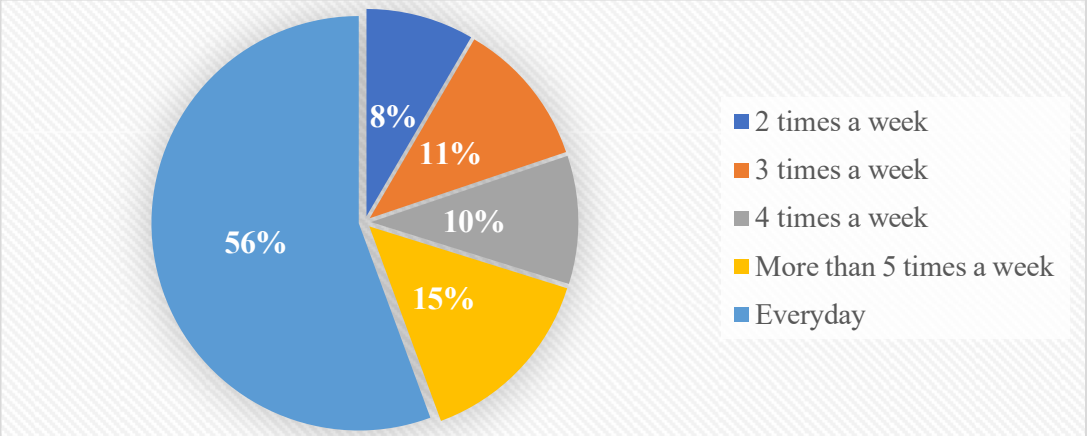


Fig. 4.6. Overall use of social media

Figure 4.6. provides insight on the frequency of how the respondents use social media for educational purposes and clearly shows that the majority of the respondents 317 (56%) use social media tools daily for acquiring their educational needs. The figure also shows that 83 (15%) of the respondents use it for more than 5 times, while 65 (11%) of the respondents use it 3 times a week, 57 (10%) of the respondents use it 3 times a week and only 48 (8%) of the respondents use social media for educational purposes 2 times a week.

4.6.1. Use of social media for educational purposes in Assam University

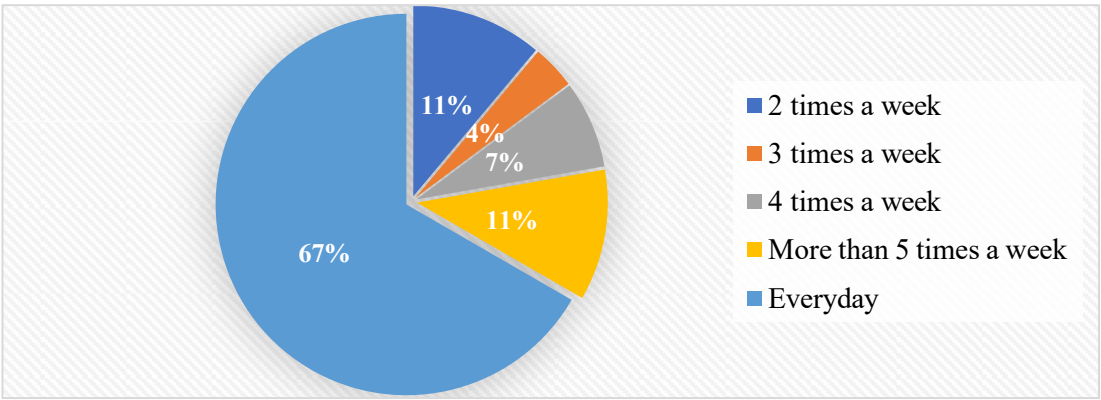


Fig. 4.6.1. Assam University use of social media

Figure 4.6.1 shows that the majority of the respondents 36 (67%) use social media for education everyday while only 2 (3%) of the respondents reported to use social media 3 times a week for education.

4.6.2. Use of social media for educational purposes in Manipur University

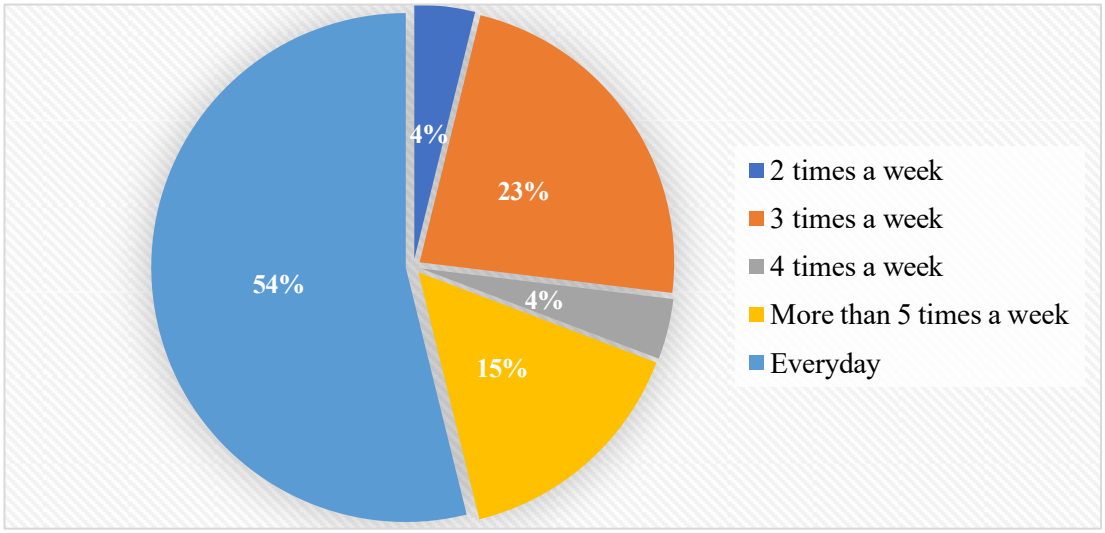


Fig. 4.6.2. Manipur University use of social media

Figure 4.6.2 shows that the majority of the respondents 28 (54%) use social for education everyday while only 2 (4%) of the respondents use social media 4 times a week and another 2 (4%) use social media 2 times a week for education.

4.6.3. Use of social media for educational purposes in Mizoram University

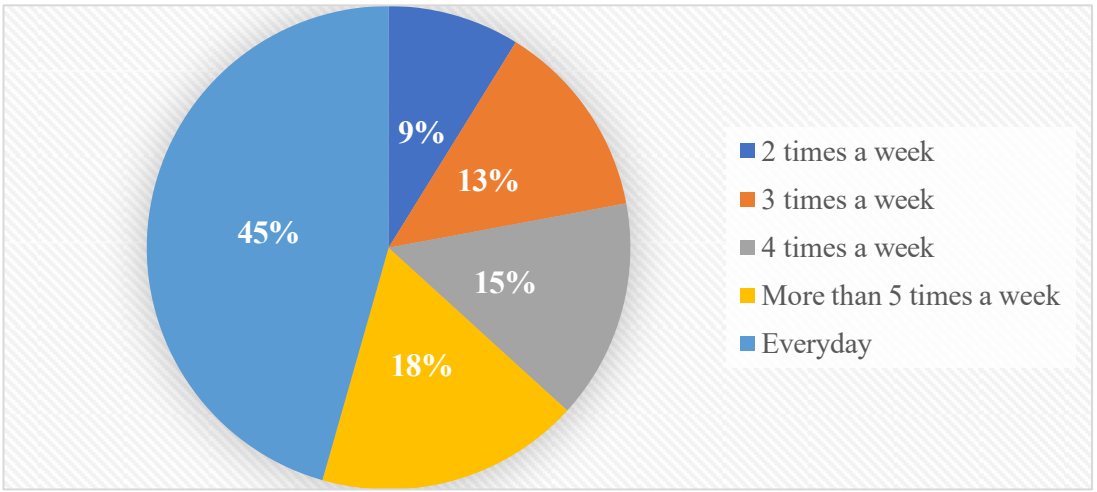


Fig. 4.6.3. Mizoram University use of social media

Figure 4.6.3. shows that the majority of the respondents 31 (45%) reported to use social media for education everyday while only 6 (9%) of the respondents reported using social media 2 times a week for education.

4.6.4. Use of social media for educational purposes in Nagaland University

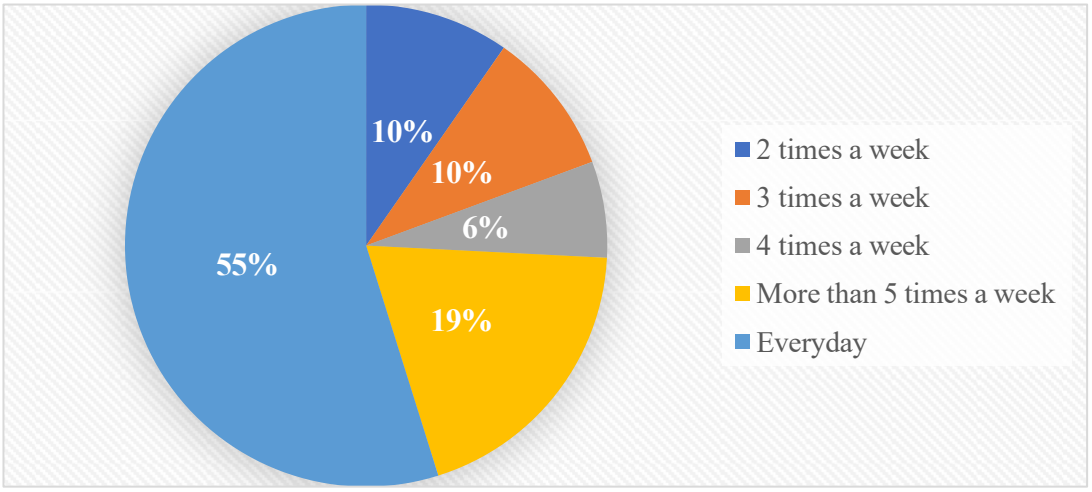


Fig. 4.6.4. Nagaland University use of social media

Figure 4.6.4. shows that the majority of the respondents 34 (55%) are using social media for education everyday while only 4 (6%) of the respondents reported to use social media 4 times a week for education.

4.6.5. Use of social media for educational purposes in North Eastern Hill University

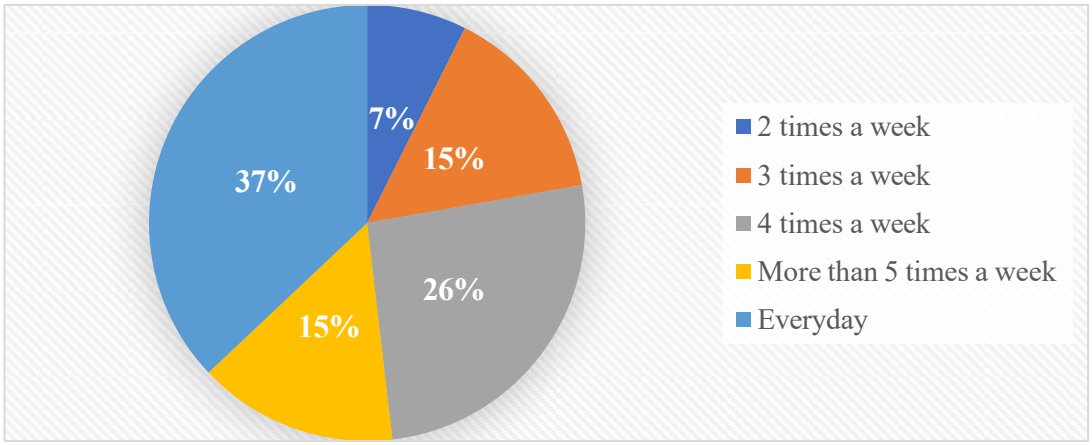


Fig. 4.6.5. NEHU University use of social media

Figure 4.6.5. shows that the majority of the respondents 20 (37%) reported to use social media for education everyday and only 4 (7%) of the respondents reported using social media 2 times a week for education.

4.6.6. Use of social media for educational purposes in Rajiv Gandhi University

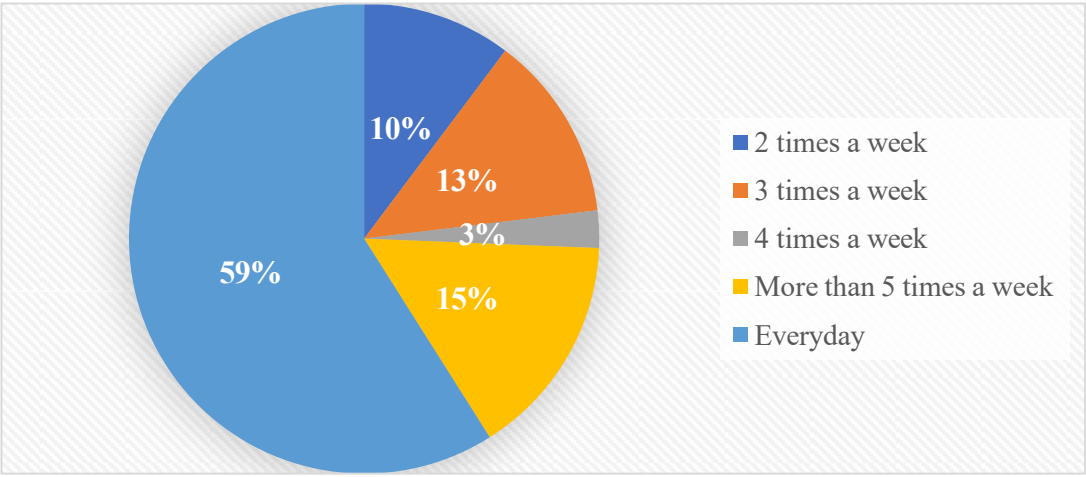


Fig. 4.6.6. Rajiv Gandhi University use of social media

Figure 4.6.6. shows that the majority of the respondents 46 (59%) are using social media for their education every day. 2 (3%) of the respondents reported to use social media only 4 times a week for education.

4.6.7. Use of social media for educational purposes in Sikkim University

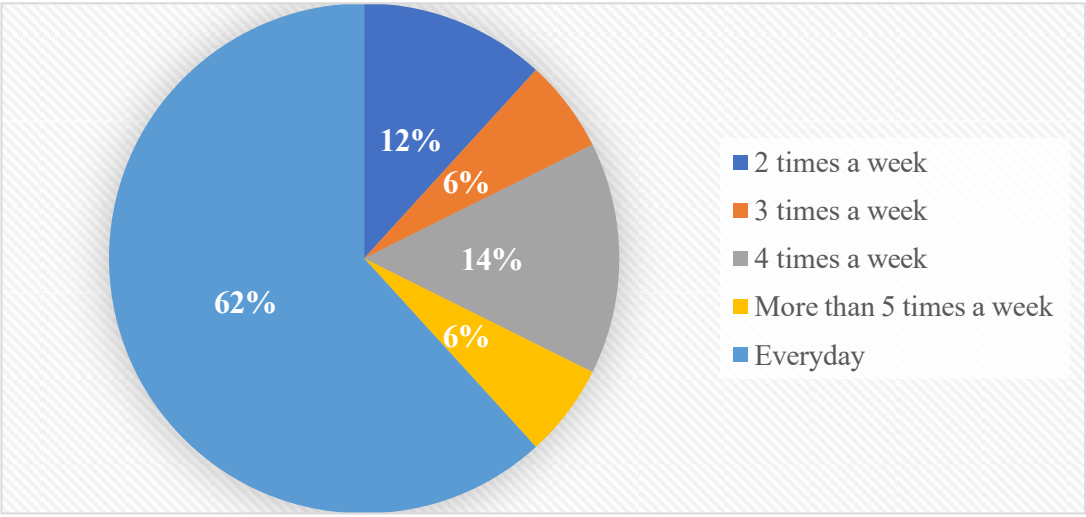


Fig. 4.6.7. Sikkim University use of social media

Figure 4.6.7. shows that the majority of the respondents 42 (62%) used social media for education everyday and only 4 (6%) of the respondents report to using social media 3 times a week for education.

4.6.8. Use of social media for educational purposes in Tezpur University

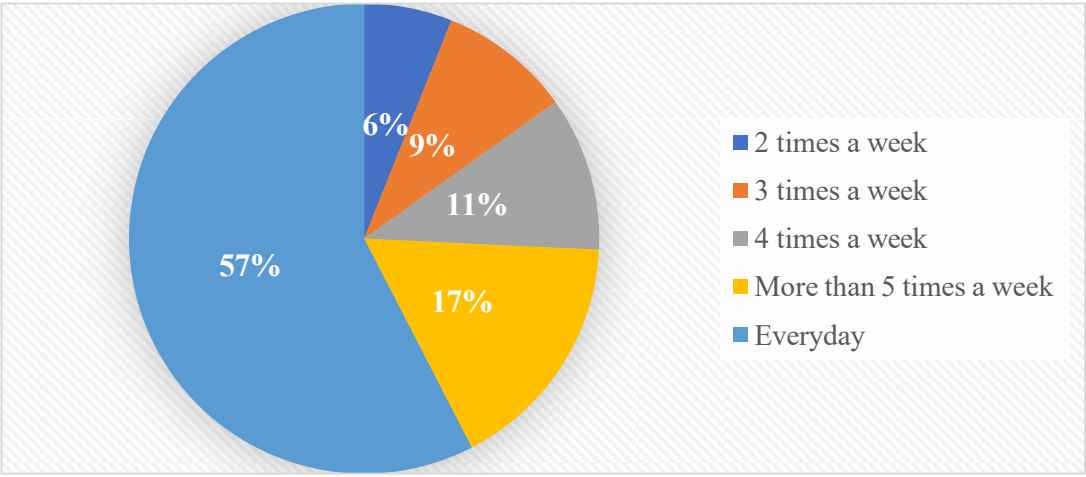


Fig. 4.6.8. Tezpur University use of social media

Figure 4.6.8. shows that the majority of the respondents 38 (57%) are using social media for education everyday while 4 (6%) of the respondents reported to use social media only 2 times a week for education.

4.6.9. Use of social media for educational purposes in Tripura University

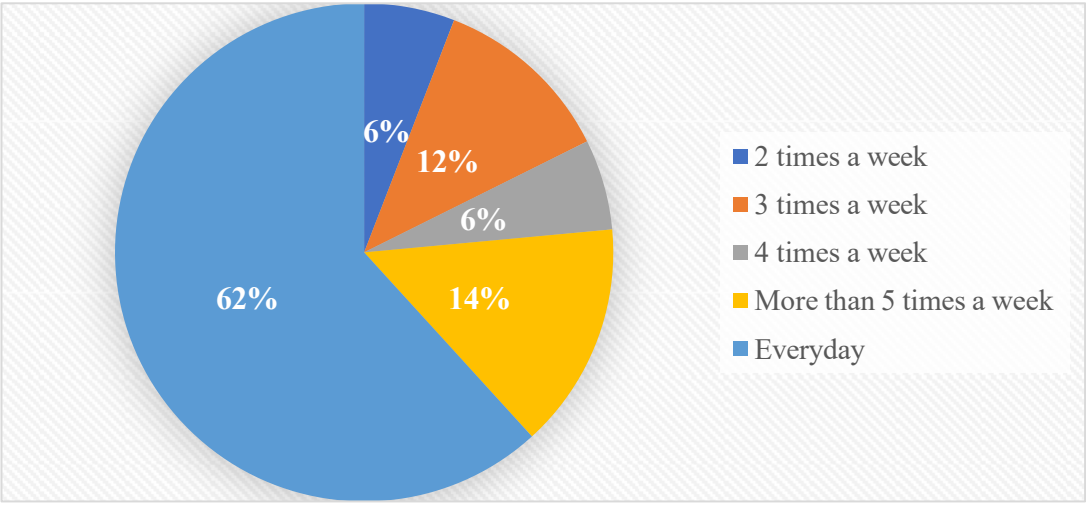


Fig. 4.6.9. Tripura University use of social media

Figure 4.6.9. shows the majority of the respondents 42 (62%) use social media for education everyday and two groups 4(6%) respondents each reported using social media for education 4 times a week and 2 times a week.

4.7. Overall feedback on the electronic devices used to access social media applications.

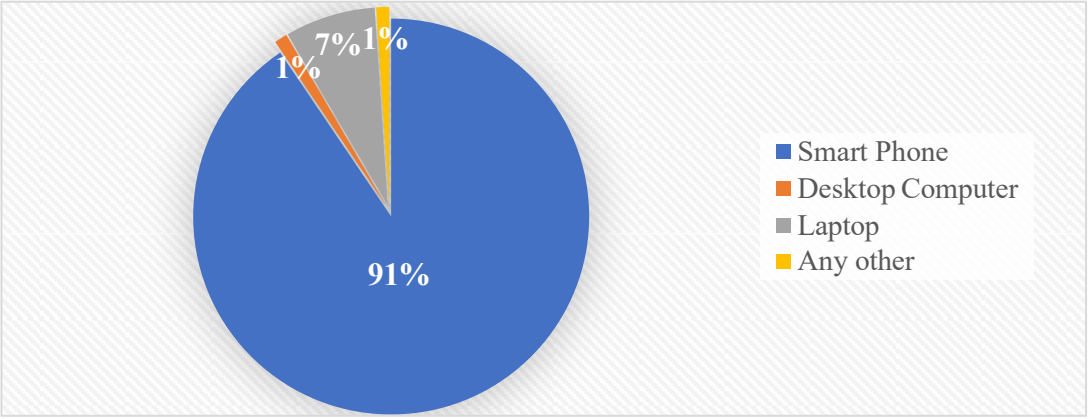


Fig. 4.7. Overall electronic devices used for social media

Figure 4.7. shows that the majority of the respondents 516 (91%) are using Smart Phones for accessing social media applications, while 42 (7%) of the respondents use Laptop for accessing social media applications. Only 6 (1%) of the respondents reported using desktop computers and the other 6 (1%) respondents access social media using other tools.

4.7.1. Electronic devices used to access social media applications in Assam University

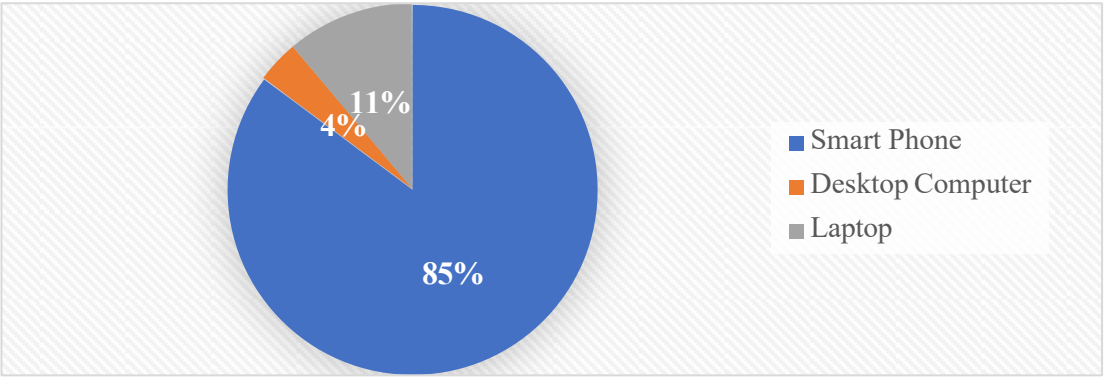


Fig. 4.7.1. Electronic devices used for social media in Assam University

Figure 4.7.1. shows that the majority of the respondents 46 (85%) are using smart phones for accessing social media applications followed by 6 (11%) of the respondents using laptops and only 2 (4%) using desktop computer for accessing social media applications.

4.7.2. Electronic devices used to access social media applications in Manipur University

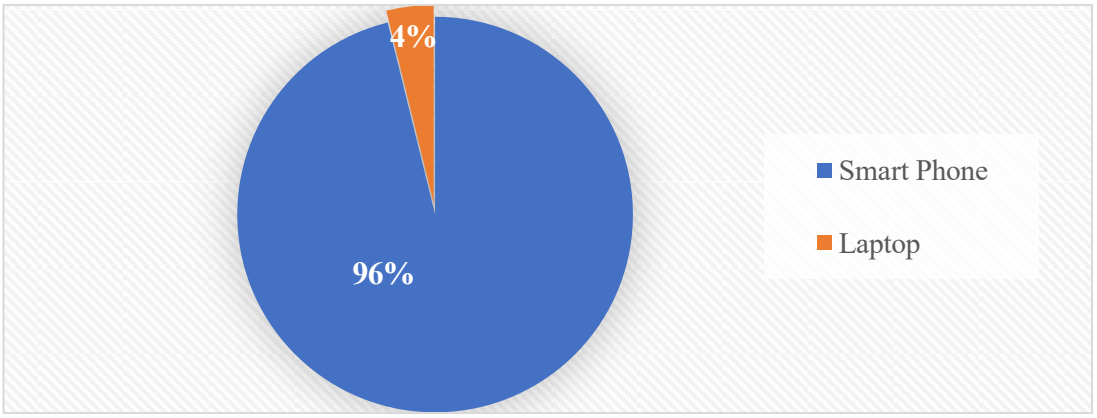


Fig. 4.7.2. Electronic devices used for social media in Manipur University

Figure 4.7.2. shows that the majority of the respondents 50 (96%) are using smart phones for accessing social media and only 2 (4%) of the respondents reported using laptop for accessing social media applications.

4.7.3. Electronic devices used to access social media applications in Mizoram University

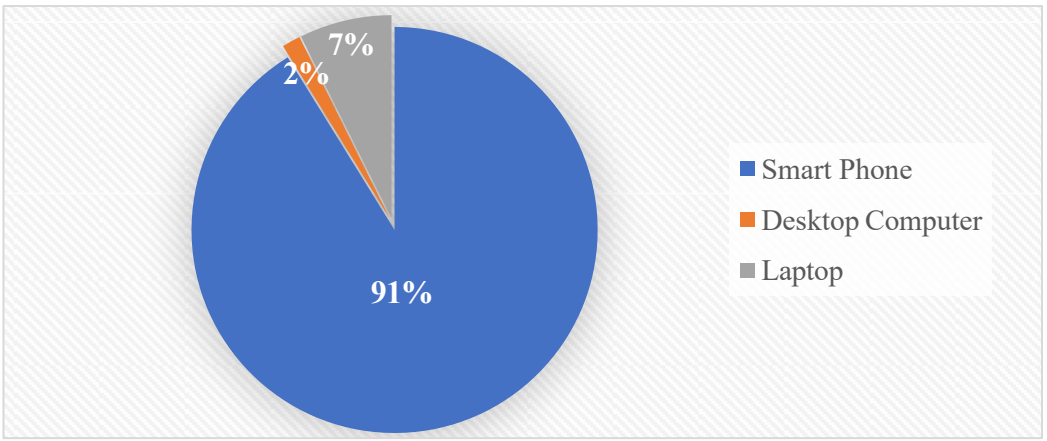


Fig. 4.7.3. Electronic devices used for social media in Mizoram University

Figure 4.7.3. shows that the majority of the respondents 62 (91%) used smart phones for accessing social media and only 1 (2%) respondent is using desktop computer for accessing social media applications.

4.7.4. Electronic devices used to access social media applications in Nagaland University

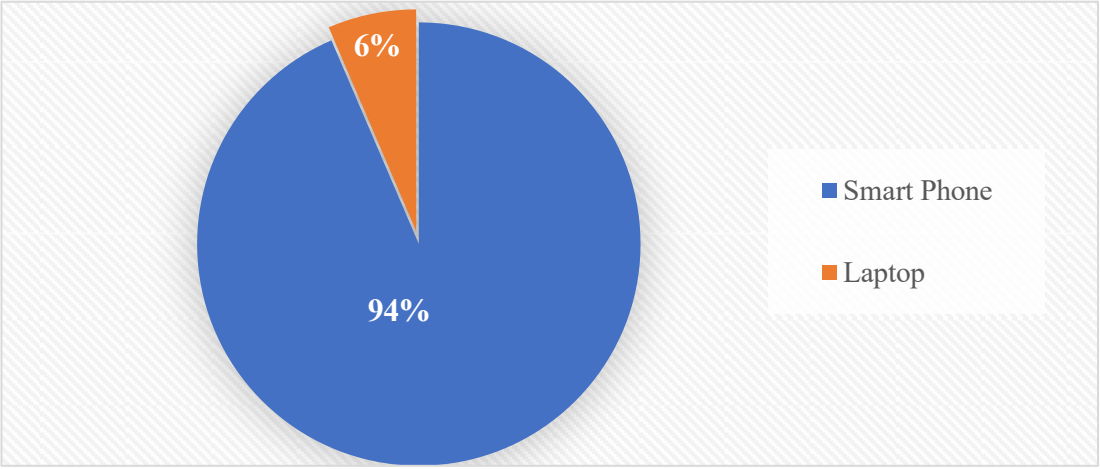


Fig. 4.7.4. Electronic devices used for social media in Nagaland University

Figure 4.7.4. shows the majority of the respondents 58 (94%) are using smart phones for accessing social media and only 4 (6%) of the respondents reported using laptop for accessing social media applications.

4.7.5. Electronic devices used to access social media applications in North Eastern Hill University

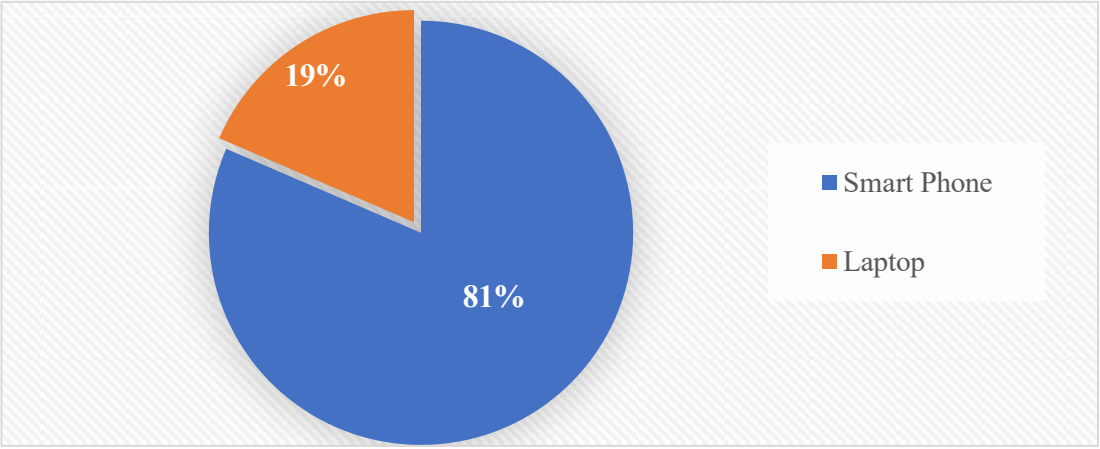


Fig. 4.7.5. Electronic devices used for social media in NEHU

Figure 4.7.5. states that the majority of the respondents 44 (81%) are using smart phones for accessing social media and only 10 (19%) of the respondents reported using laptop for accessing social media applications.

4.7.6. Electronic devices used to access social media applications in Rajiv Gandhi University

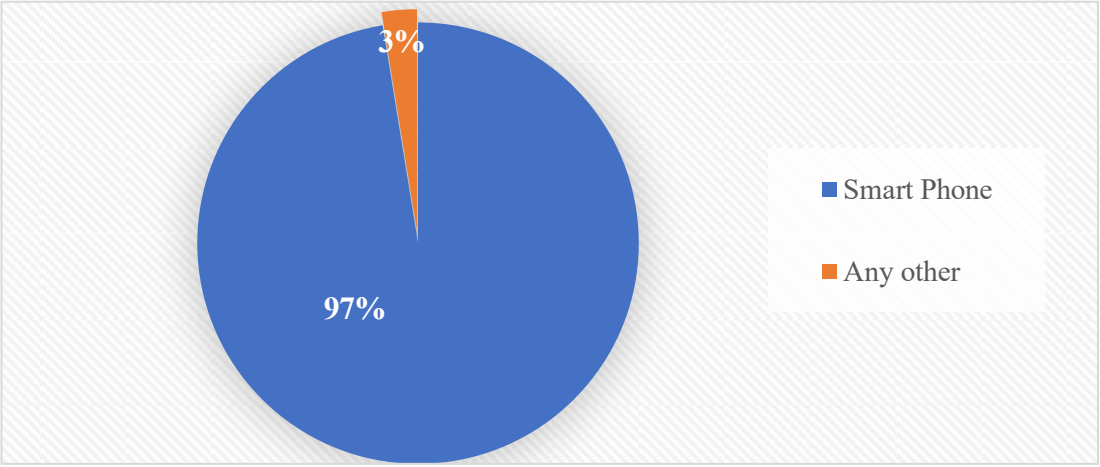


Fig. 4.7.6. Electronic devices used for social media in Rajiv Gandhi University

Figure 4.7.6. shows that the majority of the respondents 76 (97%) prefer smart phones as their main electronic device for accessing social media while only 2 (3%) of the respondents prefer other electronic devices.

4.7.7. Electronic devices used to access social media applications in Sikkim University

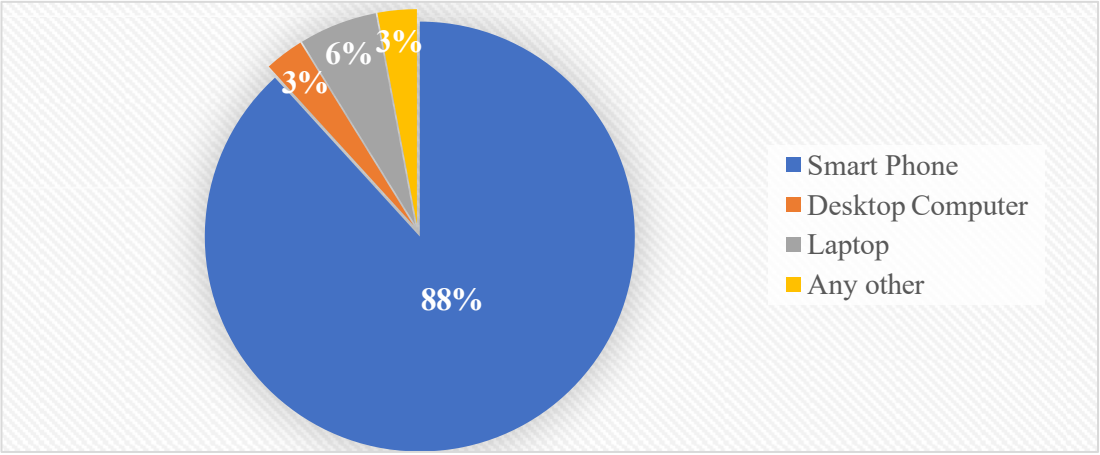


Fig. 4.7.7. Electronic devices used for social media in Sikkim University

Figure 4.7.7. shows that the majority of the respondents 60 (88%) prefer using smart phones for accessing social media and a tie of 2 (3%) respondents each preferred using both desktop computer and other electronic device for accessing social media applications.

4.7.8. Electronic devices used to access social media applications in Tezpur University

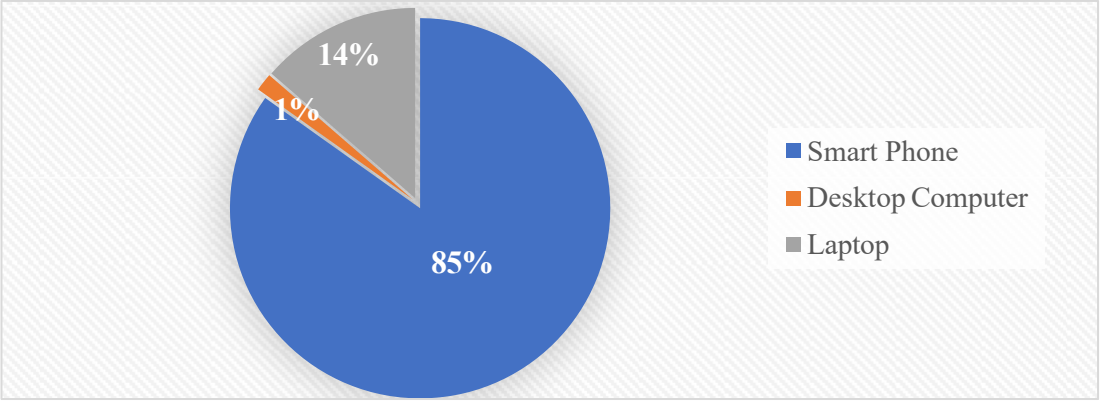


Fig. 4.7.8. Electronic devices used for social media in Tezpur University

Figure 4.7.8. shows the majority of the respondents 56 (85%) preferring to use smart phones as the main device for accessing social media while 9 (14%) of the respondents prefer using laptops, only 1(1%) of the respondents use desktop computer for accessing social media applications.

4.7.9. Electronic devices used to access social media applications in Tripura University

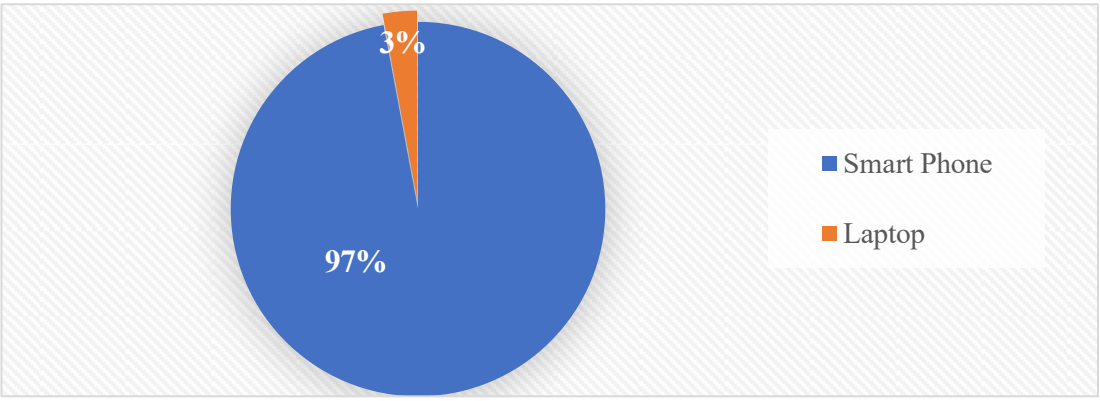


Fig. 4.7.9. Electronic devices used for social media in Tripura University

Figure 4.7.9. shows that the majority of the respondents 66 (97%) are using smart phones as their main electronic device for accessing social media while only 2 (3%) are using laptop for accessing social media applications.

4.8 Overall feedback of the significance of social media for studies, assignments, projects and exams.

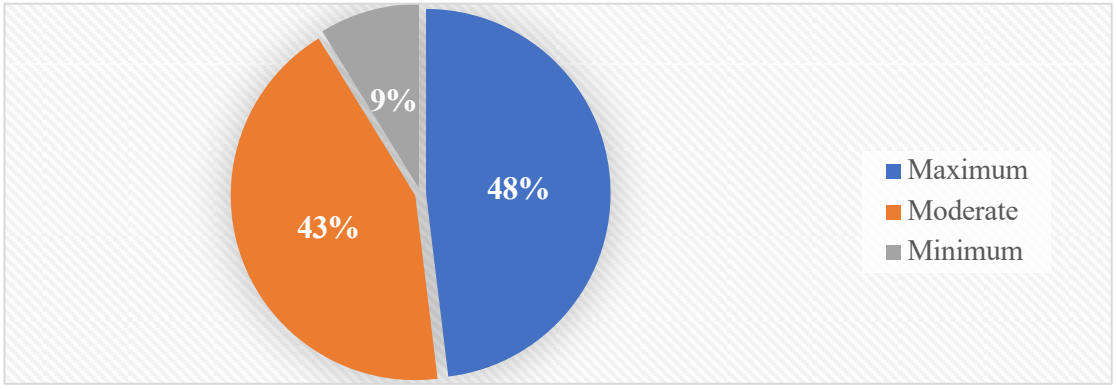


Fig. 4.8. Overall significance of social media

Figure 4.8. provides information on the significance of social media tools and the majority of the respondents 274 (48%) stated that social media has maximum significance in their studies, assignments, projects and exams. 246 (43%) of the respondents stated that social media is moderately useful and only 50 (9%) of the respondents stated that social media has minimum significance in their studies, assignments, projects and exams.

4.8.1 Significance of social media for studies, assignments, projects and exams in Assam University

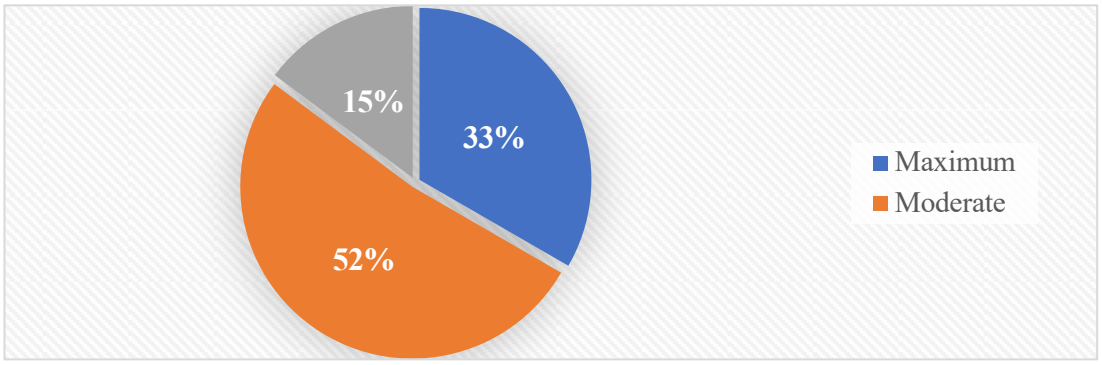


Fig. 4.8.1. Significance of social media in Assam University

Figure 4.8.1. shows that the majority of the respondents 28(52%) state that social media plays a moderate role in their studies, 18 (33%) claims that social media has a maximum role and impact for their studies while 8 (15%) claims that social media has minimum impact in their studies.

4.8.2 Significance of social media for studies, assignments, projects and exams in Manipur University

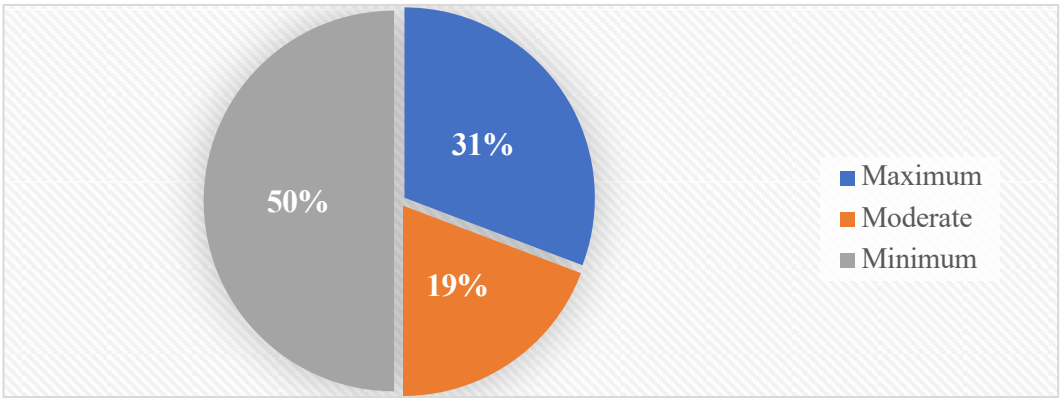


Fig. 4.8.2. Significance of social media in Manipur University

Figure 4.8.2. shows that the majority of the respondents 26 (50%) state that social media plays a minimum role in their studies, 16 (30%) claims that social media has a maximum role and impact for their studies and 10 (19%) claims that social media has moderate impact in their studies.

4.8.3 Significance of social media for studies, assignments, projects and exams in Mizoram University

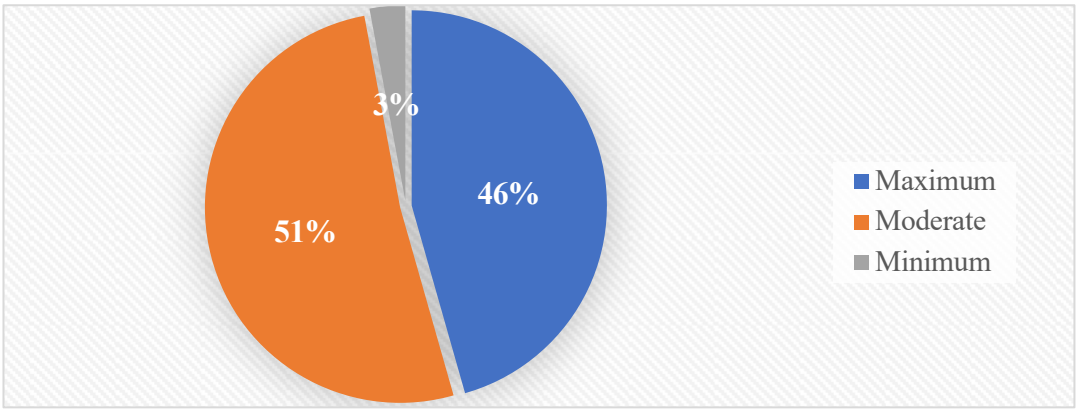


Fig. 4.8.3. Significance of social media in Mizoram University

Figure 4.8.3. shows that the majority of the respondents 35 (51%) state that social media plays a moderate role in their studies, 31 (46%) claims that social media has a maximum role and impact for their studies and 2 (3%) claims that social media has moderate impact in their studies.

4.8.4 Significance of social media for studies, assignments, projects and exams in Nagaland University

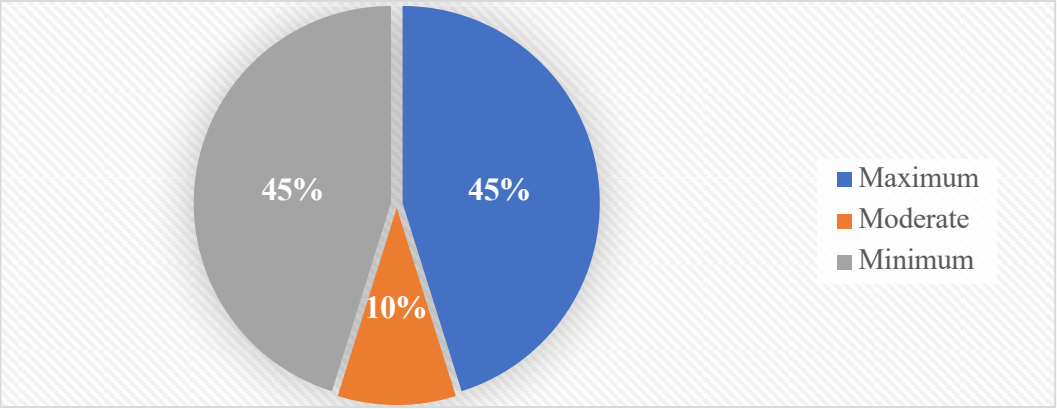


Fig. 4.8.4. Significance of social media in Nagaland University

Figure 4.8.4. shows that 28 (45%) of the respondents state that social media plays a maximum role in their studies while another 28 (45%) respondents claim that social media only plays a minimum role in their studies. 6 (10%) of the respondents claim that social media only acts a moderate role for their studies.

4.8.5 Significance of social media for studies, assignments, projects and exams in North Eastern Hill University

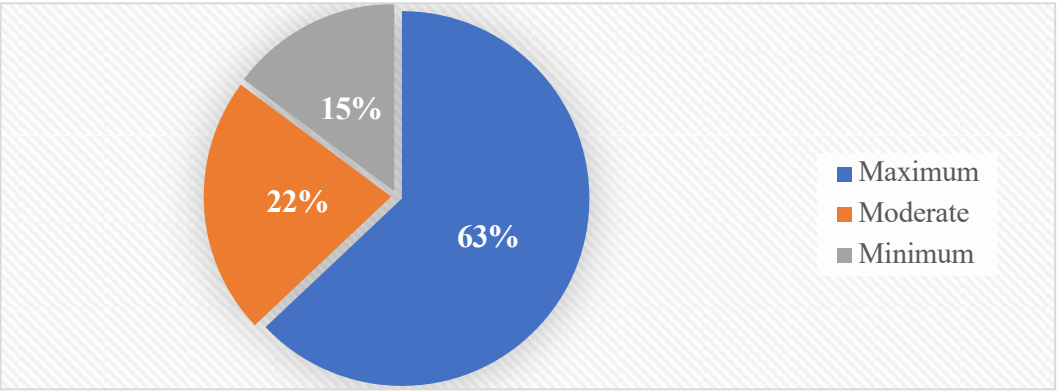


Fig. 4.8.5. Significance of social media in NEHU

Figure 4.8.5. shows that the majority of the respondents 34 (63%) state that social media plays a maximum role in their studies, 12 (22%) claims that social media has a moderate role and impact for their studies and 8 (15%) claims that social media has minimum impact in their studies.

4.8.6 Significance of social media for studies, assignments, projects and exams in Rajiv Gandhi University

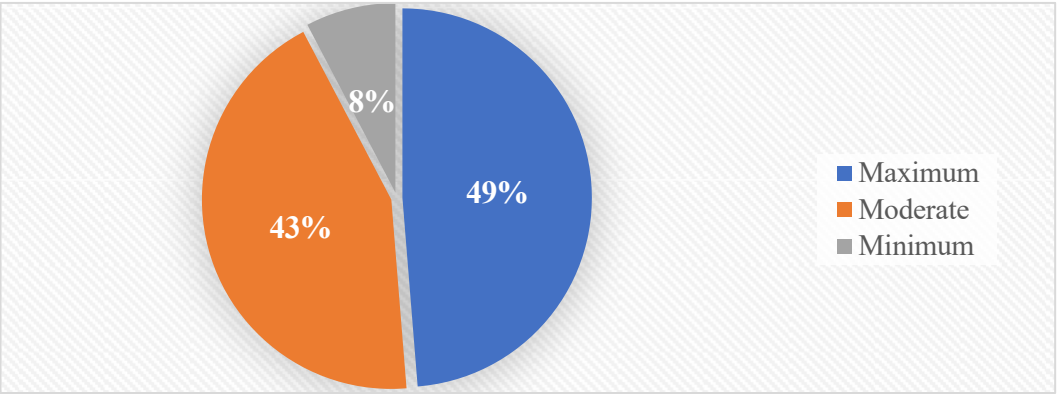


Fig. 4.8.6. Significance of social media in Rajiv Gandhi University

Figure 4.8.6. shows that the majority of the respondents 38 (49%) state that social media plays a maximum role in their studies, 34 (43%) claims that social media has a moderate role and impact for their studies and 6 (8%) claims that social media has minimum impact in their studies.

4.8.7 Significance of social media for studies, assignments, projects and exams in Sikkim University

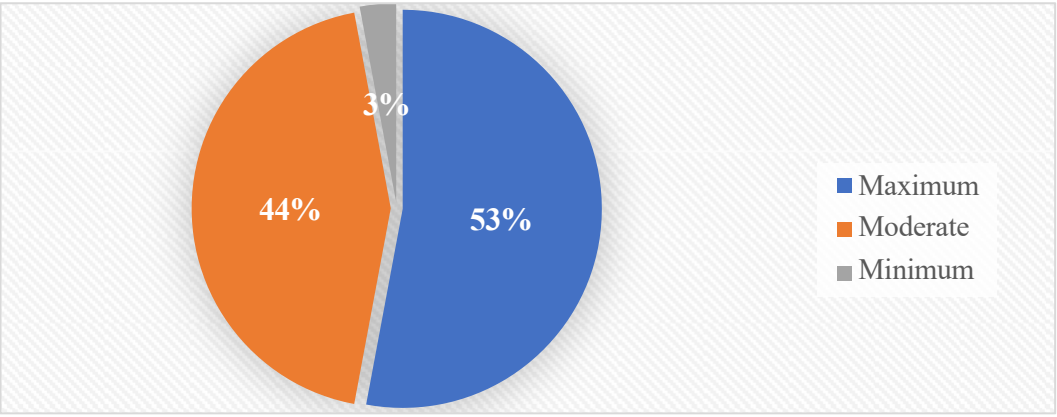


Fig. 4.8.7. Significance of social media in Sikkim University

Figure 4.8.7. shows that the majority of the respondents 36 (53%) state that social media plays a maximum role in their studies, 30 (44%) claims that social media has a moderate role and impact for their studies and 2 (3%) claims that social media has minimum impact in their studies.

4.8.8 Significance of social media for studies, assignments, projects and exams in Tezpur University

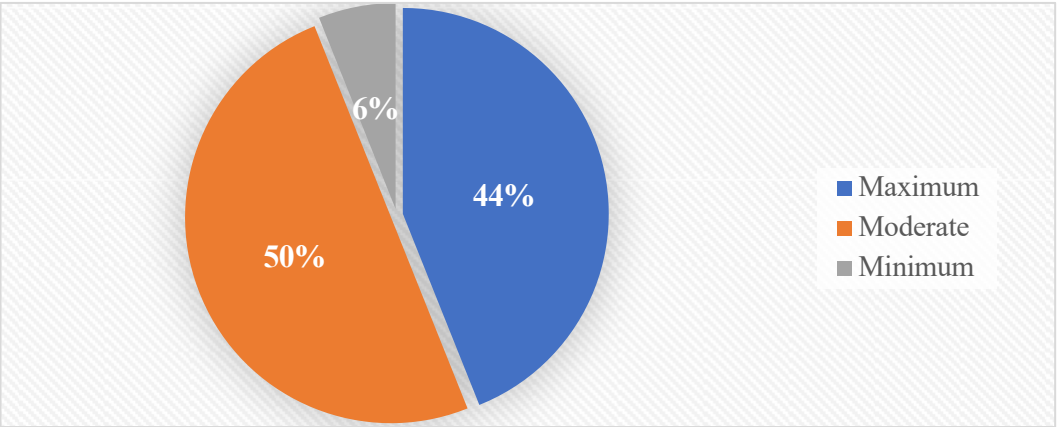


Fig. 4.8.8. Significance of social media in Tezpur University

Figure 4.8.8. shows that the majority of the respondents 33 (50%) state that social media plays a moderate role in their studies, 29 (44%) claims that social media has a maximum role and impact for their studies and 4 (6%) claims that social media has minimum impact in their studies.

4.8.9 Significance of social media for studies, assignments, projects and exams in Tripura University

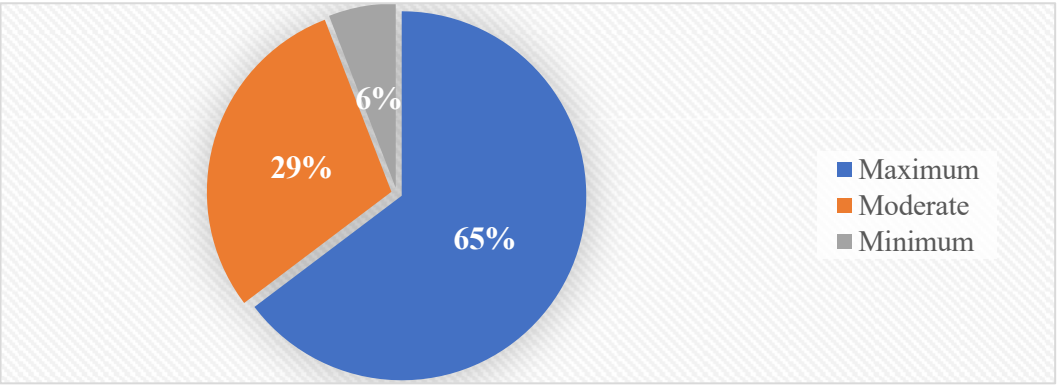


Fig. 4.8.9. Significance of social media in Tripura University

Figure 4.8.9. shows that the majority of the respondents 44 (65%) state that social media plays a maximum role in their studies, 20 (29%) claims that social media has a moderate role and impact for their studies and 4 (6%) claims that social media has minimum impact in their studies.

4.9. Overall feedback on whether easy access to online educational content will erase the need for print content.

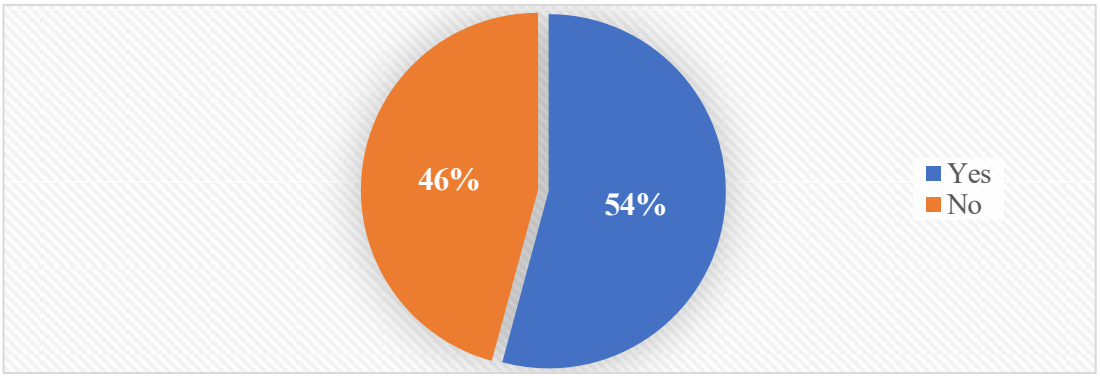


Fig. 4.9. Overall feedback on easy access to online educational content.

Figure 4.9. reveals that the majority of the respondents 309 (54%) agree that with the ease of acquiring educational online content, print educational material might be obsolete in the future whereas, 261 (46%) of the respondents do not agree that easy to access online educational materials will erase the need for print content.

4.9.1. Assam University on whether easy access to online educational content will erase the need for print content.

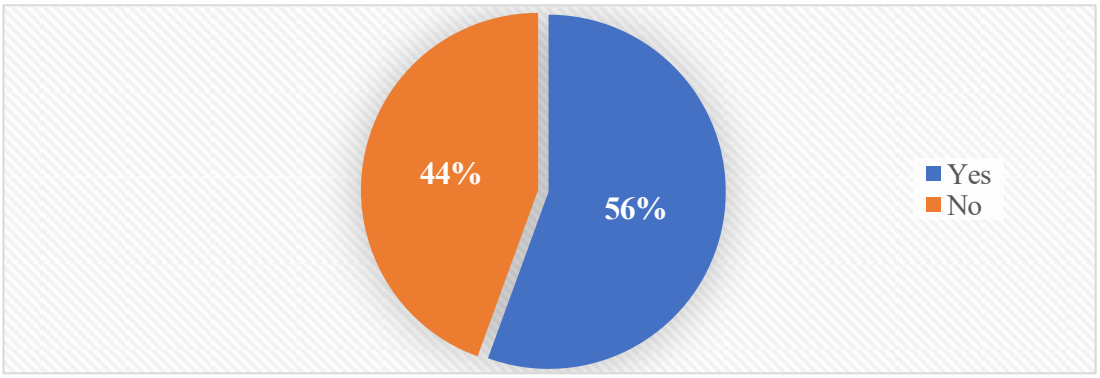


Fig. 4.9.1. Assam University feedback on easy access to online educational content

The figure 4.9.1. shows that the majority of the respondents 30 (56%) agree that the easy access to online educational materials will erase the need for print material while 24 (44%) of respondents disagree to the statement.

4.9.2. Manipur University on whether easy access to online educational content will erase the need for print content.

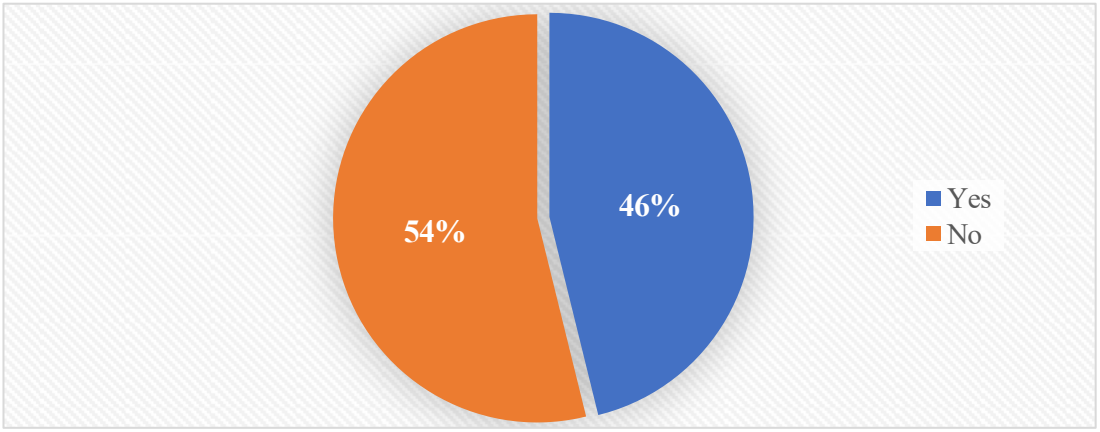


Fig. 4.9.2. Manipur University feedback on easy access to online educational content

The figure 4.9.2. shows that the majority of the respondents 28 (54%) disagree that the easy access to online educational materials will erase the need for print material while 24 (46%) agree to the statement.

4.9.3. Mizoram University on whether easy access to online educational content will erase the need for print content.

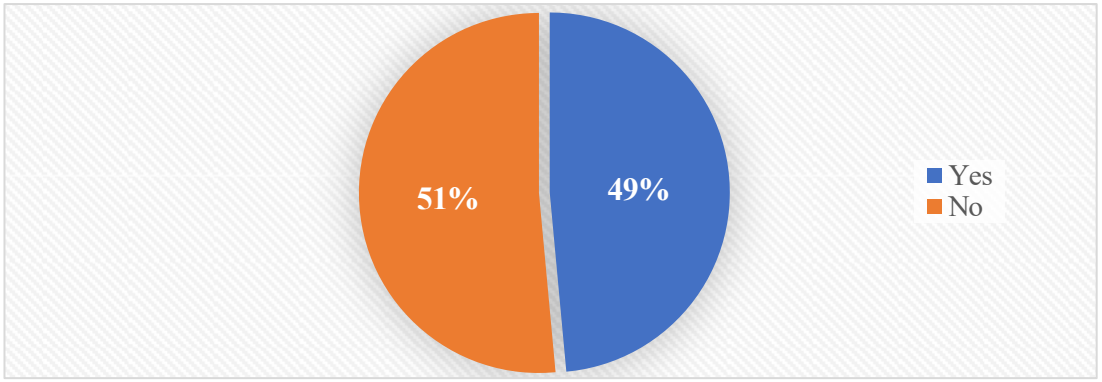


Fig. 4.9.3. Mizoram University feedback on easy access to online educational content

The figure 4.9.3. shows that the majority of the respondents 35 (51%) disagree that the easy access to online educational materials will erase the need for print material while 33 (49%) agree to the statement.

4.9.4. Nagaland University on whether easy access to online educational content will erase the need for print content.

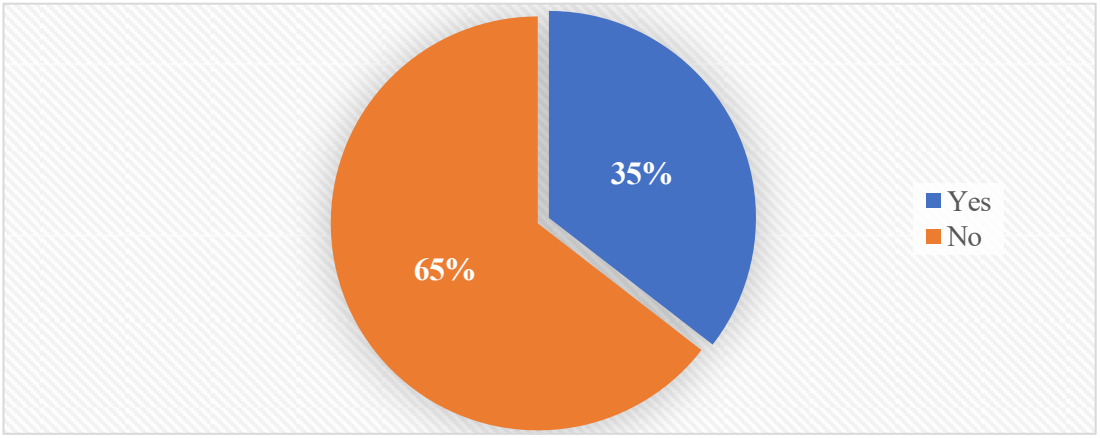


Fig. 4.9.4. Nagaland University feedback on easy access to online educational content

The figure 4.9.4. shows that the majority of the respondents 40 (65%) disagree that the easy access to online educational materials will erase the need for print material while 22 (35%) agree to the statement.

4.9.5. North Eastern Hill University on whether easy access to online educational content will erase the need for print content.

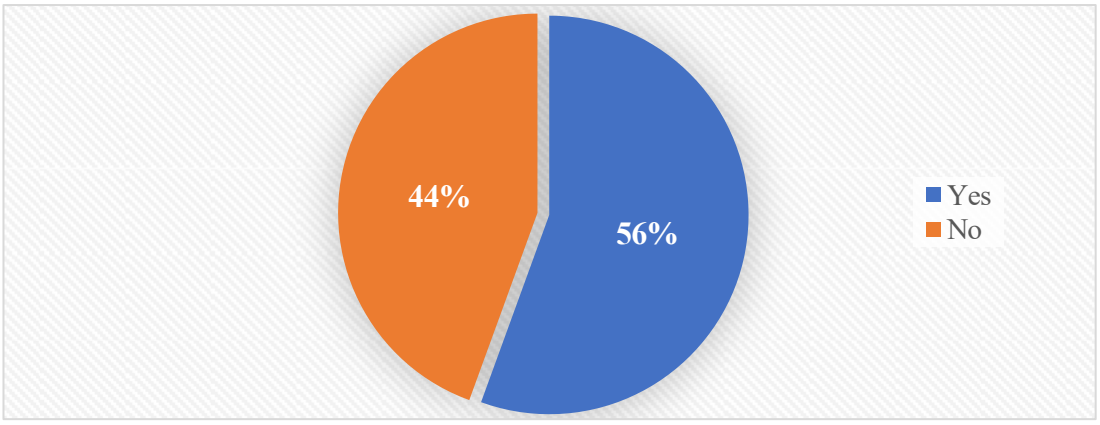


Fig. 4.9.5. NEHU feedback on easy access to online educational content

The figure 4.9.5. shows that the majority of the respondents 30 (56%) agree that the easy access to online educational materials will erase the need for print material while 24 (44%) disagree to the statement.

4.9.6. Rajiv Gandhi University on whether easy access to online educational content will erase the need for print content.

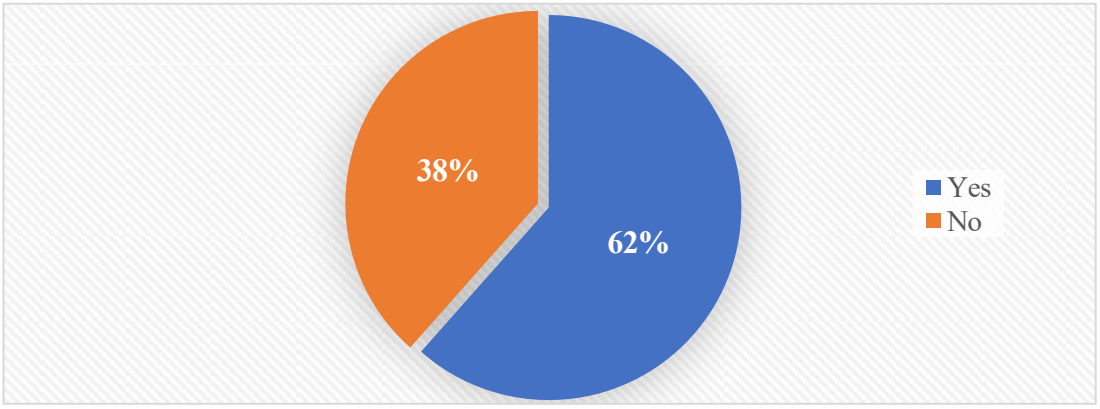


Fig. 4.9.6. Rajiv Gandhi University feedback on easy access to online educational content

The figure 4.9.6. shows that the majority of the respondents 48 (62%) agree that the easy access to online educational materials will erase the need for print material while 30 (38%) disagree to the statement.

4.9.7. Sikkim University on whether easy access to online educational content will erase the need for print content.

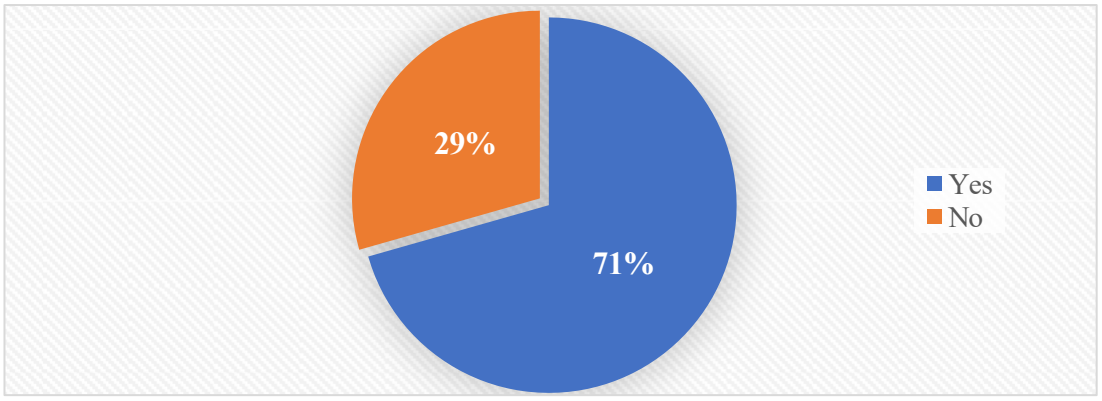


Fig. 4.9.7. Sikkim University feedback on easy access to online educational content

The figure 4.9.7. shows that the majority of the respondents 48 (71%) agree that the easy access to online educational materials will erase the need for print material while 20 (29%) disagree to the statement.

4.9.8. Tezpur University on whether easy access to online educational content will erase the need for print content.

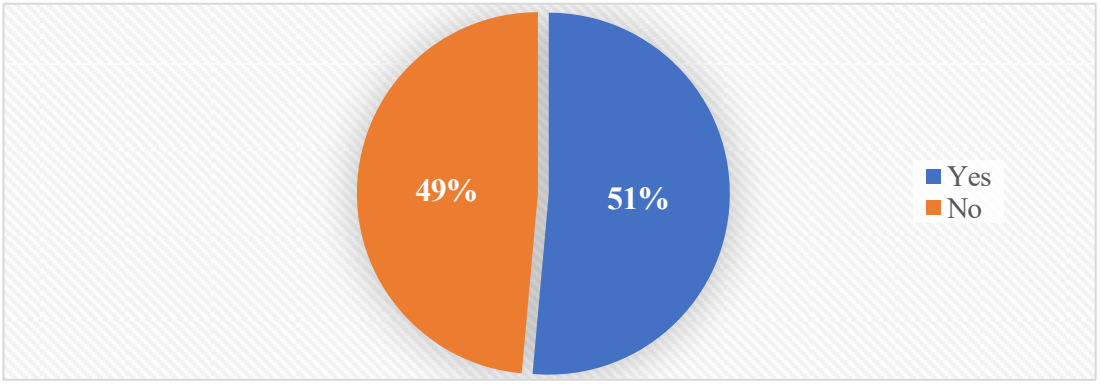


Fig. 4.9.8. Tezpur University feedback on easy access to online educational content

The figure 4.9.8. shows that the majority of the respondents 36 (51%) agree that the easy access to online educational materials will erase the need for print material while 34 (49%) disagree to the statement.

4.9.9. Tripura University on whether easy access to online educational content will erase the need for print content.

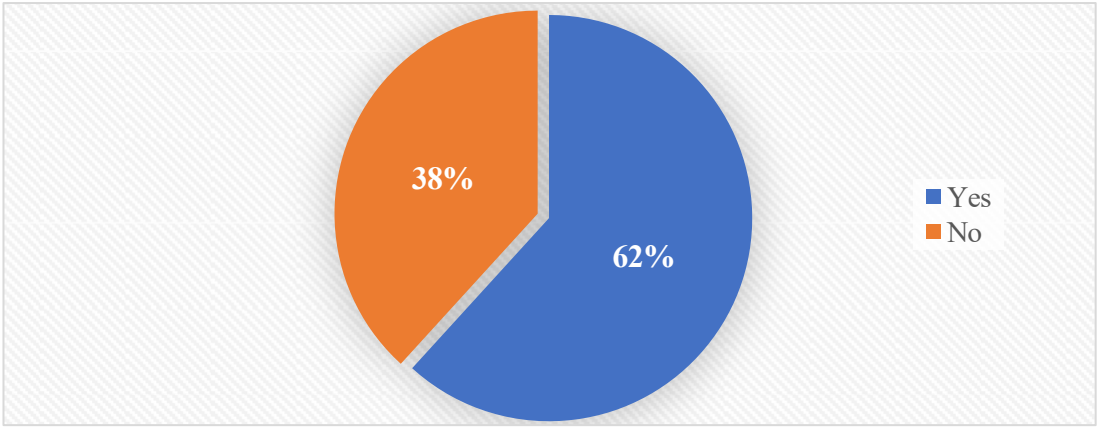


Fig. 4.9.9. Tripura University feedback on easy access to online educational content

The figure 4.9.9. shows that the majority of the respondents 42 (62%) agree that the easy access to online educational materials will erase the need for print material while 26 (38%) disagree to the statement.

4.10. Overall feedback on the purpose of using social media

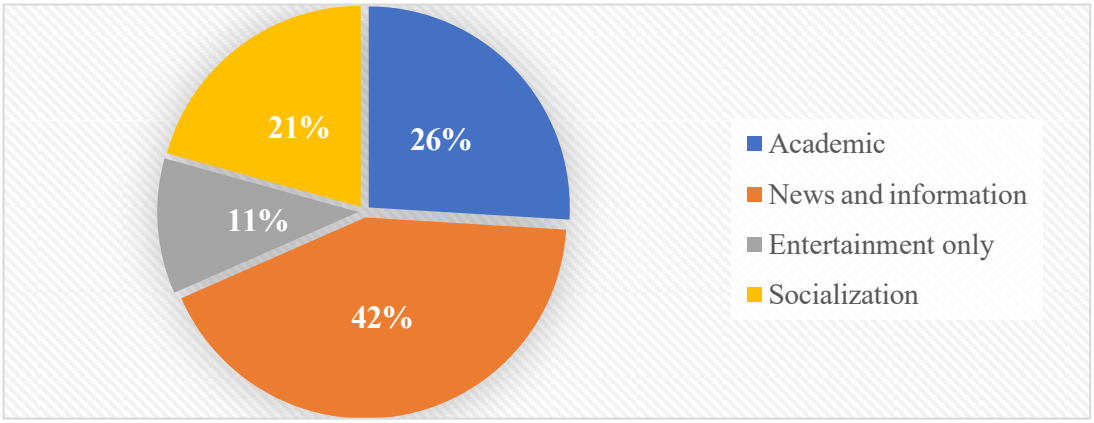


Fig. 4.10. Overall feedback on social media usage

Figure 4.10. shows that the majority of the respondents 242 (42%) are using social media for acquiring news and information. 148 (26%) of the respondents use social media for the academic purposes and 118 (21%) use social media for socializing. Only 62 (11%) of the respondents use social media as a means for entertainment.

4.10.1. Purpose of using social media in Assam University

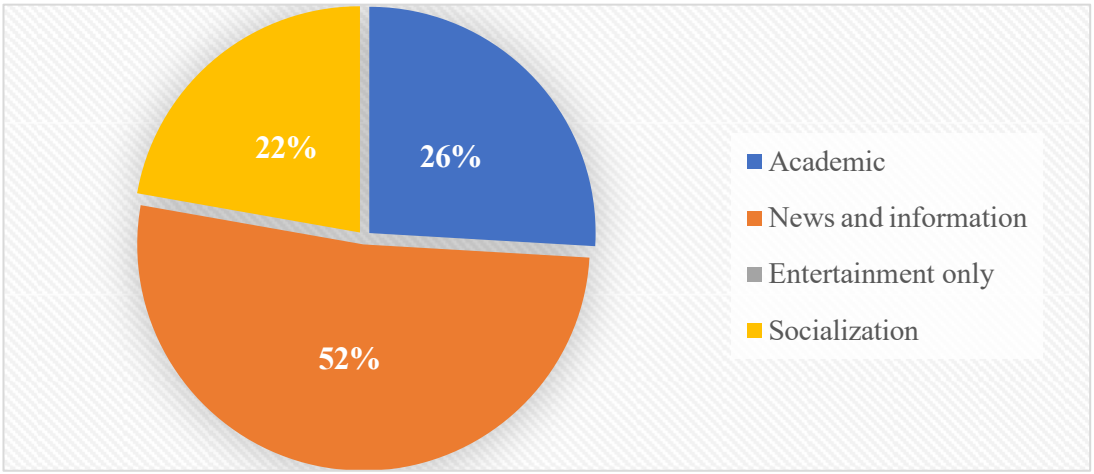


Fig. 4.10.1. Assam University feedback on social media usage

Figure 4.10.1. shows that the majority of the respondents 28 (52%) are using social media for news and information while 14 (26%) use it for academic purpose and only 12 (22%) of the respondents use social media only for socializing.

4.10.2. Purpose of using social media in Manipur University

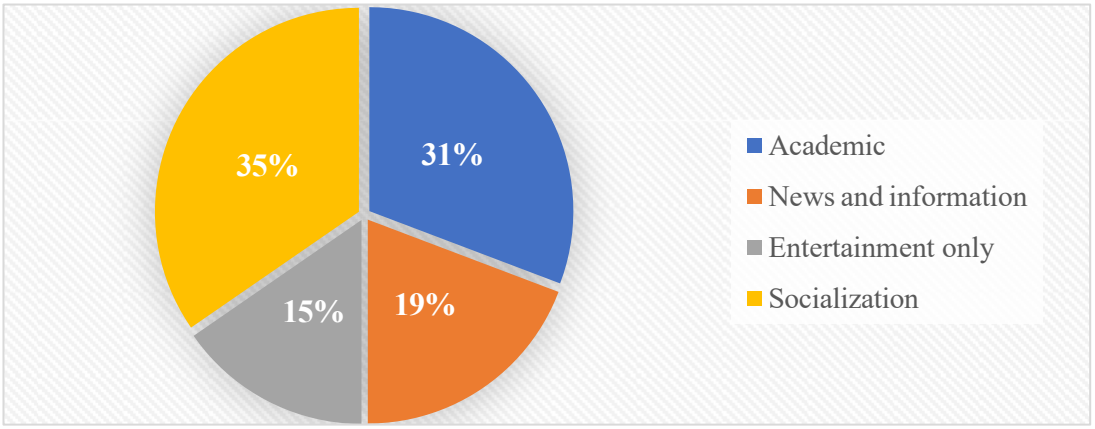


Fig. 4.10.2. Manipur University feedback on social media usage

Figure 4.10.2. shows that the majority of the respondents 18 (35%) are using social media for socializing while 16 (31%) of the respondents use social media for academic purpose and only 8 (15%) of the respondents are using social media for entertainment.

4.10.3. Purpose of using social media in Mizoram University

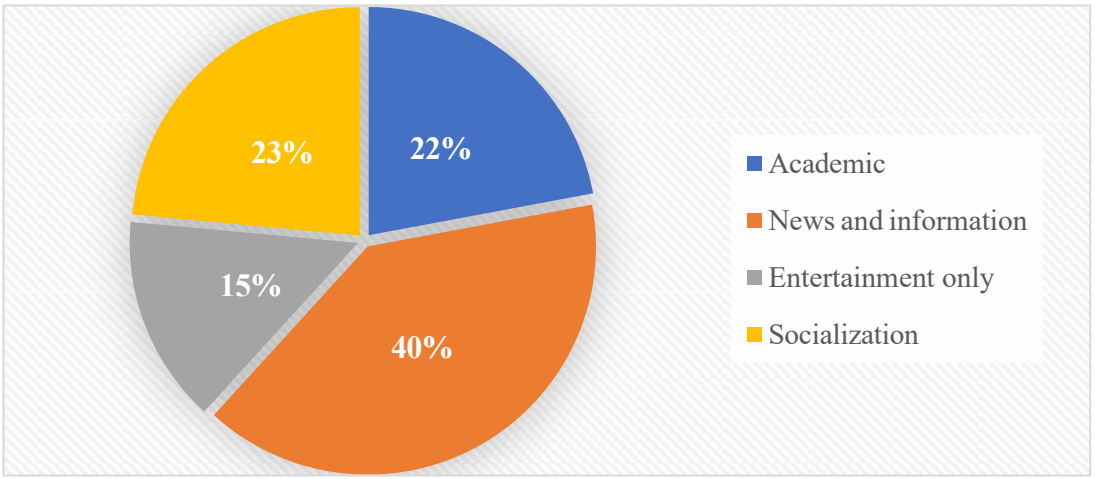


Fig. 4.10.3. Mizoram University feedback on social media usage

Figure 4.10.3. shows that the majority of the respondents 27 (40%) use social media for news and information while 16 (23%) use it for socialization and only 10 (15%) use social media for entertainment purposes only.

4.10.4. Purpose of using social media in Nagaland University

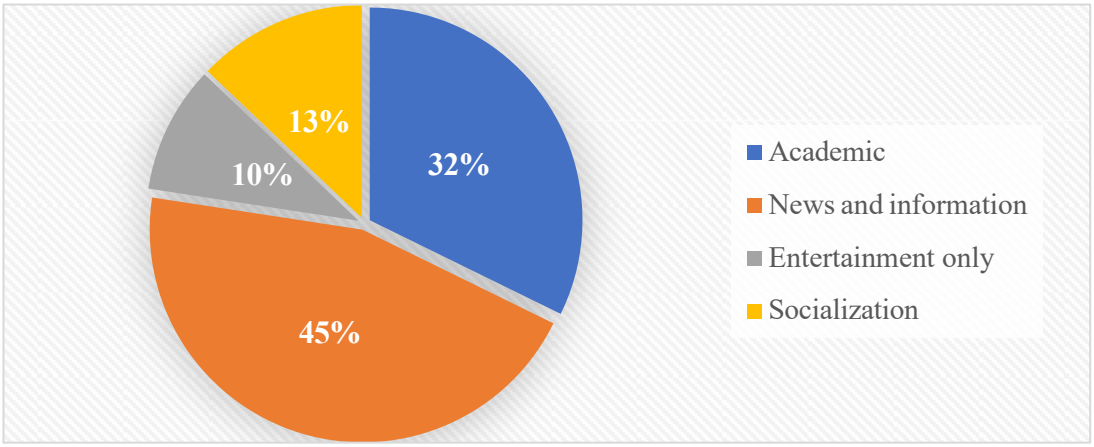


Fig. 4.10.4. Nagaland University feedback on social media usage

Figure 4.10.4. shows that the majority of the respondents 28 (45%) use social media for news and information while 20 (32%) use it for academic purposes and only 6 (10%) use social media for entertainment purposes only.

4.10.5. Purpose of using social media in North Eastern Hill University

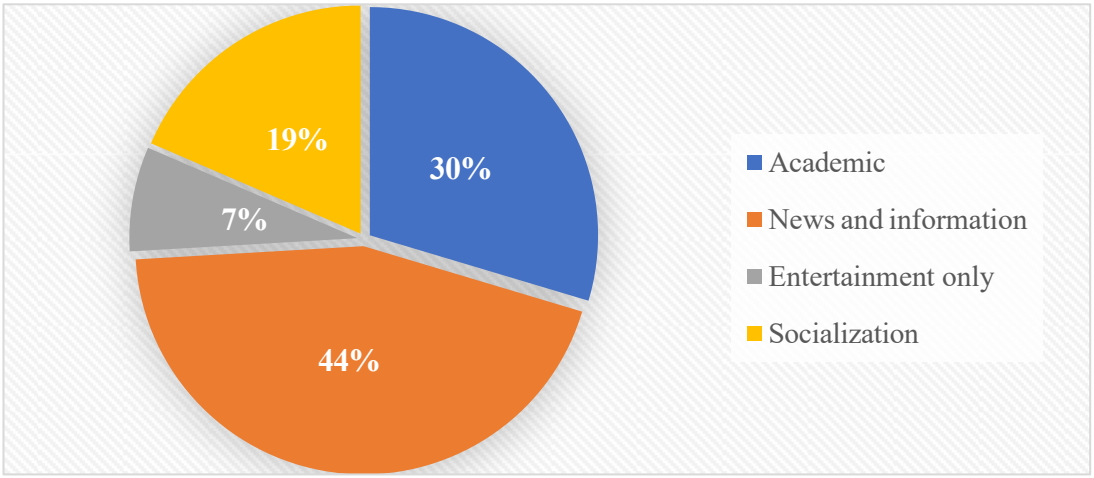


Fig. 4.10.5. NEHU feedback on social media usage

Figure 4.10.5. shows that the majority of the respondents 42 (44%) use social media for news and information while 16 (30%) use it for academic purposes and only 4 (7%) use social media for entertainment purposes only.

4.10.6. Purpose of using social media in Rajiv Gandhi University

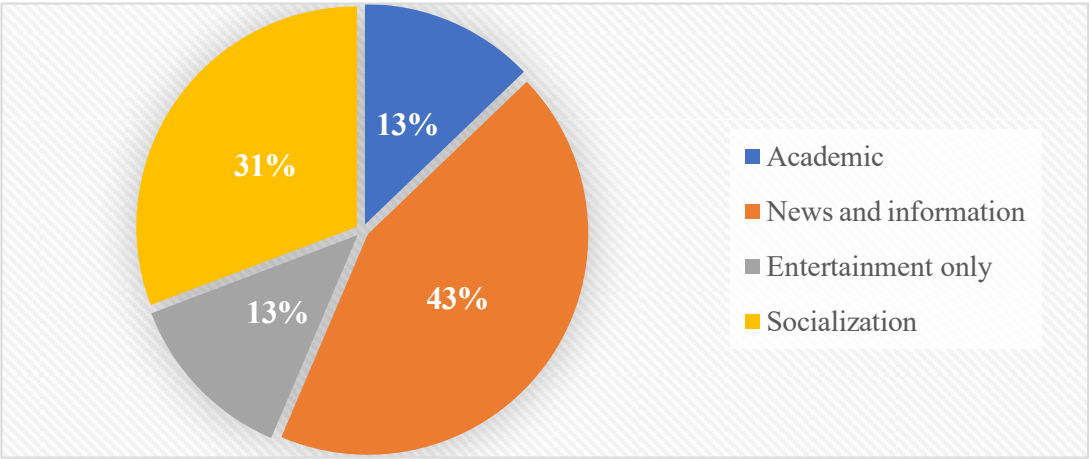


Fig. 4.10.6. Rajiv Gandhi University feedback on social media usage

Figure 4.10.6. shows that the majority of the respondents 34 (43%) use social media for news and information while 24 (31%) use it for socialization. 10 (13%) respondents use social media for academic purposes and the other 10 (13%) are using social media for only entertainment.

4.10.7. Purpose of using social media in Sikkim University

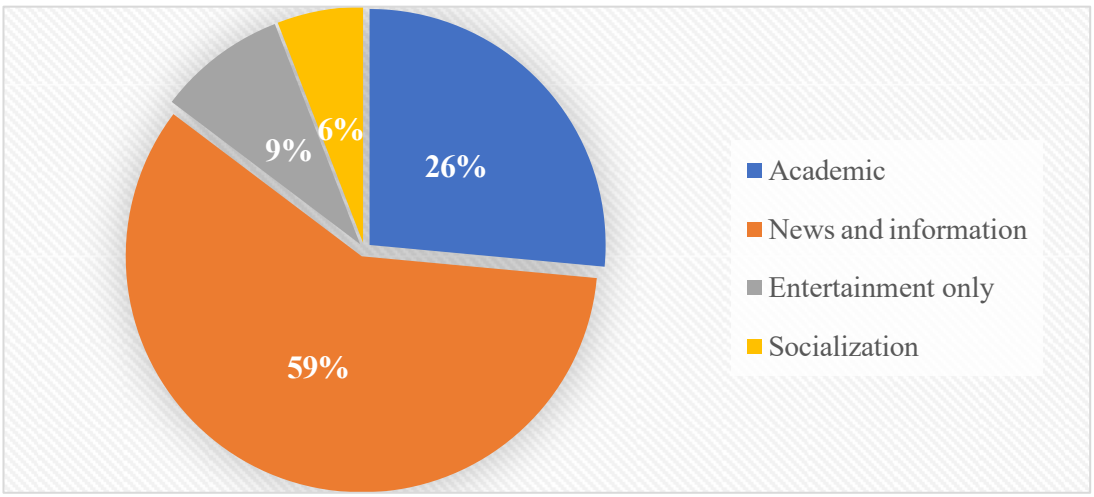


Fig. 4.10.7. Sikkim University feedback on social media usage

Figure 4.10.7. shows that the majority of the respondents 40 (59%) use social media for news and information while 18 (26%) use it for academic purpose while 4 (6%) of the respondents are using social media for socializing.

4.10.8. Purpose of using social media in Tezpur University

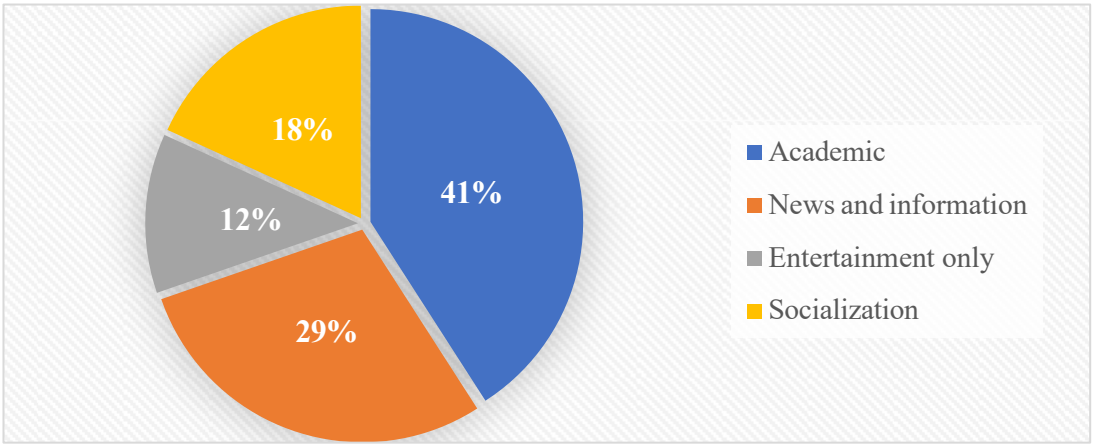


Fig. 4.10.8. Tezpur University feedback on social media usage

Figure 4.10.8. shows that the majority of the respondents 27 (41%) are using social media for academic purposes, 19 (29%) of the respondents use social media for news and information and 8 (12%) of the respondents are using social media for only entertainment.

4.10.9. Purpose of using social media in Tripura University

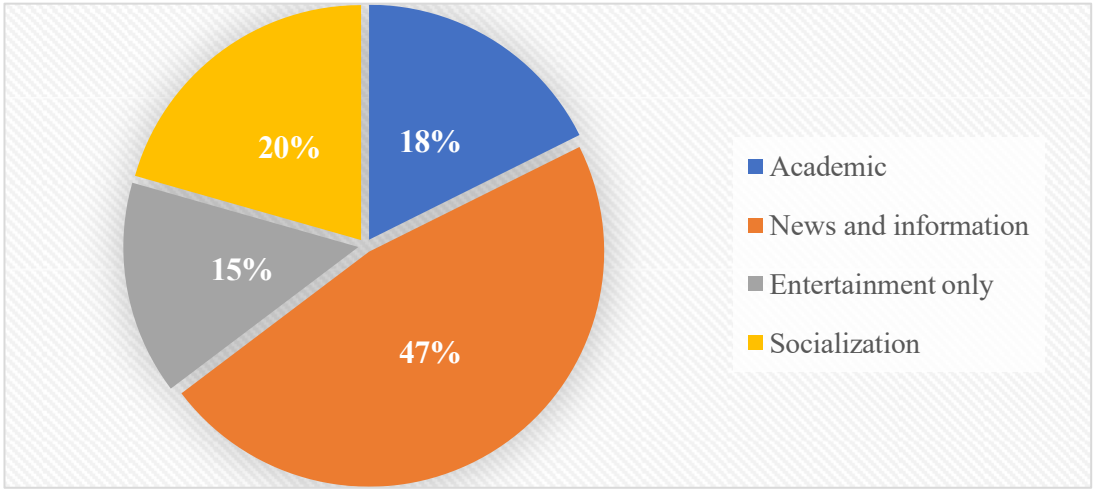


Fig. 4.10.9. Tripura University feedback on social media usage

Figure 4.10.9. shows that the majority of the respondents 32 (47%) are using social media for news and information and 14 (20%) use it for socialization while 10 (15%) of the respondents are using social media for only entertainment.

4.11. Overall frequency of visiting the library

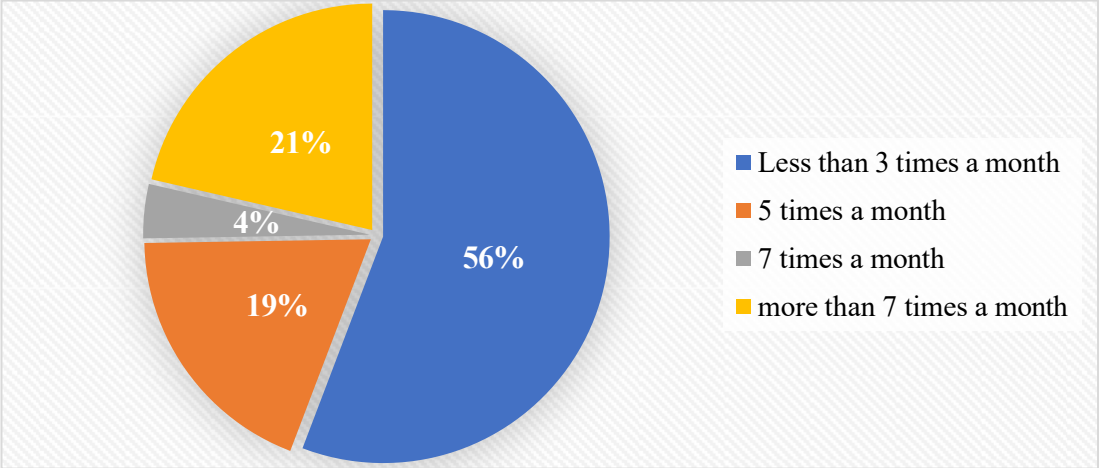


Fig. 4.11. Overall frequency of visiting the library

From figure 4.11. we can find that the majority of the respondents 318 (56%) only visit the library less than 3 times a month, 122 (21%) visit the library more than 7 times a month, 108 (19%) visit the library 5 times a month and only 22 (4%) visit the library 7 times a month.

4.11.1. Frequency of visiting the library in Assam University

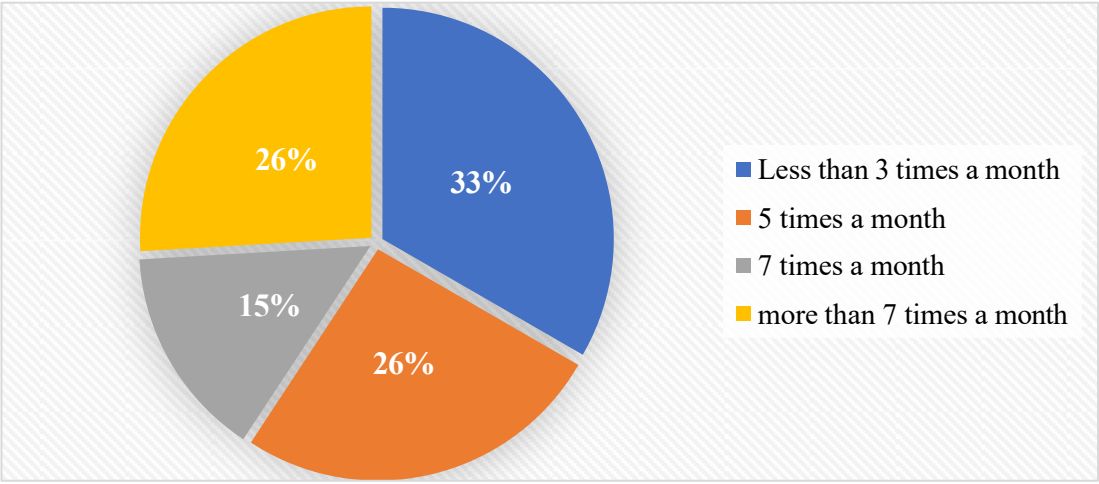


Fig. 4.11.1. Frequency of visiting the library in Assam University

4.11.2. Frequency of visiting the library in Manipur University

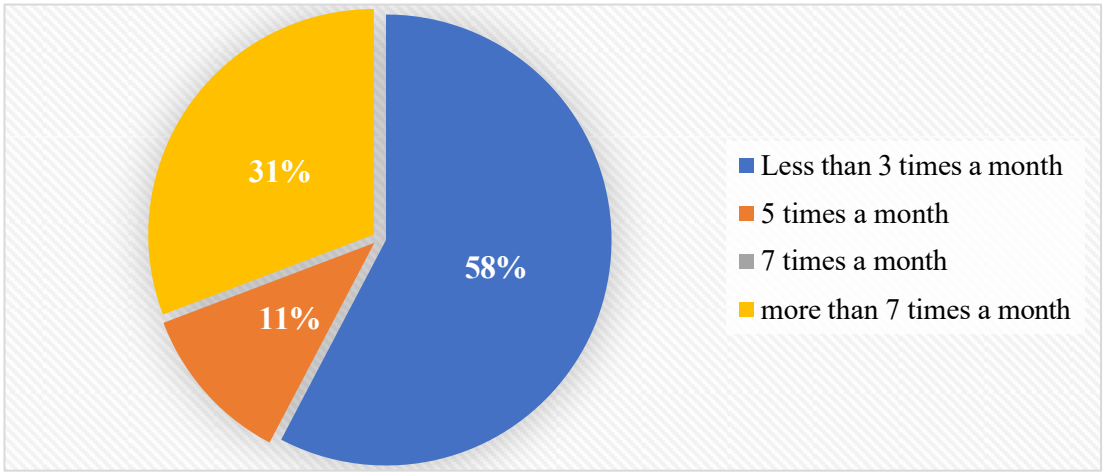


Fig. 4.11.2. Frequency of visiting the library in Manipur University

The figure 4.11.2. shows that the majority of the respondents 30 (58%) visit the library less than 3 times a month and 16 (31%) respondents visit the library more than 7 times a month and only 6 (11%) visit the library 5 times a month.

4.11.3. Frequency of visiting the library in Mizoram University

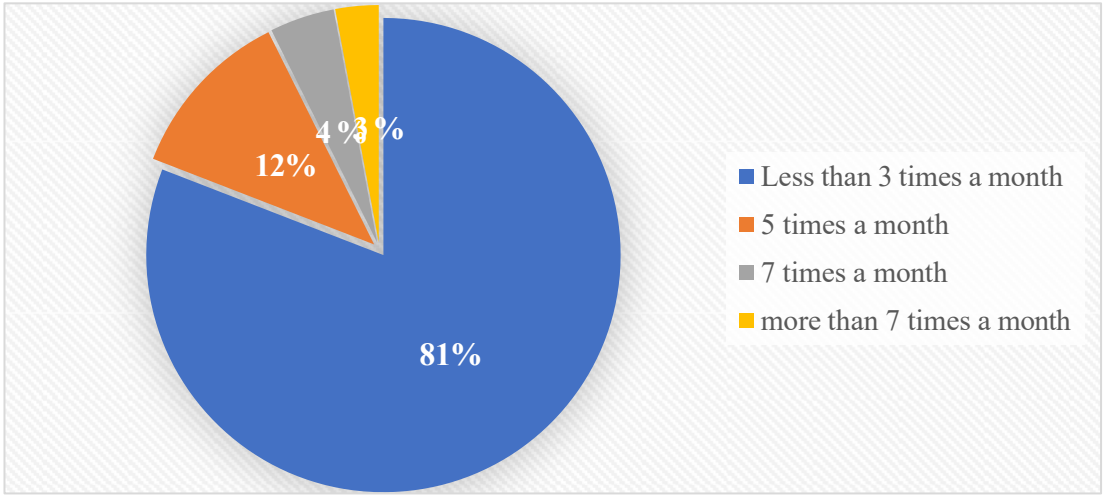


Fig. 4.11.3. Frequency of visiting the library in Mizoram University

The figure 4.11.3. shows that the majority of the respondents 55 (81%) are visiting the library less than 3 times a month and 8 (12%) of the respondents visit the library 5 times a month while 2 (3%) of the respondents visit the library more than 7 times a month.

4.11.4. Frequency of visiting the library in Nagaland University

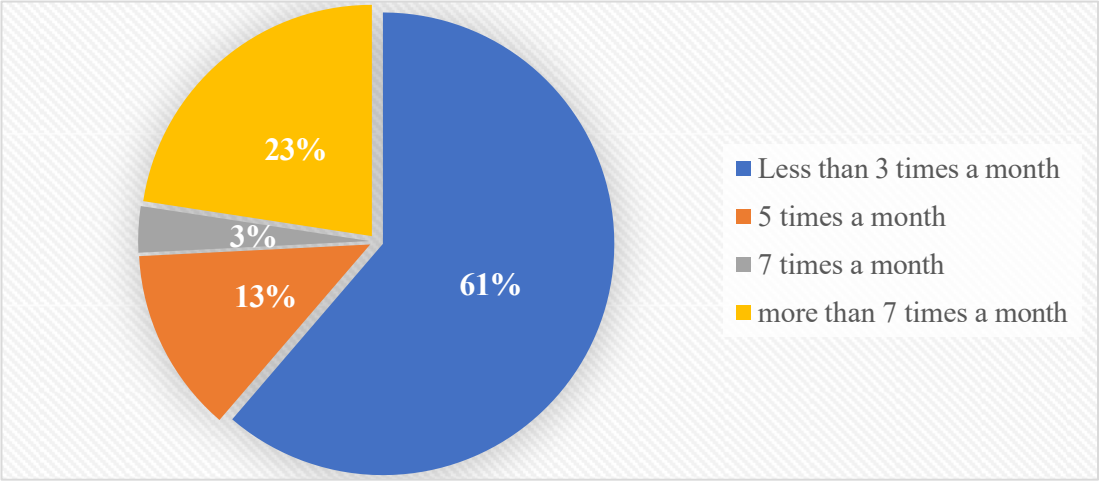


Fig. 4.11.4. Frequency of visiting the library in Nagaland University

The figure 4.11.4. shows that the majority of the respondents 38 (61%) visit the library less than 3 times a month and 14 (23%) respondents visit the library more than 7 times a month and only 2 (3%) visit the library 7 times a month.

4.11.5. Frequency of visiting the library in North Eastern Hill University

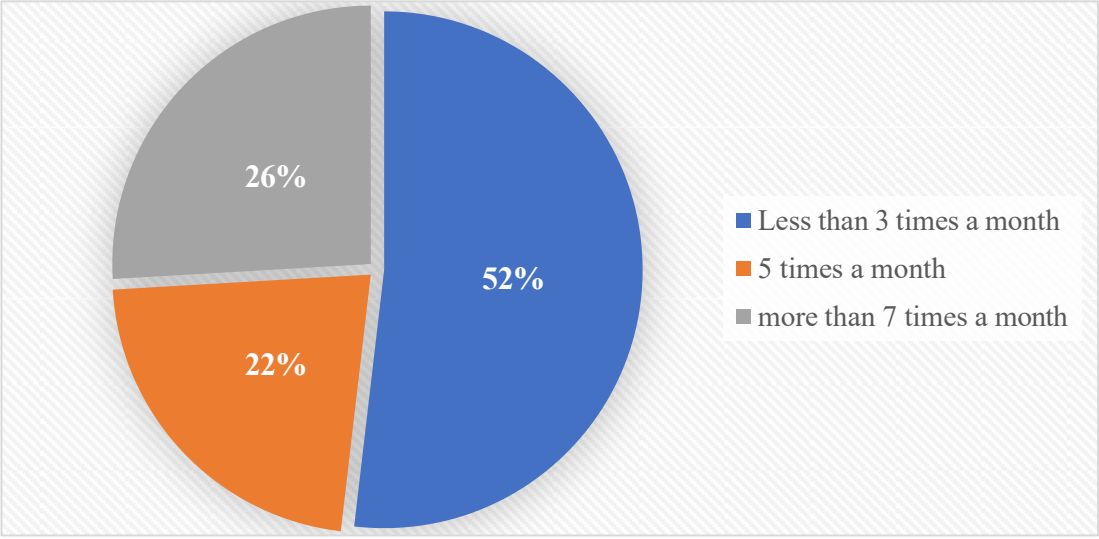


Fig. 4.11.5. Frequency of visiting the library in NEHU

The figure 4.11.5. shows that the majority of the respondents 28 (52%) visit the library less than 3 times a month and 14 (26%) respondents visit the library more than 7 times a month and only 12 (22%) visit the library 5 times a month.

4.11.6. Frequency of visiting the library in Rajiv Gandhi University

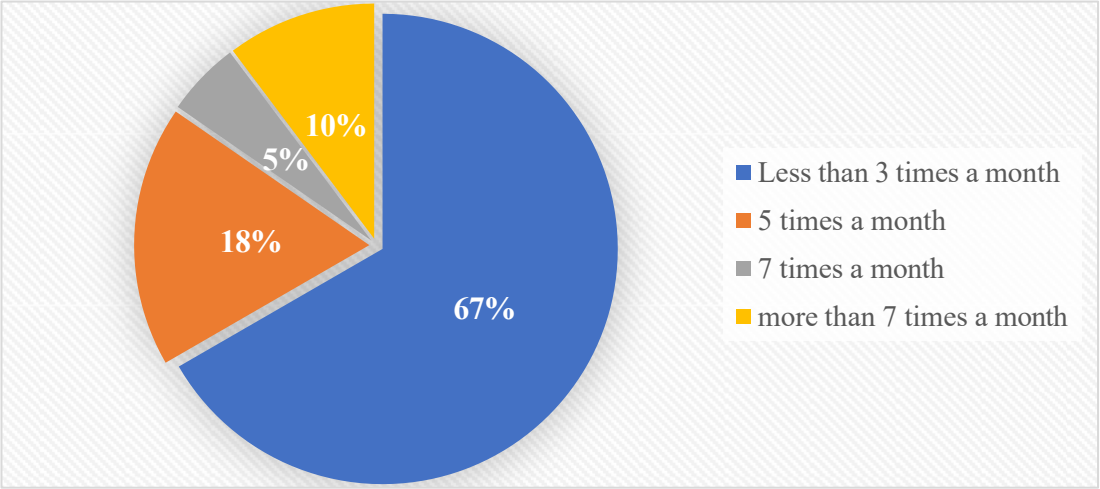


Fig. 4.11.6. Frequency of visiting the library in Rajiv Gandhi University

The figure 4.11.6. shows that the majority of the respondents 52 (67%) of the respondents are visiting the library less than 3 times a month, 14 (18%) of the respondents visit the library 5 times a month and 4 (5%) of the respondents visit the library only 7 times a month.

4.11.7. Frequency of visiting the library in Sikkim University

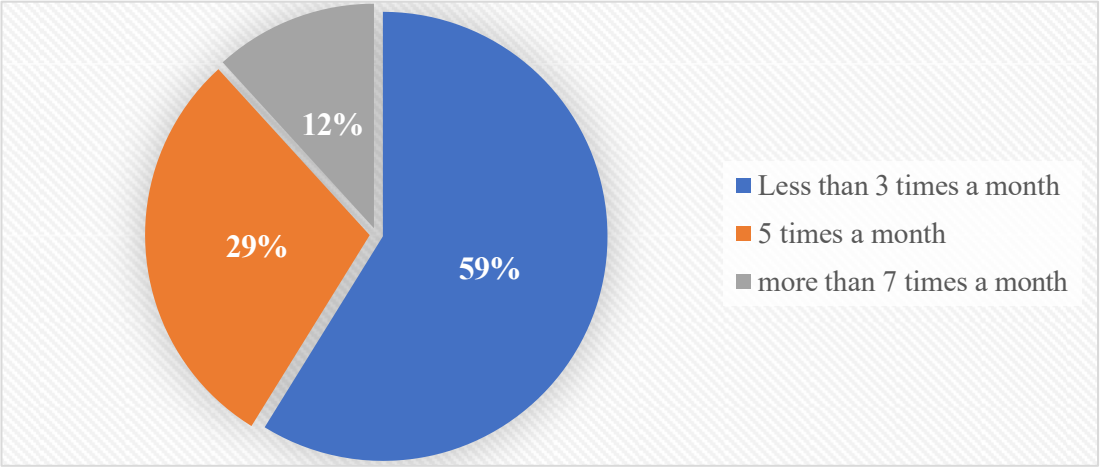


Fig. 4.11.7. Frequency of visiting the library in Sikkim University

The figure 4.11.7. shows that the majority of the respondents 40 (59%) visit the library less than 3 times a month and 20 (29%) respondents visit the library 5 times a month and only 8 (12%) visit the library more than 7 times a month.

4.11.8. Frequency of visiting the library in Tezpur University

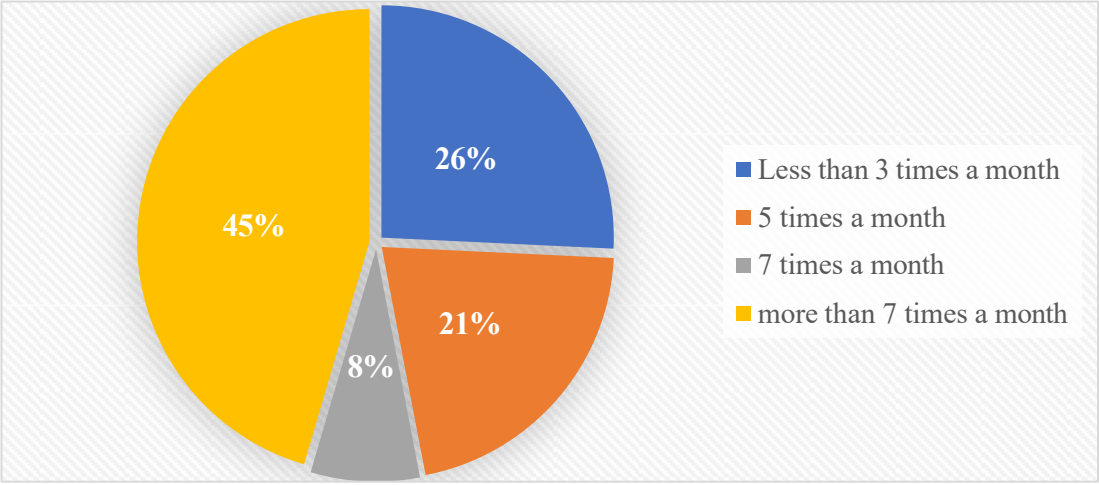


Fig. 4.11.8. Frequency of visiting the library in Tezpur University

The figure 4.11.8. shows that the majority of the respondents 30 (45%) visit the library more than 7 times a month, while 17 (26%) visit the library less than 3 times a month, 14 (21%) visit the library 5 times a month and only 5 (8%) of the respondents visit the library 7 times a month.

4.11.9. Frequency of visiting the library in Tripura University

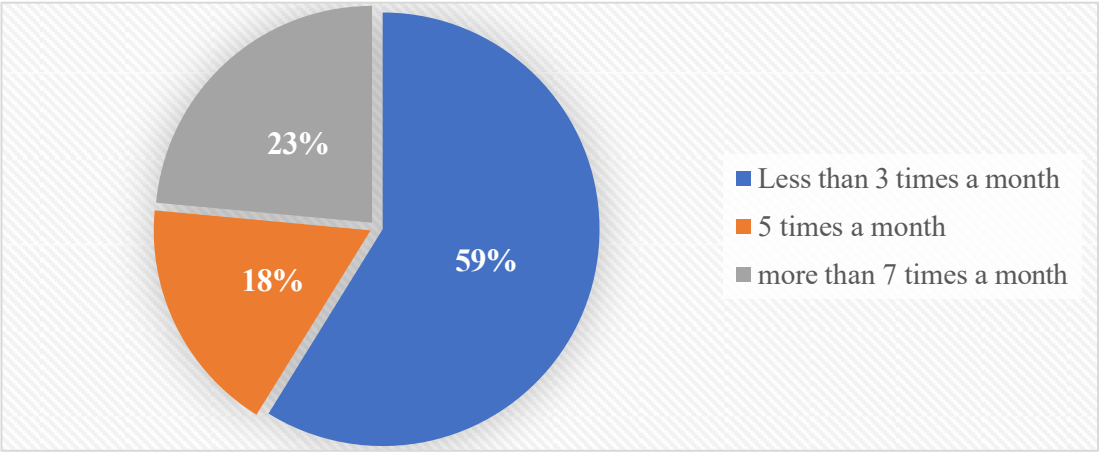


Fig. 4.11.9. Frequency of visiting the library in Tripura University

The figure 4.11.9. shows that the majority of the respondents 40 (59%) visit the library less than 3 times a month, and 16 (23%) visit the library more than 7 times a month while only 12 (18%) visit the library 5 times a month.

4.12. Overall awareness of library website

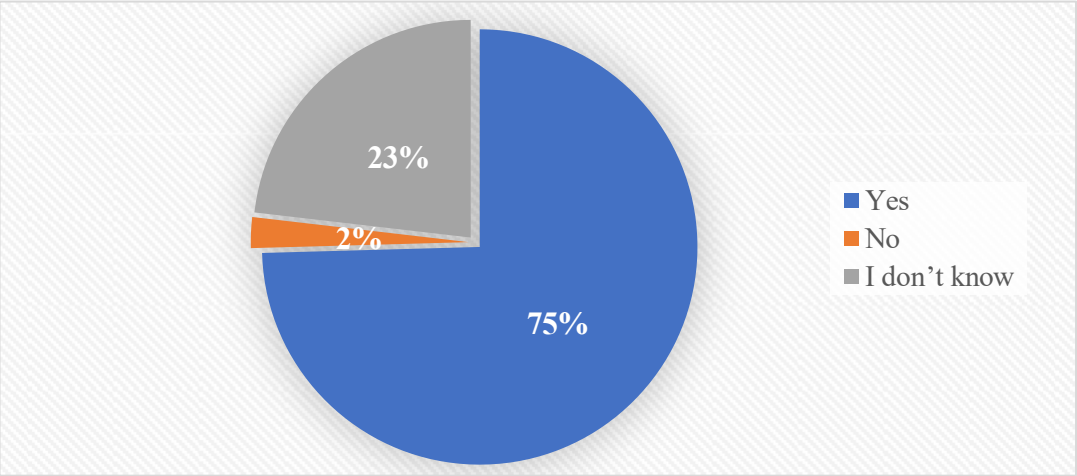


Fig. 4.12. Overall awareness of library website

Figure 4.12. shows that the majority of the respondents 425 (75%) have knowledge on whether their institution has a library website while 132 (23%) have no knowledge on whether or not their institution has a library website. 13 (2%) of the respondents stated that their institution does not have a library website.

4.12.1. Awareness of library website in Assam University

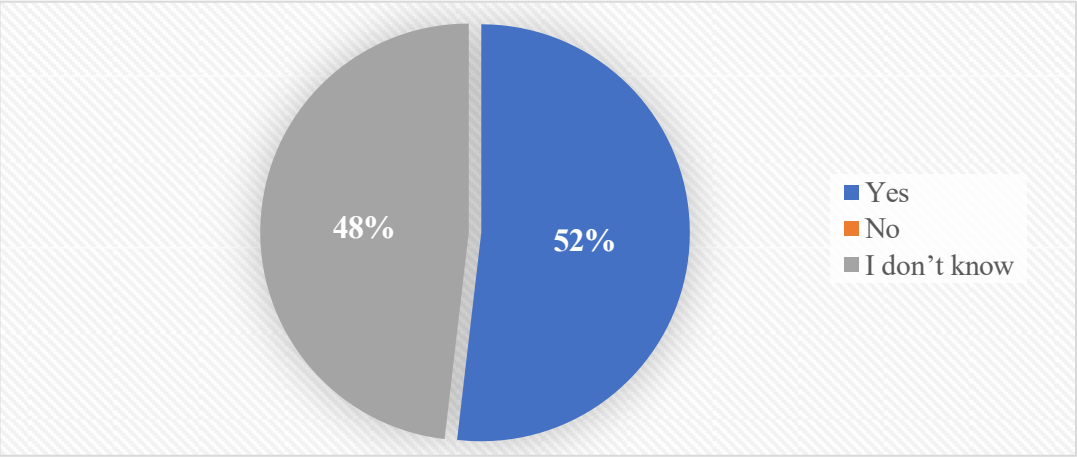


Fig. 4.12.1. Awareness of library website in Assam University

The figure 4.14.1. shows that the majority of the respondents 28 (52%) are aware of the library website while 26 (48%) of the respondents are not aware of the library website.

4.12.2. Awareness of library website in Manipur University

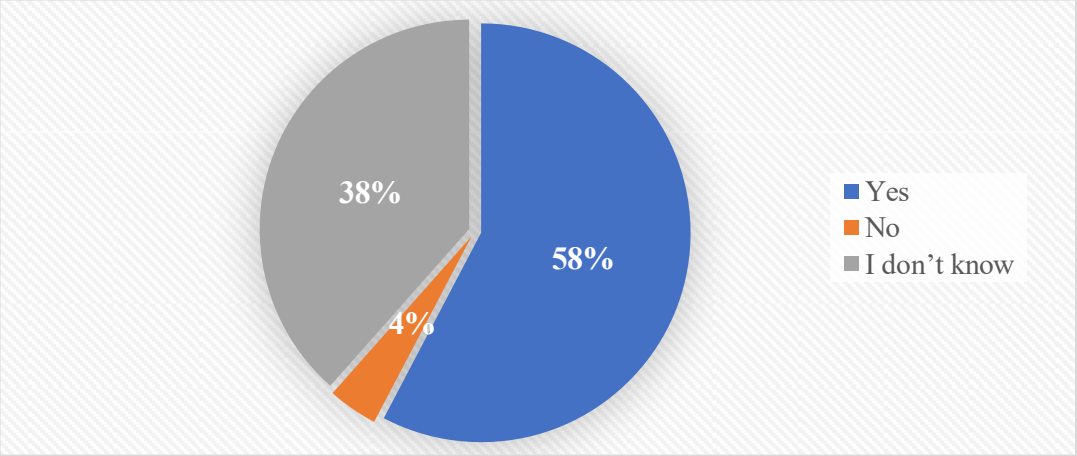


Fig. 4.12.2. Awareness of library website in Manipur University

The figure 4.12.2. shows that the majority of the respondents 30 (58%) are aware of the library website while 20 (38%) of the respondents are not aware of the library website and 2 (4%) of the respondents have no knowledge of whether they do or do not have a library website.

4.12.3. Awareness of library website in Mizoram University

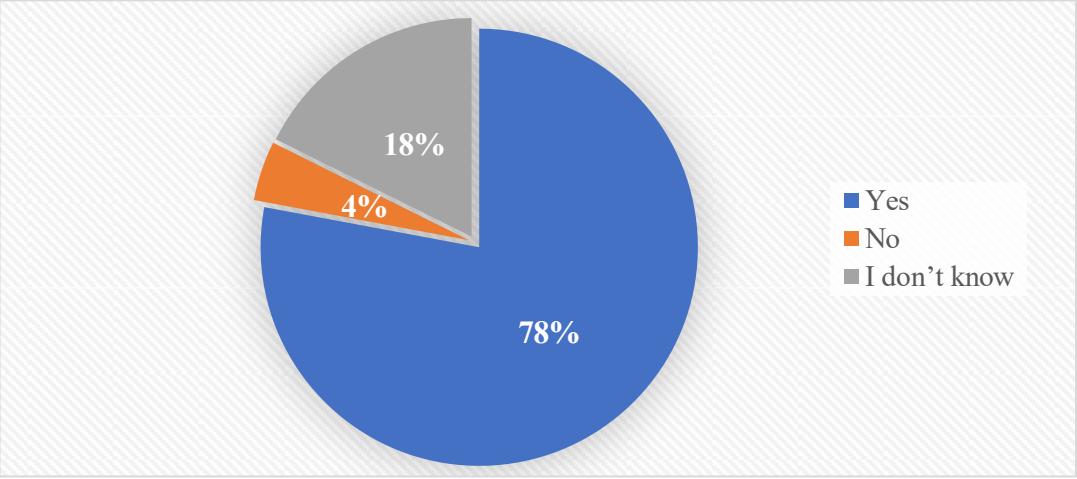


Fig. 4.12.3. Awareness of library website in Mizoram University

The figure 4.12.3. shows that the majority of the respondents 53 (78%) are aware of the library website while 12 (18%) of the respondents are not aware of the library website and 3 (4%) of the respondents have no knowledge of whether they do or do not have a library website.

4.12.4. Awareness of library website in Nagaland University

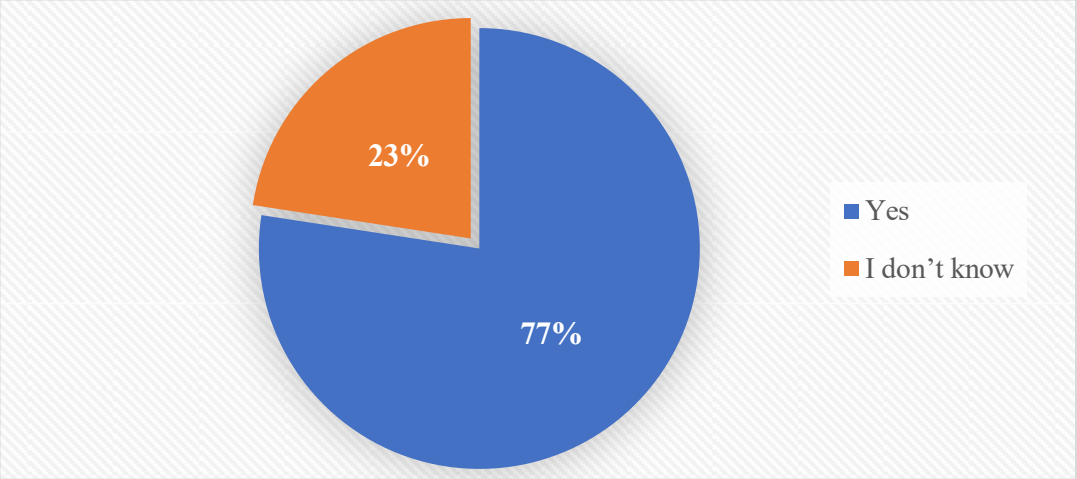


Fig. 4.12.4. Awareness of library website in Nagaland University

The figure 4.12.4. shows that the majority of the respondents 48 (77%) are aware of the library website while 14 (23%) of the respondents are not aware of the library website.

4.12.5. Awareness of library website in North Eastern Hill University

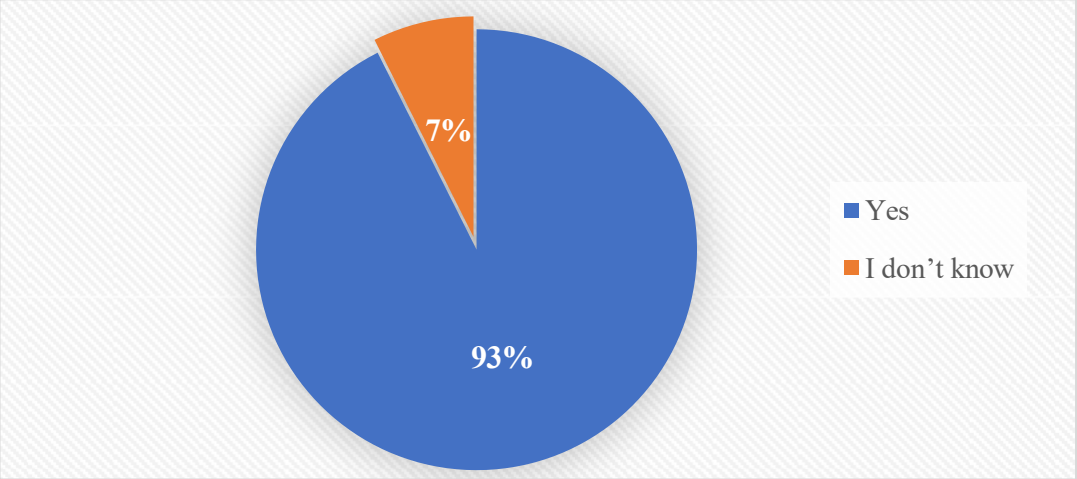


Fig. 4.12.5. Awareness of library website in NEHU

The figure 4.12.5. shows that the majority of the respondents 50 (93%) are aware of the library website while 4 (7%) of the respondents are not aware of the library website.

4.12.6. Awareness of library website in Rajiv Gandhi University

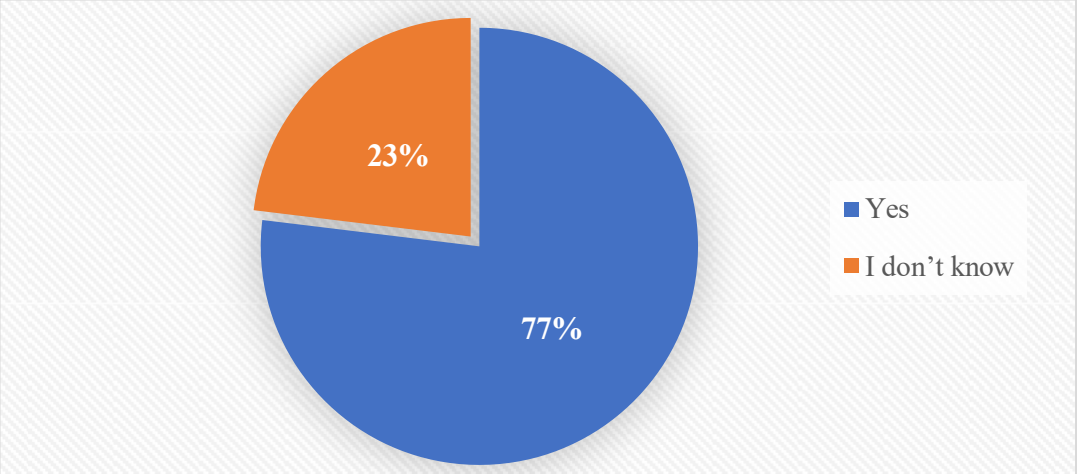


Fig. 4.12.6. Awareness of library website in Rajiv Gandhi University

The figure 4.12.6. shows that the majority of the respondents 60 (77%) are aware of the library website while 18 (23%) of the respondents are not aware of the library website.

4.12.7. Awareness of library website in Sikkim University

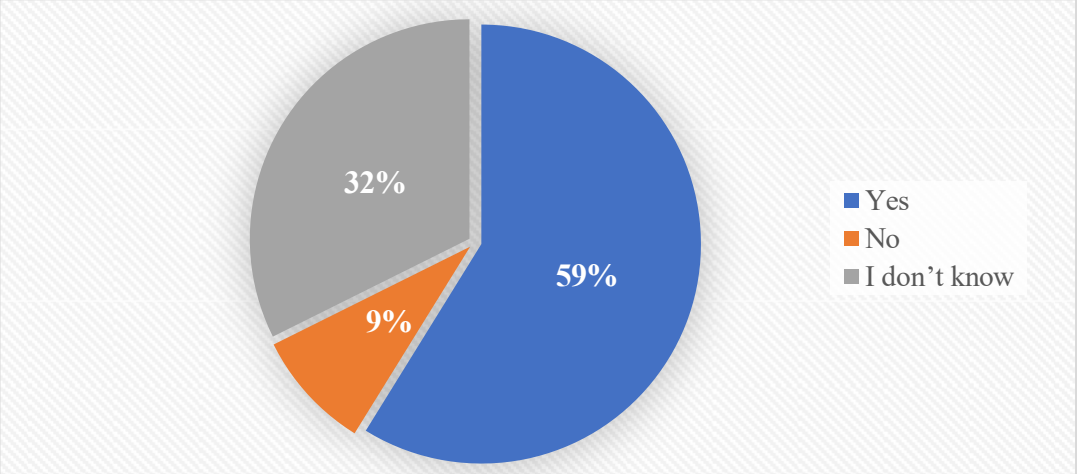


Fig. 4.12.7. Awareness of library website in Sikkim University

The figure 4.12.7. shows that the majority of the respondents 40 (59%) are aware of the library website while 22 (32%) of the respondents are not aware of the library website and 6 (9%) of the respondents have no knowledge of whether they do or do not have a library website.

4.12.8. Awareness of library website in Tezpur University

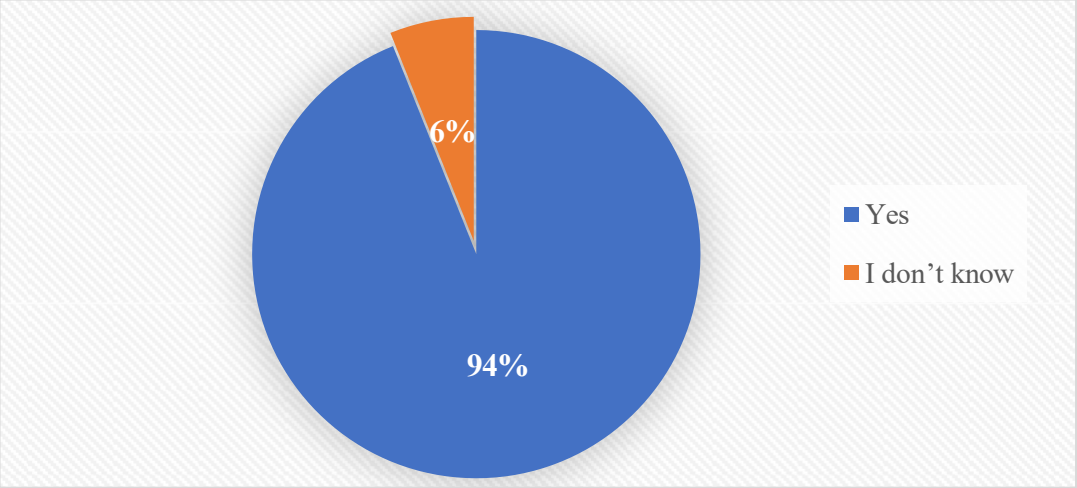


Fig. 4.12.8. Awareness of library website in Tezpur University

The figure 4.12.8. shows that the majority of the respondents 62 (94%) are aware of the library website while 4 (6%) of the respondents are not aware of the library website.

4.12.9. Awareness of library website in Tripura University

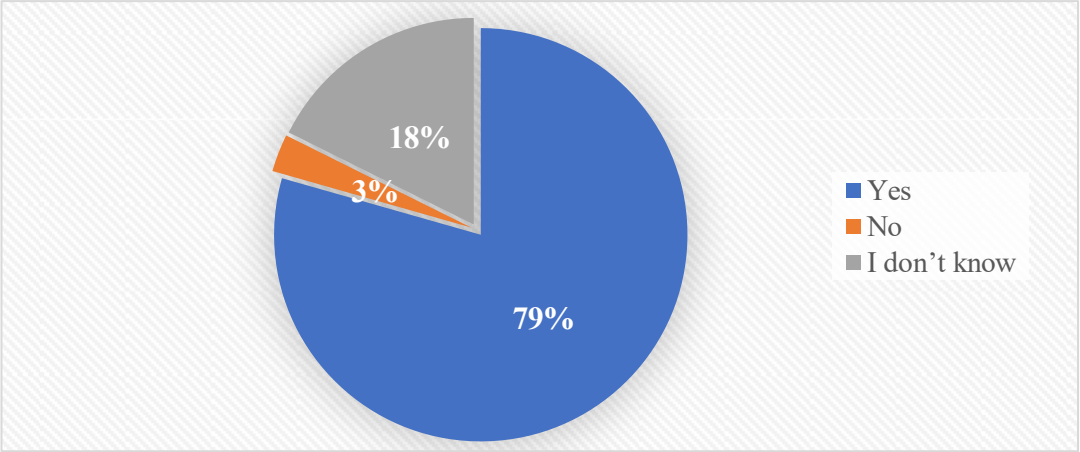


Fig. 4.12.9. Awareness of library website in Tripura University

The figure 4.12.9. shows that the majority of the respondents 54 (79%) are aware of the library website while 12 (18%) of the respondents are not aware of the library website and 2 (3%) of the respondents have no knowledge of whether they do or do not have a library website.

4.13. Overall frequency of visiting the library website

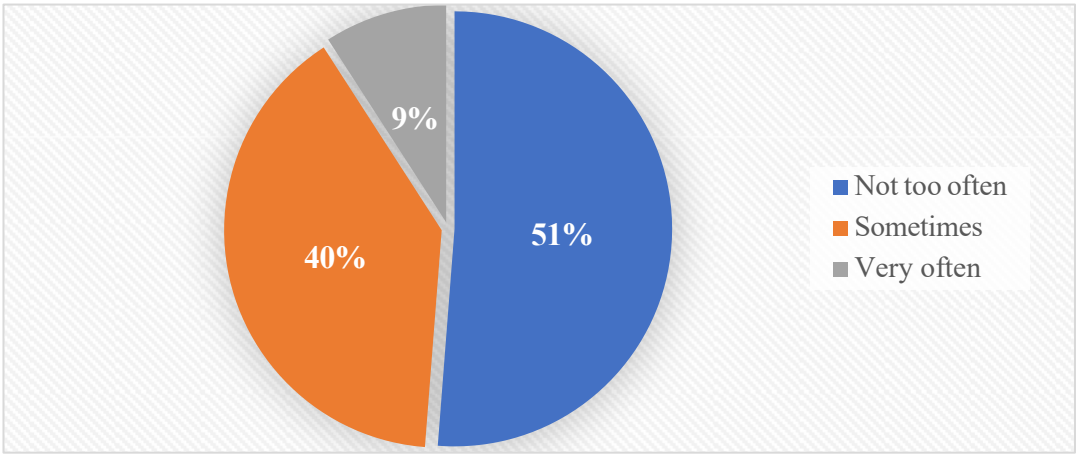


Fig. 4.13. Overall frequency of visiting the library website

From figure 4.13. we can find that, even though the majority of the respondents are knowledgeable of their library website as seen on figure 5.12., only 52 (9%) of the respondents are frequent users of the library website, while 226 (40%) of the respondents sometimes use the library website and the majority 292 (51%) do not frequently use the library website.

4.13.1. Frequency of visiting the library website in Assam University

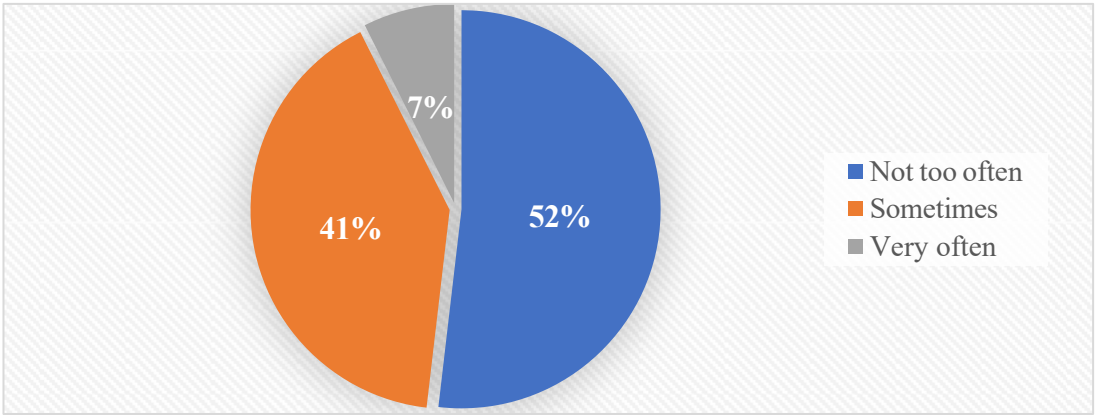


Fig. 4.13.1. Assam University frequency of visiting the library website

Figure 4.13.1. shows that the majority of the respondents 28 (52%) do not often visit their library website and 22 (41%) of the respondents sometimes visit their library website while 4 (7%) very often visit their library website.

4.13.2. Frequency of visiting the library website in Manipur University

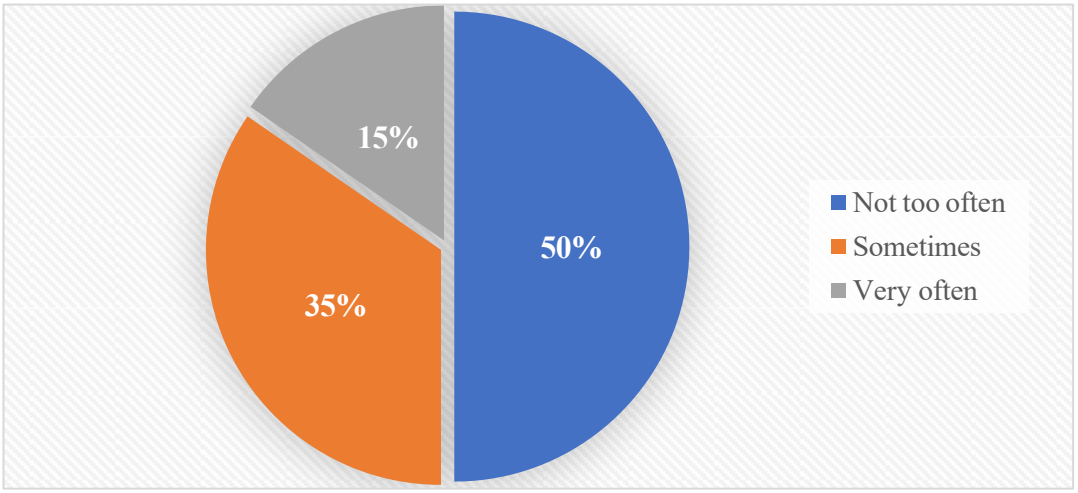


Fig. 4.13.2. Manipur University frequency of visiting the library website

Figure 4.13.2. shows that the majority of the respondents 26 (50%) do not often visit their library website and 18 (35%) of the respondents sometimes visit their library website while 8 (15%) very often visit their library website.

4.13.3. Frequency of visiting the library website in Mizoram University

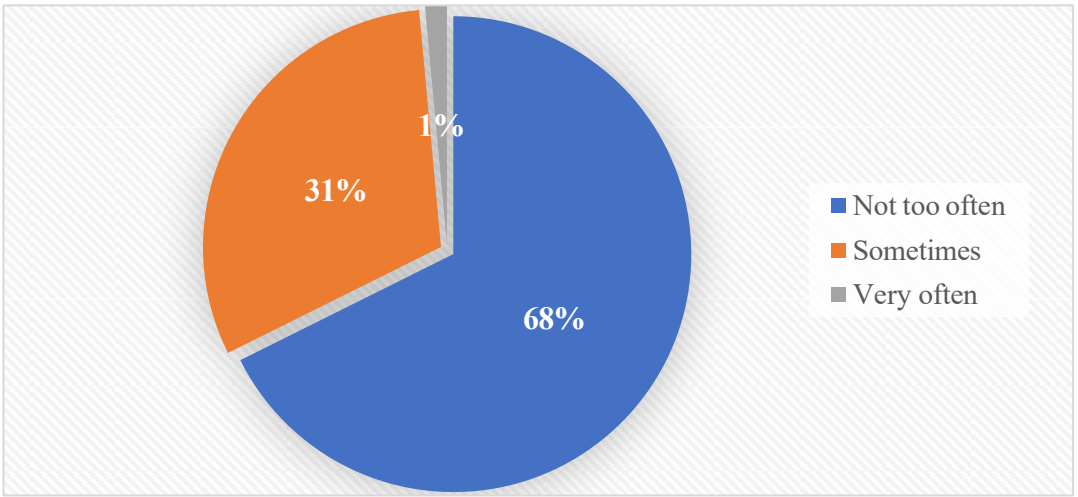


Fig. 4.13.3. Mizoram University frequency of visiting the library website

Figure 4.15.3. shows that the majority of the respondents 46 (68%) do not often visit their library website and 21 (31%) of the respondents sometimes visit their library website while only 1 (1%) very often visit their library website.

4.13.4. Frequency of visiting the library website in Nagaland University

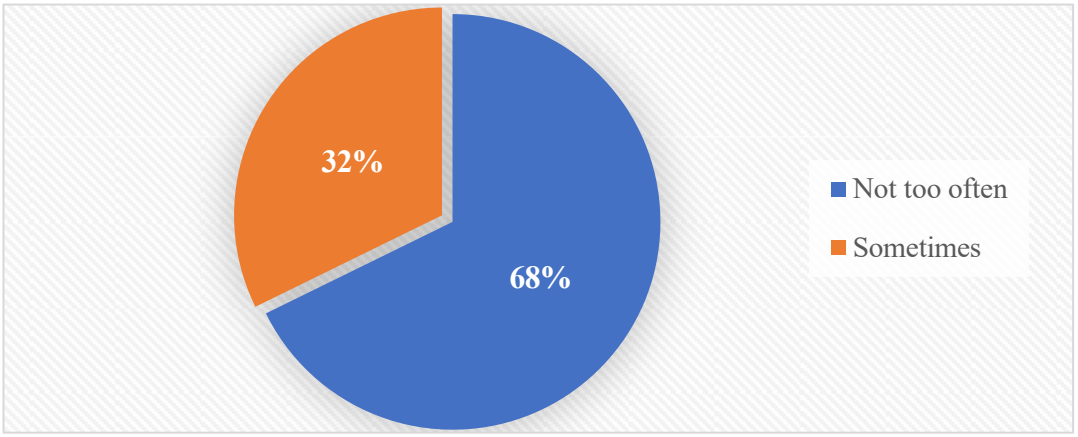


Fig. 4.13.4. Nagaland University frequency of visiting the library website

Figure 4.15.4. shows that the majority of the respondents 42 (68%) do not often visit their library website and 20 (32%) of the respondents sometimes visit their library website.

4.13.5. Frequency of visiting the library website in North Eastern Hill University

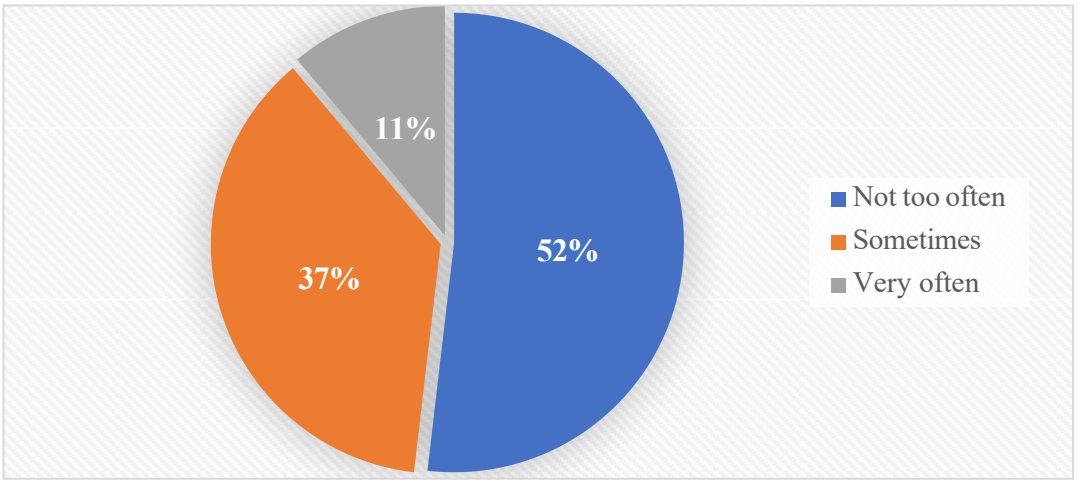


Fig. 4.13.5. NEHU frequency of visiting the library website

Figure 4.13.5. shows that the majority of the respondents 28 (52%) do not often visit their library website and 20 (37%) of the respondents sometimes visit their library website while 6 (11%) very often visit their library website.

4.13.6. Frequency of visiting the library website in Rajiv Gandhi University

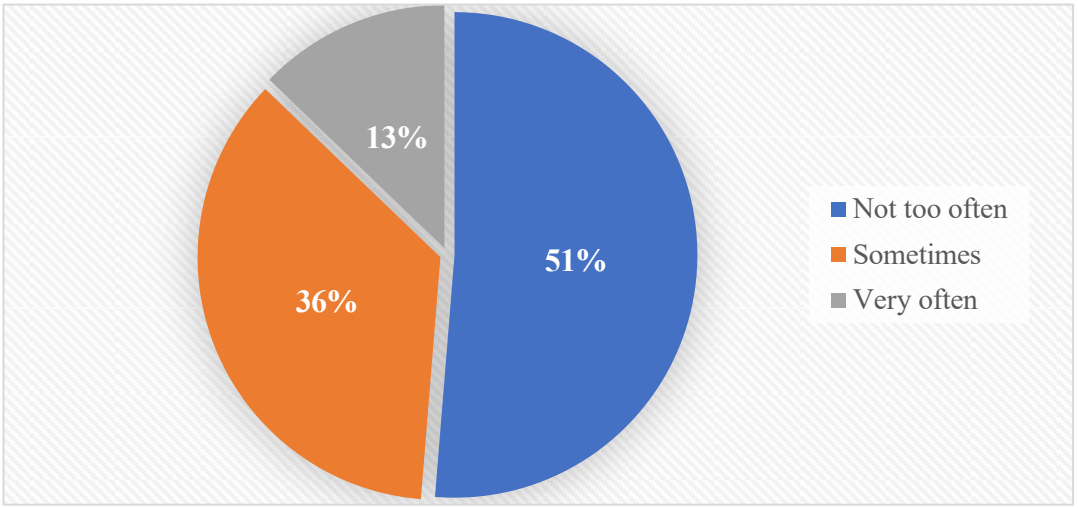


Fig. 4.13.6. Rajiv Gandhi University frequency of visiting the library website

Figure 4.13.6. shows that the majority of the respondents 40 (51%) do not often visit their library website and 28 (36%) of the respondents sometimes visit their library website while 10 (13%) very often visit their library website.

4.13.7. Frequency of visiting the library website in Sikkim University

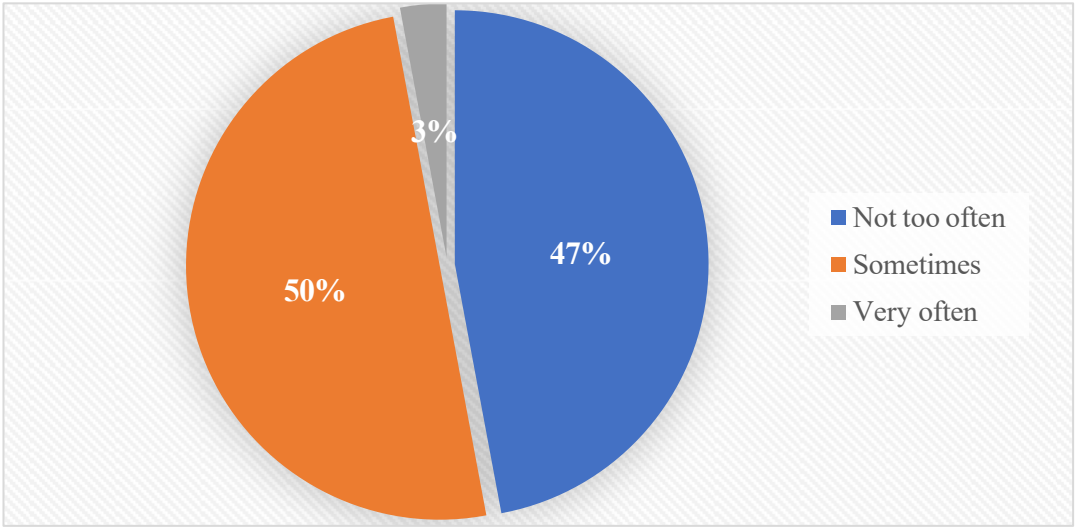


Fig. 4.13.7. Sikkim University frequency of visiting the library website

Figure 4.13.7. shows that the majority of the respondents 34 (50%) sometimes visit their library website and 32 (47%) of the respondents do not often visit their library website while 2 (3%) very often visit their library website.

4.13.8. Frequency of visiting the library website in Tezpur University

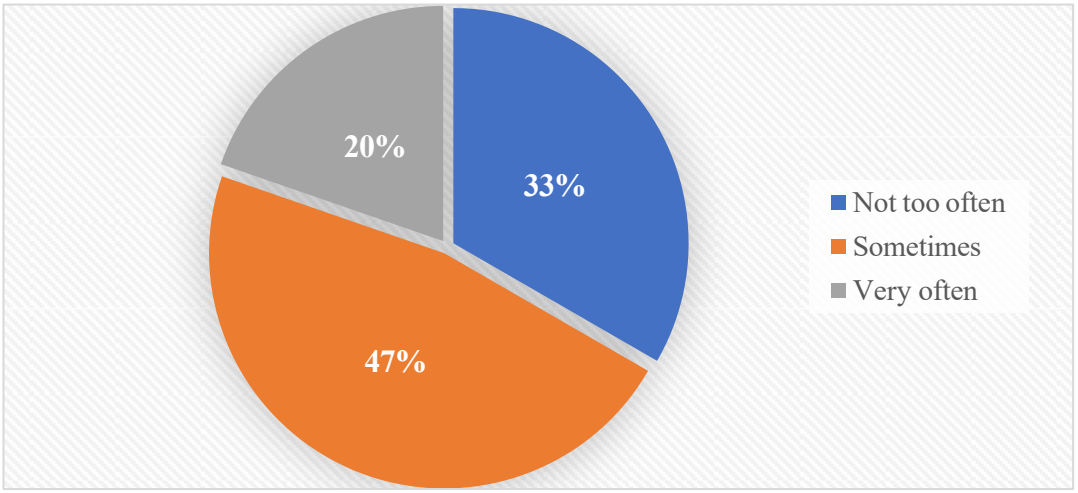


Fig. 4.13.8. Tezpur University frequency of visiting the library website

Figure 4.13.8. shows that the majority of the respondents 31 (47%) sometimes visit their library website and 22 (33%) of the respondents do not often visit their library website while 13 (20%) very often visit their library website.

4.13.9. Frequency of visiting the library website in Tripura University

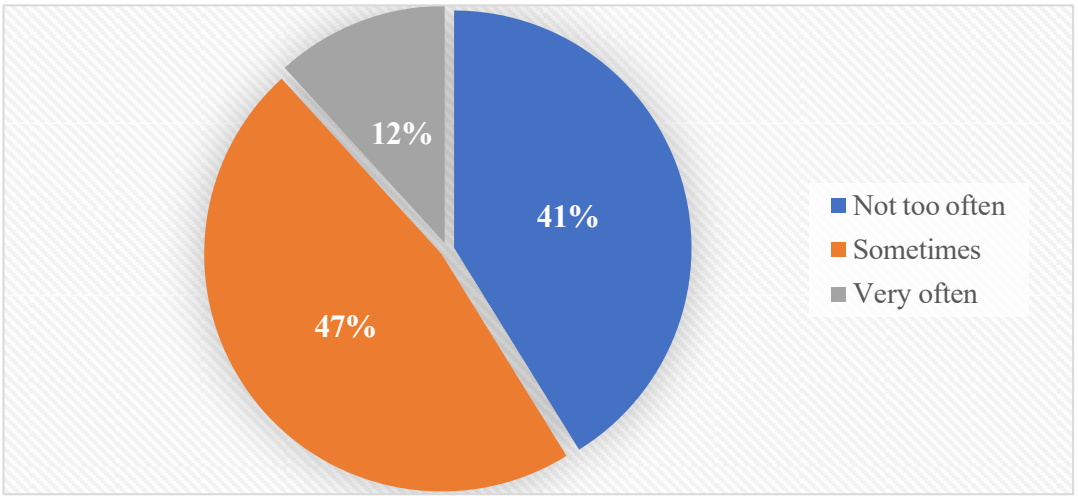


Fig. 4.13.9. Tripura University frequency of visiting the library website

Figure 4.13.9. shows that the majority of the respondents 32 (47%) sometimes visit their library website and 28 (41%) of the respondents do not often visit their library website while 8 (12%) very often visit their library website.

4.14. Overall feedback on social media used for seeking library updates

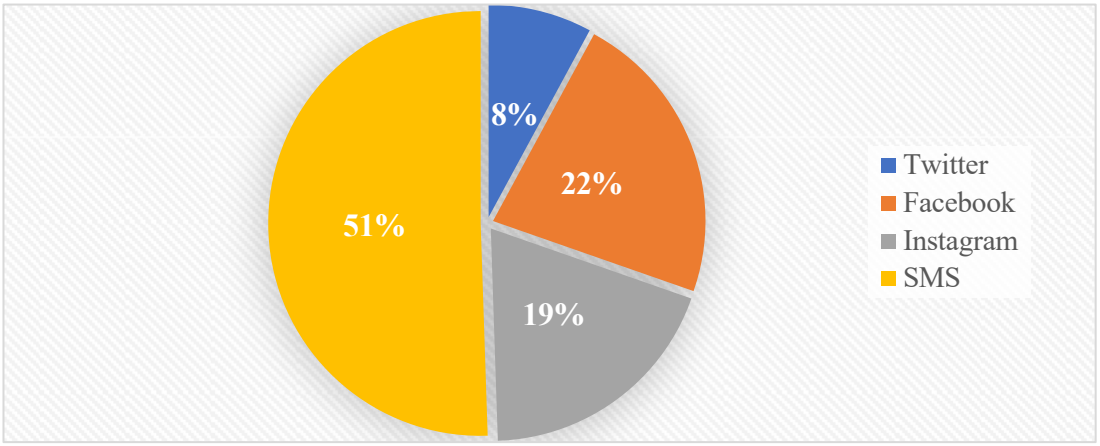


Fig.4.14. Overall social media used to seek library updates

From figure 4.14. we can clearly observe that the majority of the respondents 288 (51%) are relying on SMS for getting information and updates of their institution's library. 128 (22%) of the respondents rely of Facebook, 109 (19%) of the respondents rely on Instagram and only 45 (8%) of the respondents rely on Twitter for getting updates of their institution's library.

4.14.1. Social media used for seeking library updates in Assam University

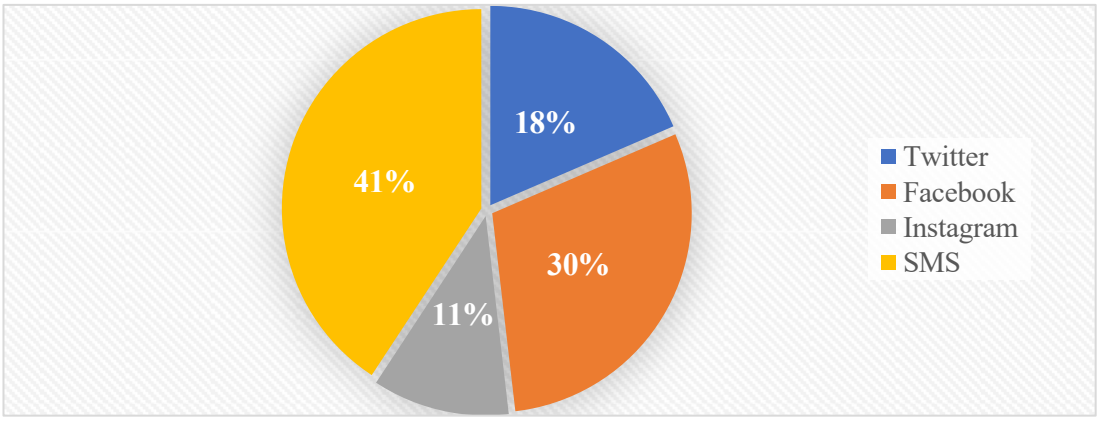


Fig. 4.14.1. Social media used for seeking library updates in Assam University

Figure 4.14.1. shows that the majority of the respondents 22 (41%) use SMS to as their main source on seeking library updates. While 16 (30%) of the respondents use Facebook to seek library updates, 10 (18%) of the respondents use Twitter and 6 (11%) use Instagram to seek library updates.

4.14.2. Social media used for seeking library updates in Manipur University

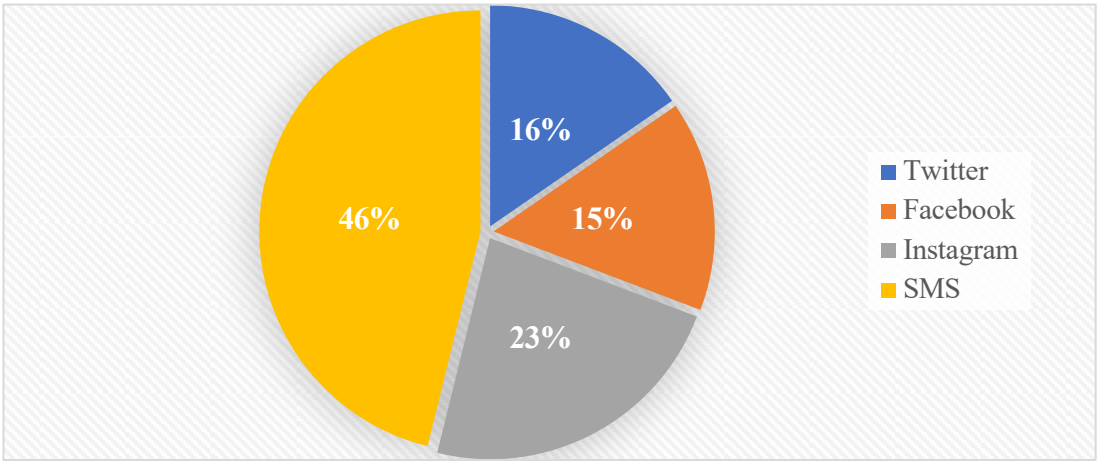


Fig. 4.14.2. Social media used for seeking library updates in Manipur University

Figure 4.14.2. shows that the majority of the respondents 24 (46%) use SMS to as their main source on seeking library updates. While 12 (23%) of the respondents use Instagram to seek library updates, 8 (16%) of the respondents use Twitter and 8 (15%) use Facebook to seek library updates.

4.14.3. Social media used for seeking library updates in Mizoram University

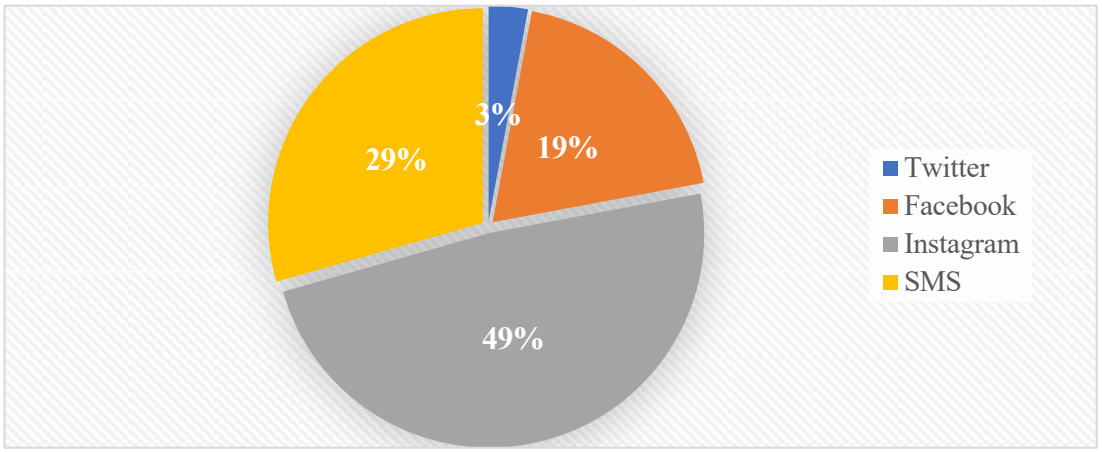


Fig. 4.14.3. Social media used for seeking library updates in Mizoram University

Figure 5.14.3. shows that the majority of the respondents 33 (49%) use Instagram as their main source on seeking library updates. While 20 (29%) of the respondents use SMS to seek library updates, 13 (19%) of the respondents use Facebook and 2 (3%) of the respondents use Twitter to seek library updates.

4.14.4. Social media used for seeking library updates in Nagaland University

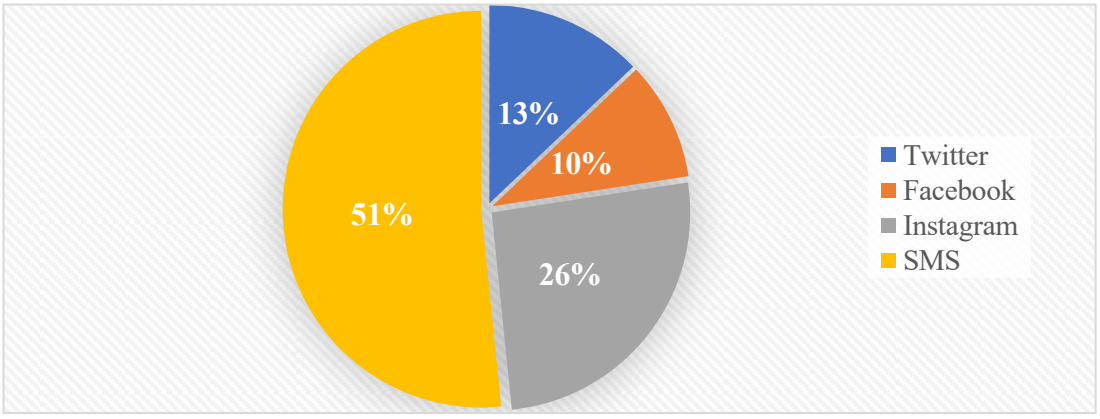


Fig. 4.14.4. Social media used for seeking library updates in Nagaland University

Figure 4.14.4. shows that the majority of the respondents 32 (51%) use SMS as their main source on seeking library updates. While 16 (26%) of the respondents use Instagram to seek library updates, 8 (13%) of the respondents use Twitter and 10% use Facebook to seek library updates.

4.14.5. Social media used for seeking library updates in North Eastern Hill University

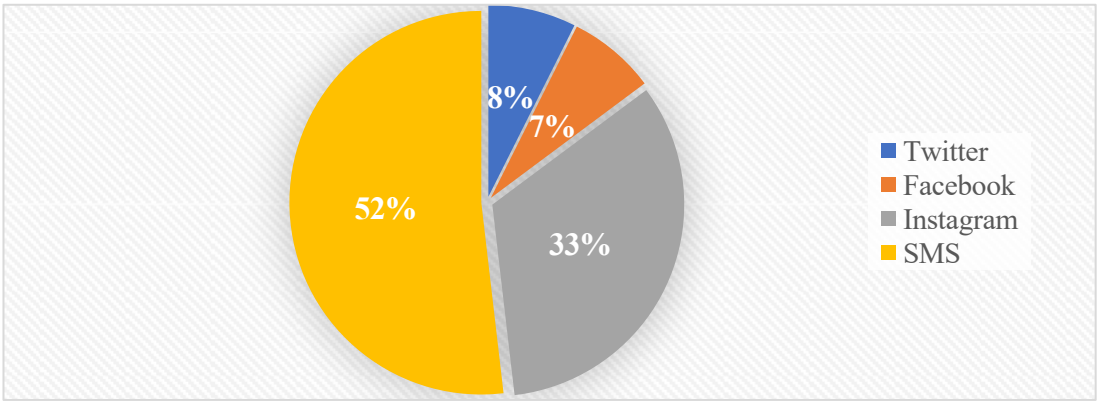


Fig. 4.14.5. Social media used for seeking library updates in NEHU

Figure 4.14.5. shows that the majority of the respondents 28 (52%) use SMS as their main source on seeking library updates. While 18 (33%) of the respondents use Instagram to seek library updates, 4 (8%) of the respondents use Twitter and 4 (7%) use Facebook to seek library updates.

4.14.6. Social media used for seeking library updates in Rajiv Gandhi University

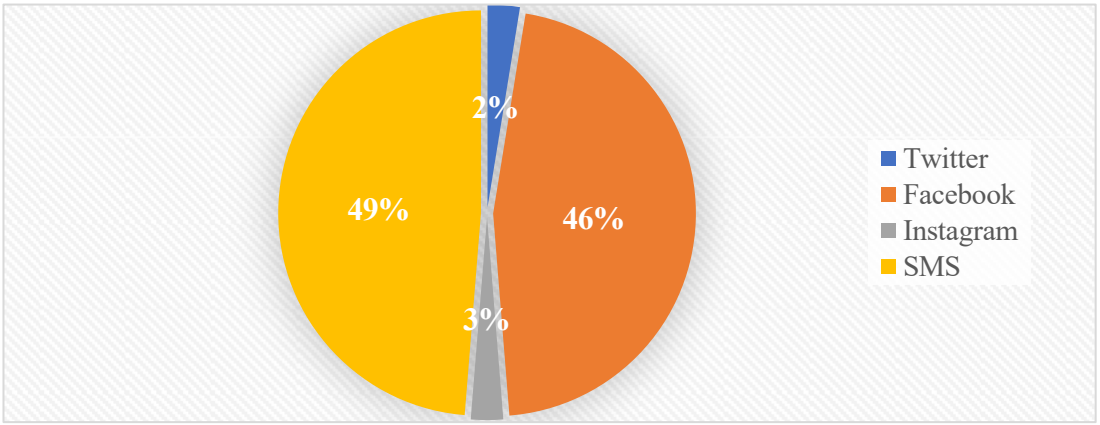


Fig. 4.14.6. Social media used for seeking library updates in Rajiv Gandhi University

Figure 4.14.6. shows that the majority of the respondents 38 (49%) use SMS as their main source on seeking library updates. While 36 (46%) of the respondents use Facebook to seek library updates, 2 (2%) of the respondents are using X (Twitter) to seek library updates.

4.14.7. Social media used for seeking library updates in Sikkim University

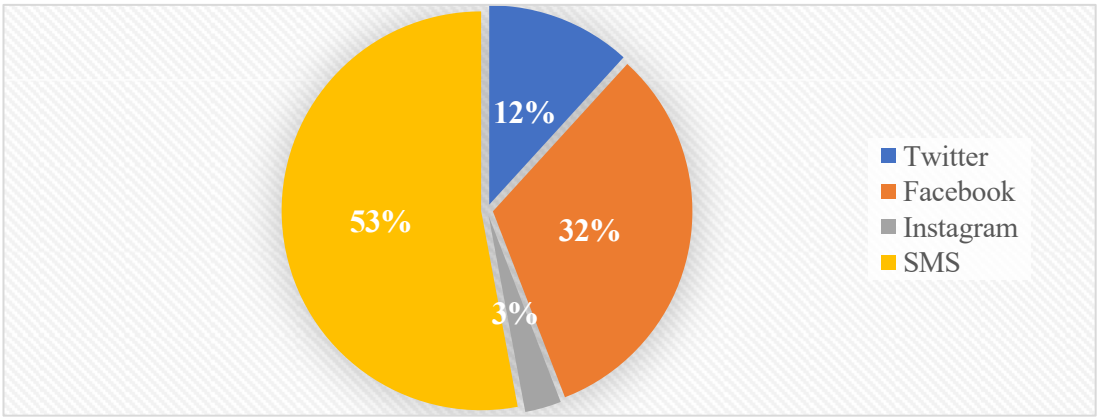


Fig. 4.14.7. Social media used for seeking library updates in Sikkim University

Figure 4.14.7. shows that the majority of the respondents 36 (53%) use SMS as their main source on seeking library updates. While 22 (32%) of the respondents use Facebook to seek library updates, 8 (12%) of the respondents use Twitter and 2 (3%) use Instagram to seek library updates.

4.14.8. Social media used for seeking library updates in Tezpur University

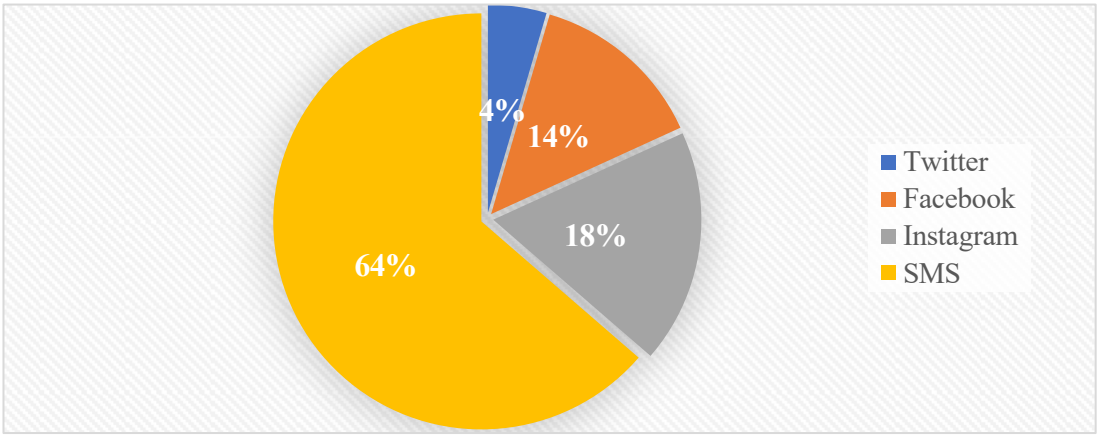


Fig. 4.14.8. Social media used for seeking library updates in Tezpur University

Figure 4.14.8. shows that the majority of the respondents 42 (64%) use SMS as their main source on seeking library updates. While 12 (18%) of the respondents use Instagram to seek library updates, 9 (14%) of the respondents use Facebook and 3 (4%) use Twitter to seek library updates.

4.14.9. Social media used for seeking library updates in Tripura University

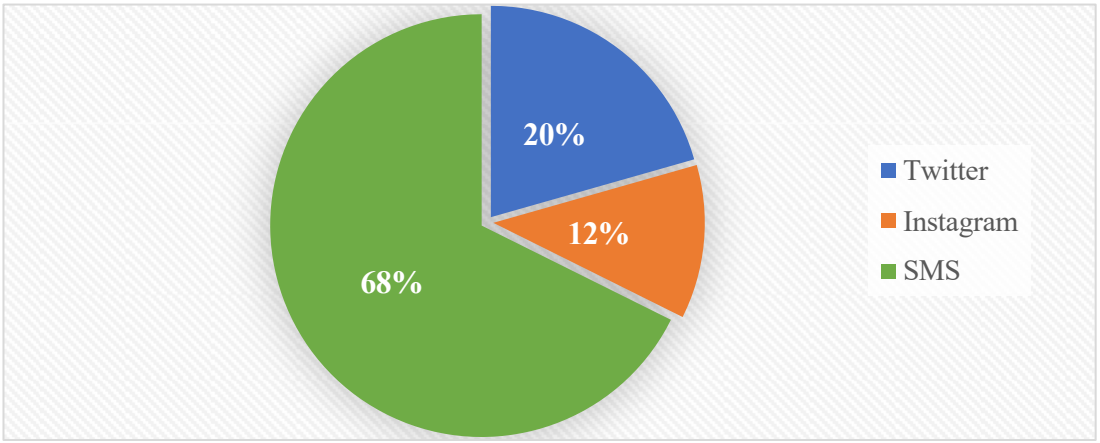


Fig. 4.14.9. Social media used for seeking library updates in Tripura University

Figure 4.14.9. shows that the majority of the respondents 14 (68%) use SMS as their main source on seeking library updates. While 14 (20%) of the respondents use Twitter to seek library updates and 8 (12%) of the respondents use Instagram.

4.15. Overall feedback on the availability of interaction with the librarian using social media in the library

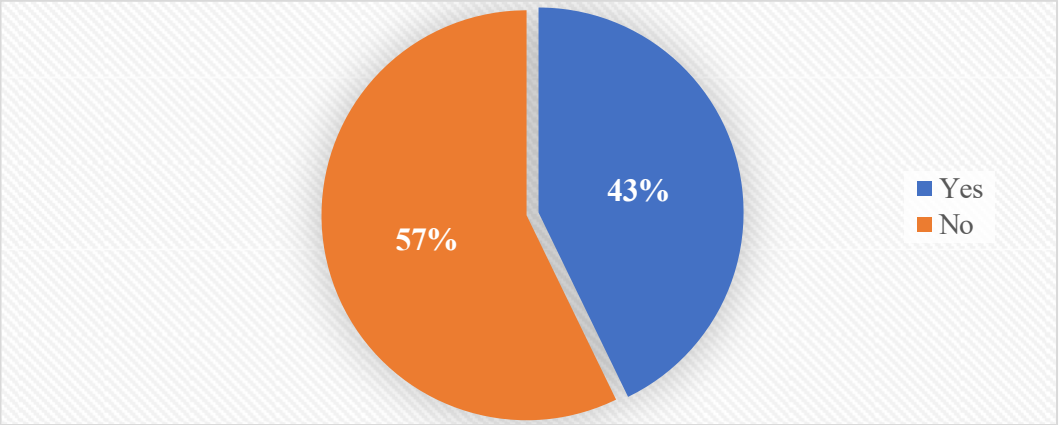


Fig. 4.15. Overall availability on social media interaction

Figure 4.15. shows that the majority of the respondents 326 (57%) stated that their institution's library does not provide social media to interact with the librarian, while 244 (43%) of the respondents claimed that their institution's library provides access to social media for interacting with the librarian.

4.15.1. Availability of interaction with the librarian using social media in the library in Assam University

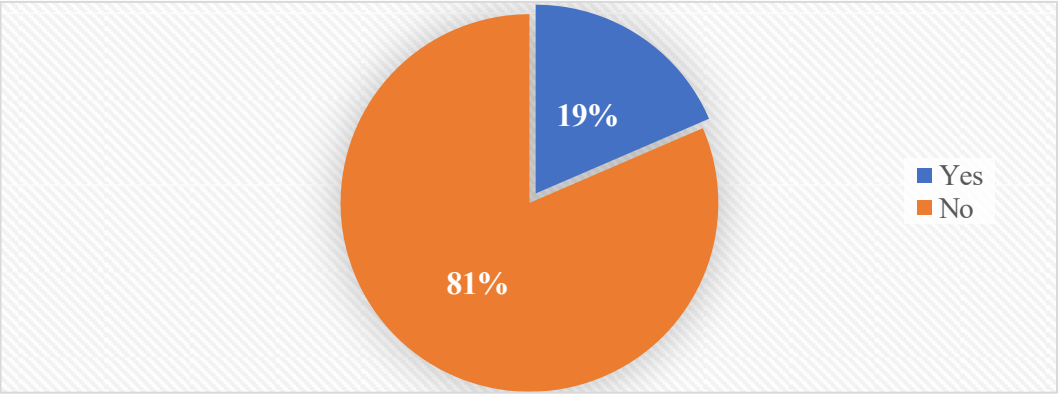


Fig. 4.15.1. Availability on social media interaction in Assam University

From figure 4.15.1. it is shown that the majority of the respondents 44 (81%) indicate that the library does not provide social media to interact with the librarian while 10 (19%) indicate that the library provides social media to interact with the librarian.

4.15.2. Availability of interaction with the librarian using social media in the library in Manipur University

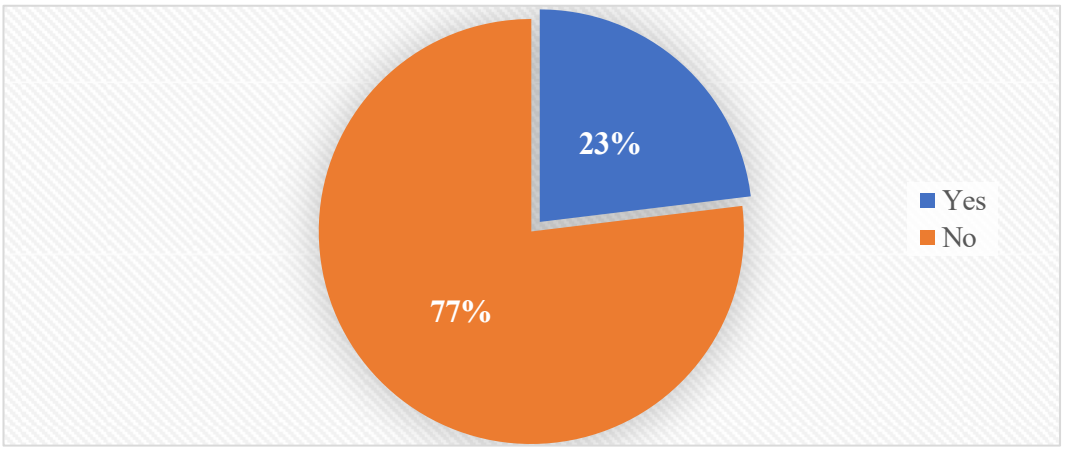


Fig. 4.15.2. Availability on social media interaction in Manipur University

From figure 4.15.2. it is shown that the majority of the respondents 40 (77%) indicate that the library does not provide social media to interact with the librarian while 12 (23%) indicate that the library provides social media to interact with the librarian.

4.15.3. Availability of interaction with the librarian using social media in the library in Mizoram University

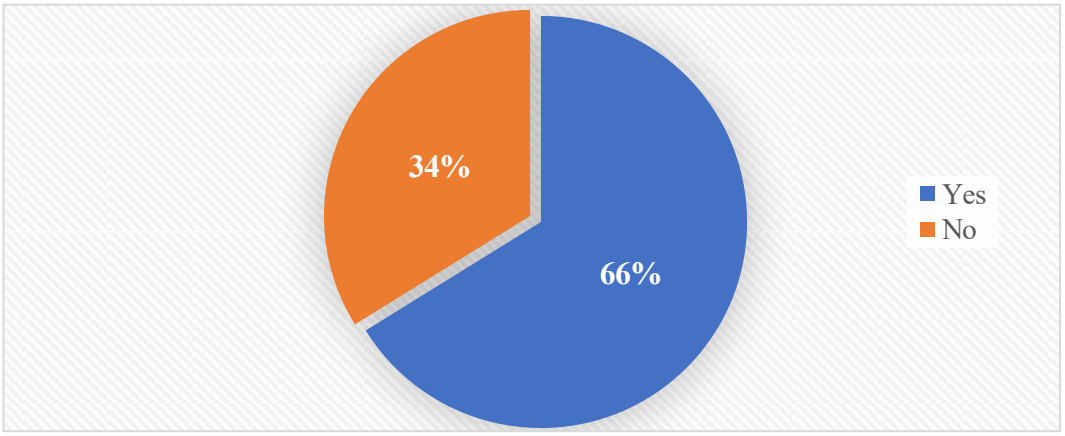


Fig. 4.15.3. Availability on social media interaction in Mizoram University

From figure 4.15.3. it is shown that the majority of the respondents 45 (66%) indicate that the library provides social media to interact with the librarian while 23 (34%) indicate that the library does not provide social media to interact with the librarian.

4.15.4. Availability of interaction with the librarian using social media in the library in Nagaland University

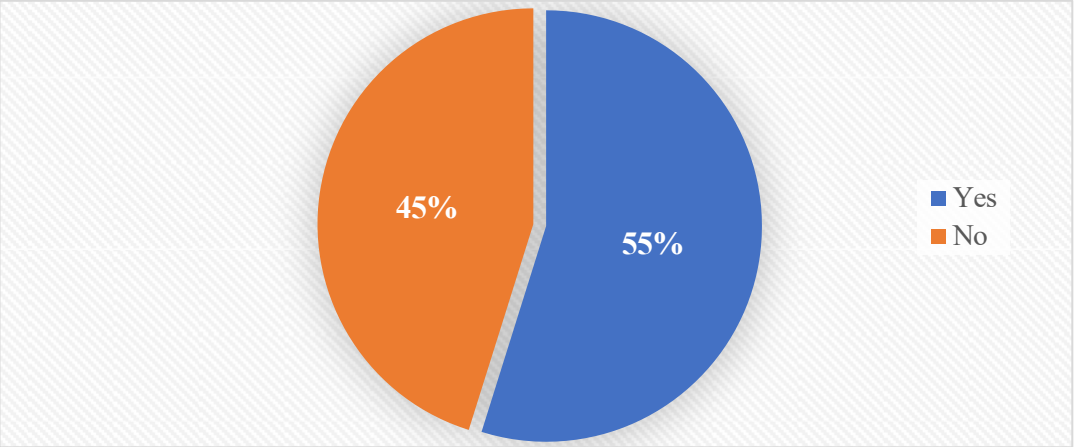


Fig. 4.15.4. Availability on social media interaction in Nagaland University

From figure 4.15.4. it is shown that the majority of the respondents 34 (55%) indicate that the library provides social media to interact with the librarian while 28 (45%) indicate that the library does not provide social media to interact with the librarian.

4.15.5. Availability of interaction with the librarian using social media in the library in North Eastern Hill University

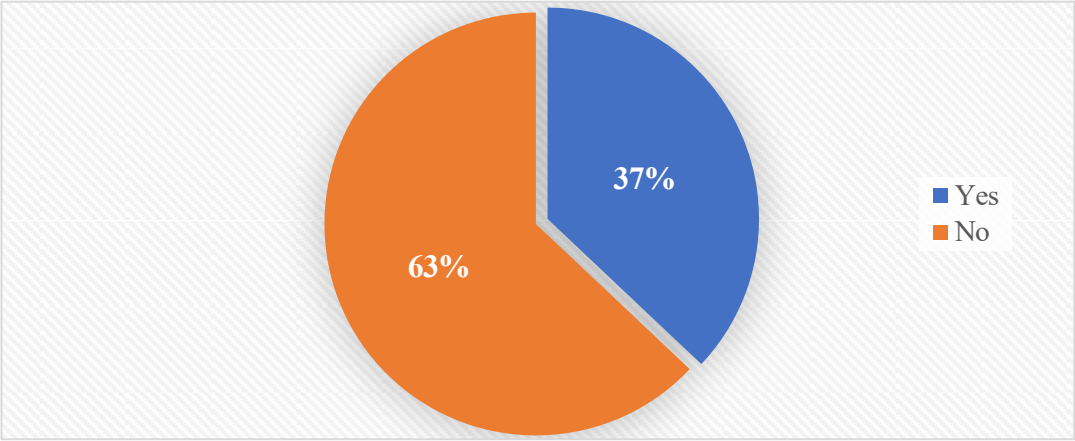


Fig. 4.15.5. Availability on social media interaction in NEHU

From figure 4.15.5. it is shown that the majority of the respondents 34 (63%) indicate that the library does not provide social media to interact with the librarian while 20 (37%) indicate that the library provides social media to interact with the librarian.

4.15.6. Availability of interaction with the librarian using social media in the library in Rajiv Gandhi University

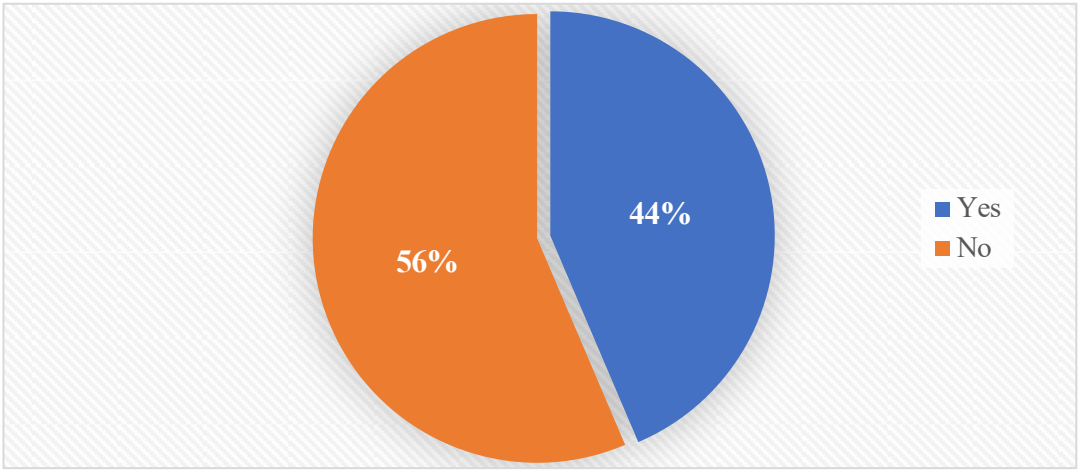


Fig. 4.15.6. Availability on social media interaction in Rajiv Gandhi University

From figure 4.15.6. it is shown that the majority of the respondents 44 (56%) indicate that the library does not provide social media to interact with the librarian while 34 (44%) indicate that the library provides social media to interact with the librarian.

4.15.7. Availability of interaction with the librarian using social media in the library in Sikkim University

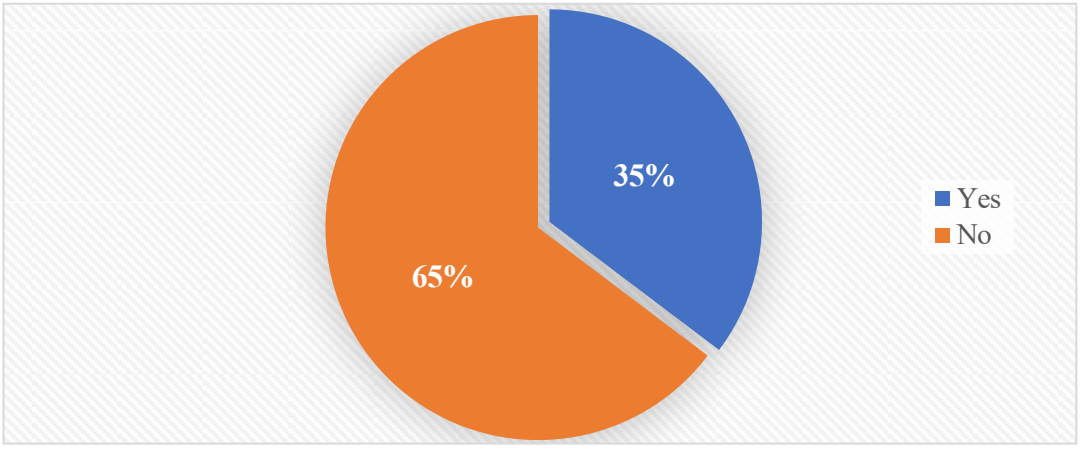


Fig. 4.15.7. Availability on social media interaction in Sikkim University

From figure 4.15.7. it is shown that the majority of the respondents 44 (65%) indicate that the library does not provide social media to interact with the librarian while 24 (35%) indicate that the library provides social media to interact with the librarian.

4.15.8. Availability of interaction with the librarian using social media in the library in Tezpur University

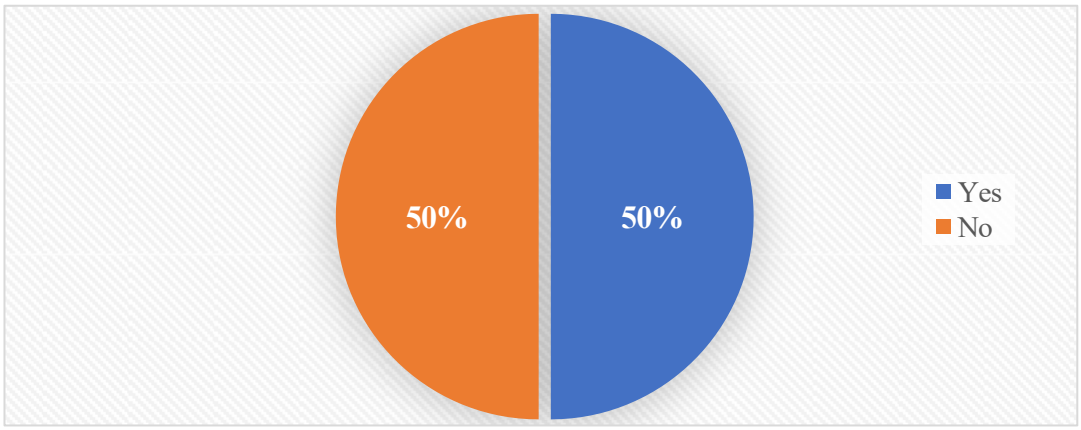


Fig. 4.15.8. Availability on social media interaction in Tezpur University

From figure 4.15.8. it is shown that 33 (50%) of the respondents indicate that the library provides social media to interact with the librarian while 33 (50%) of the respondents indicate that the library does not provides social media to interact with the librarian.

4.15.9. Availability of interaction with the librarian using social media in the library in Tripura University

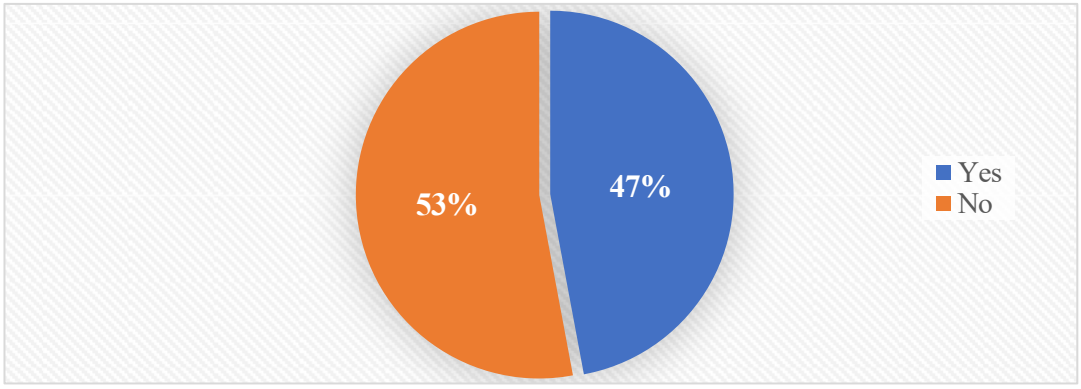


Fig. 4.15.9. Availability on social media interaction in Tripura University

From figure 4.15.9. it is shown that the majority of the respondents 36 (53%) state that the library does not provide social media to interact with the librarian while 32 (47%) of the respondents claim that the library provides interaction with the librarian using social media.

4.16. Overall satisfaction of social media used in the library

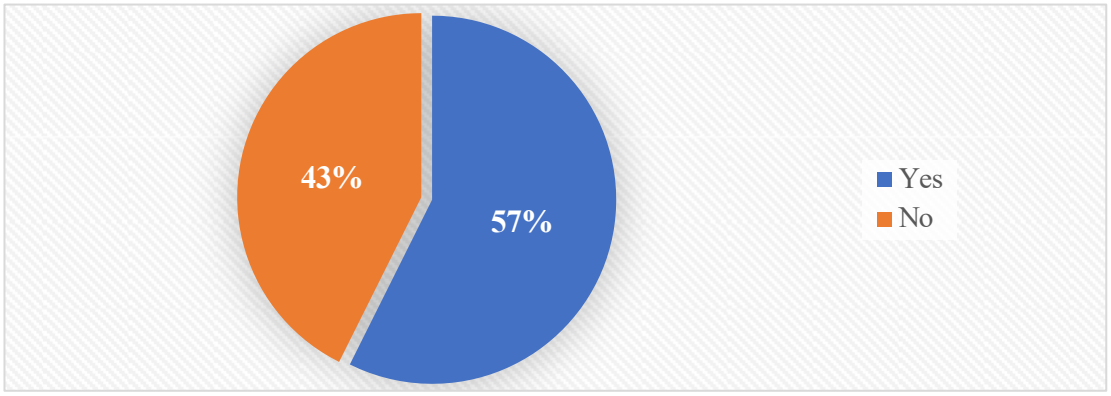


Fig. 4.16. Overall satisfaction of social media used in the library

The respondents were asked whether the social media applications used by their institution's library was satisfactory for their educational, research and teaching needs. Figure 4.16. shows that 327 (57%) of the respondents are satisfied by the social media applications used by their institution's library. 243 (43%) of the respondents are not satisfied by their institution's library was satisfactory for their educational, research and teaching needs.

4.16.1. Satisfaction of social media used in the library in Assam University

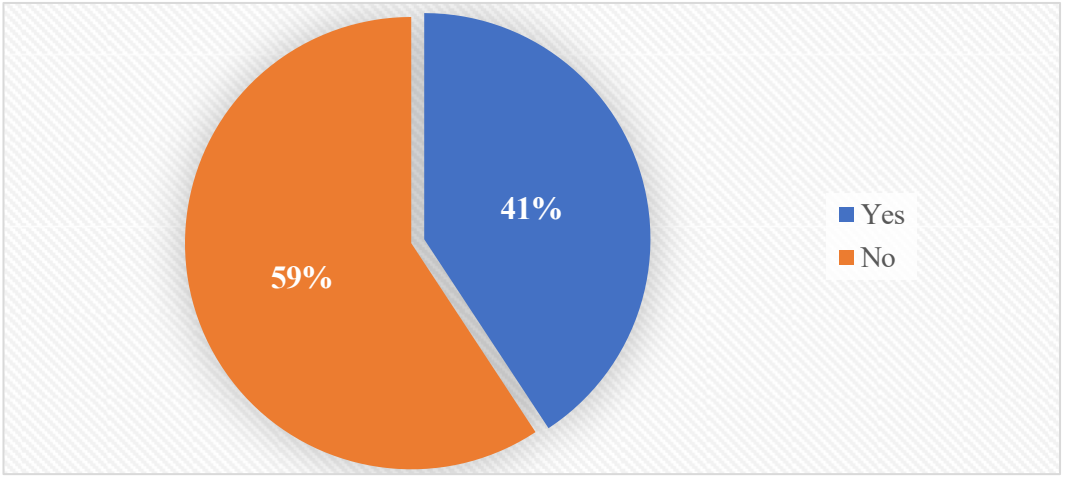


Fig. 4.16.1. Satisfaction of social media used in Assam University library

Figure 4.16.1. shows that the majority of the respondents 32 (59%) are not satisfied with the social media applications used while 22 (41%) are satisfied with the social media applications used in central library.

4.16.2. Satisfaction of social media used in the library in Manipur University

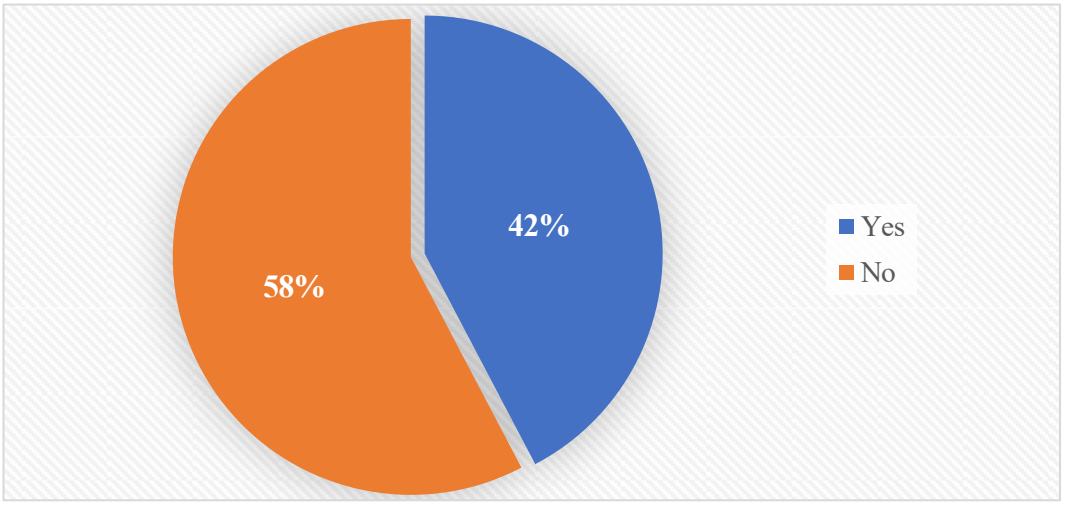


Fig. 4.16.2. Satisfaction of social media used in Manipur University library

Figure 4.16.2. shows that the majority of the respondents 30 (58%) are not satisfied with the social media applications used while 22 (42%) are satisfied with the social media applications used in central library.

4.16.3. Satisfaction of social media used in the library in Mizoram University

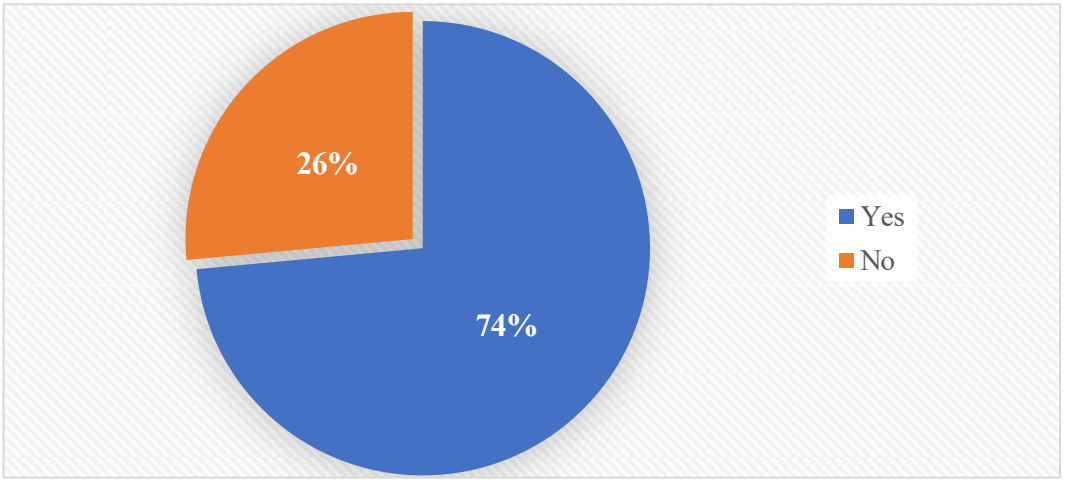


Fig. 4.16.3. Satisfaction of social media used in Mizoram University library

Figure 4.16.3. shows that the majority of the respondents 50 (74%) are satisfied with the social media applications used while 18 (26%) are not satisfied with the social media applications used in central library.

4.16.4. Satisfaction of social media used in the library in Nagaland University

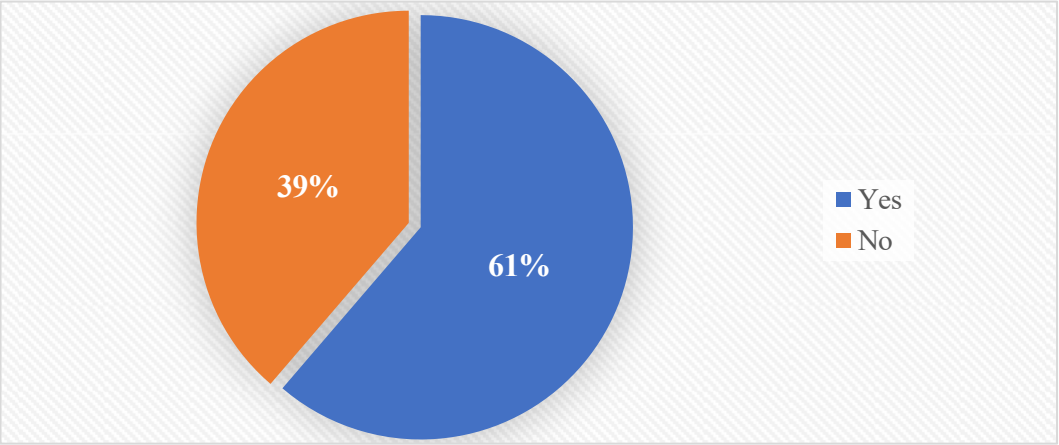


Fig. 4.16.4. Satisfaction of social media used in Nagaland University library

Figure 4.16.4. shows that the majority of the respondents 38 (61%) are satisfied with the social media applications used while 24 (39%) are not satisfied with the social media applications used in central library.

4.16.5. Satisfaction of social media used in the library in North Eastern Hill University

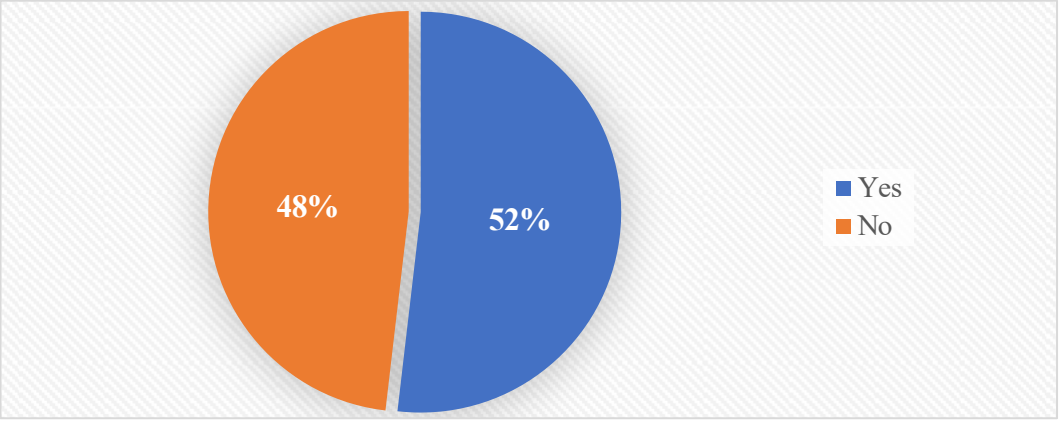


Fig. 4.16.5. Satisfaction of social media used in NEHU library

Figure 4.16.5. shows that the majority of the respondents 28 (52%) are satisfied with the social media applications used while 26 (48%) are not satisfied with the social media applications used in central library.

4.16.6. Satisfaction of social media used in the library in Rajiv Gandhi University

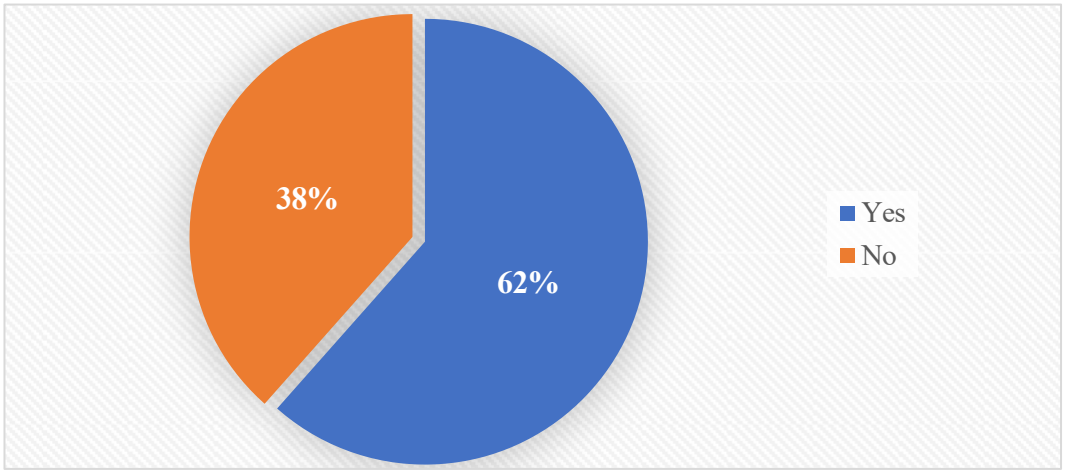


Fig. 4.16.6. Satisfaction of social media used in Rajiv Gandhi University library

Figure 4.16.6. shows that the majority of the respondents 48 (62%) are satisfied with the social media applications used while 30 (38%) are not satisfied with the social media applications used in central library.

4.16.7. Satisfaction of social media used in the library in Sikkim University

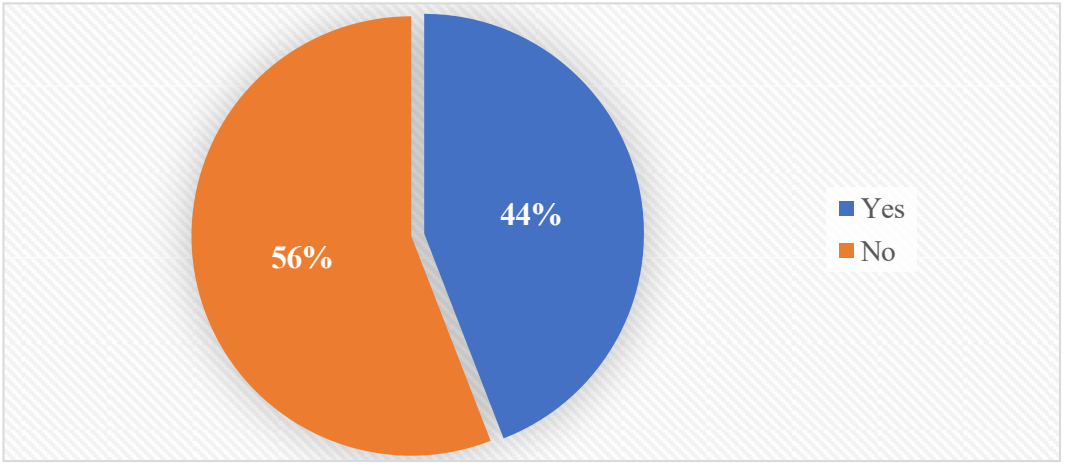


Fig. 4.16.7. Satisfaction of social media used in Sikkim University library

Figure 4.16.7. shows that the majority of the respondents 38 (56%) are not satisfied with the social media applications used while 30 (44%) are satisfied with the social media applications used in central library.

4.16.8. Satisfaction of social media used in the library in Tezpur University

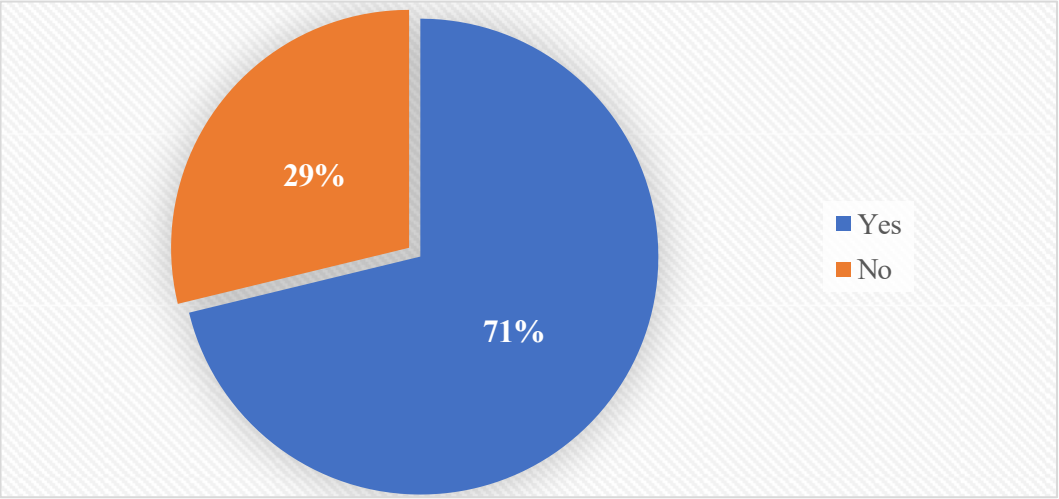


Fig. 4.16.8. Satisfaction of social media used in Tezpur University library

Figure 4.16.8. shows that the majority of the respondents 47 (71%) are satisfied with the social media applications used while 19 (29%) are not satisfied with the social media applications used in central library.

4.16.9. Satisfaction of social media used in the library in Tripura University

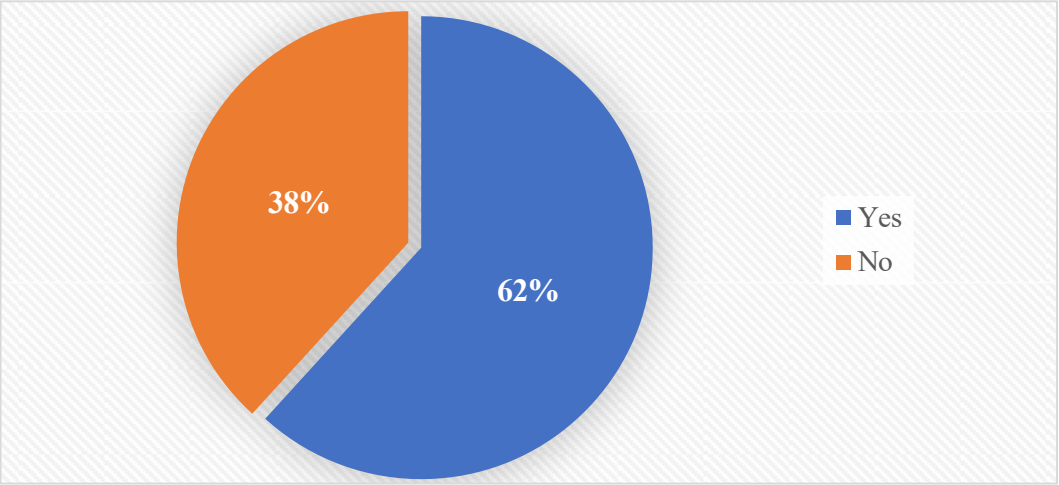
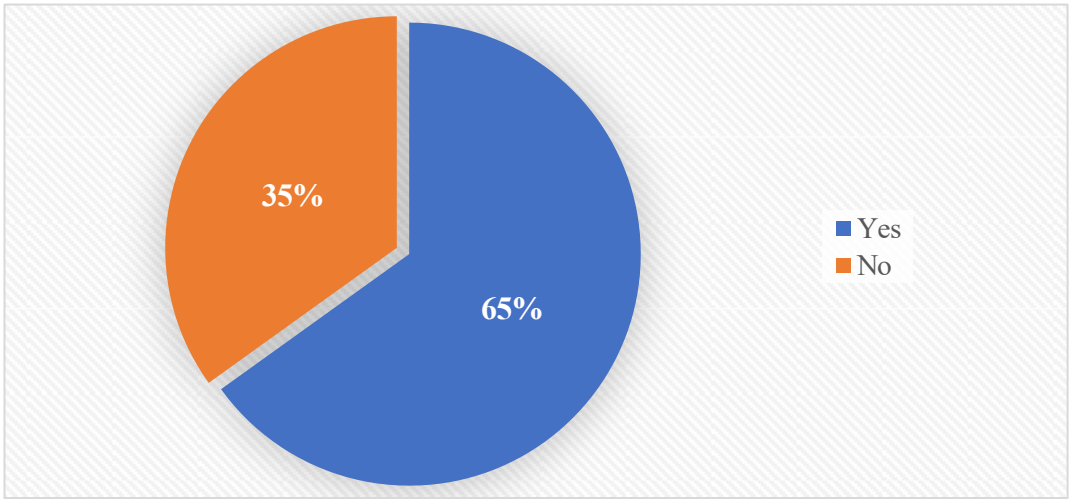


Fig. 4.16.9. Satisfaction of social media used in Tripura University library

Figure 4.16.9. shows that the majority of the respondents 42 (62%) are satisfied with the social media applications used while 26 (38%) are not satisfied with the social media applications used in central library.

4.17. Overall satisfaction of e-resources provided by the Library



4.17. Overall satisfaction of e-resources provided by the library

From figure 4.17. it is evident that the majority of the respondents 371 (65%) are satisfied of the e-resources provided by their institution's library while 199 (35%) are not satisfied of the provided e-resources by their institution's library.

4.17.1. Satisfaction of e-resources provided by Assam University Library

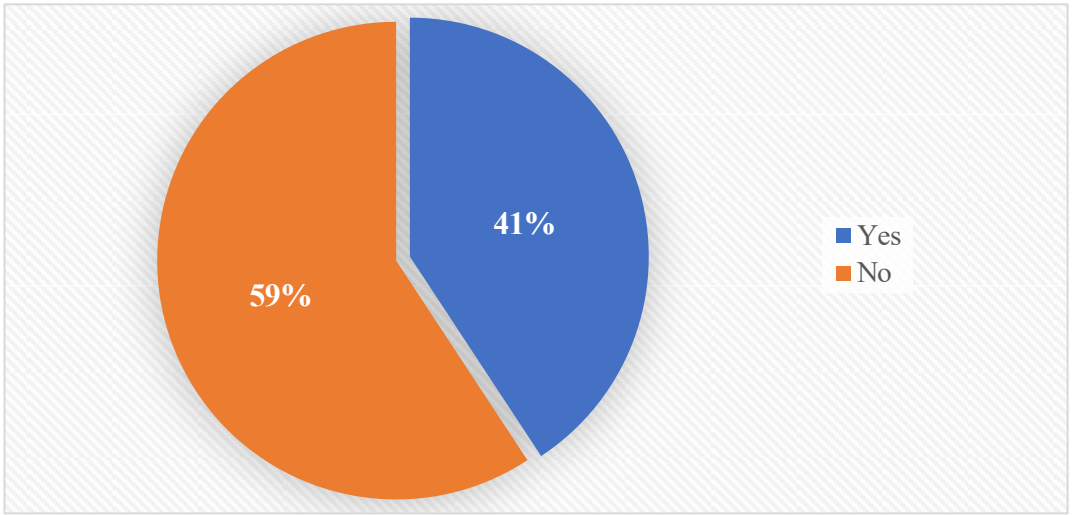


Fig. 4.17.1. Overall satisfaction of e-resources provided by Assam University Library

Figure 4.17.1. shows that the majority of the respondents 32 (59%) are not satisfied with the e-resources provided while 22 (41%) are satisfied with the provided e-resources.

4.17.2. Satisfaction of e-resources provided by Manipur University Library

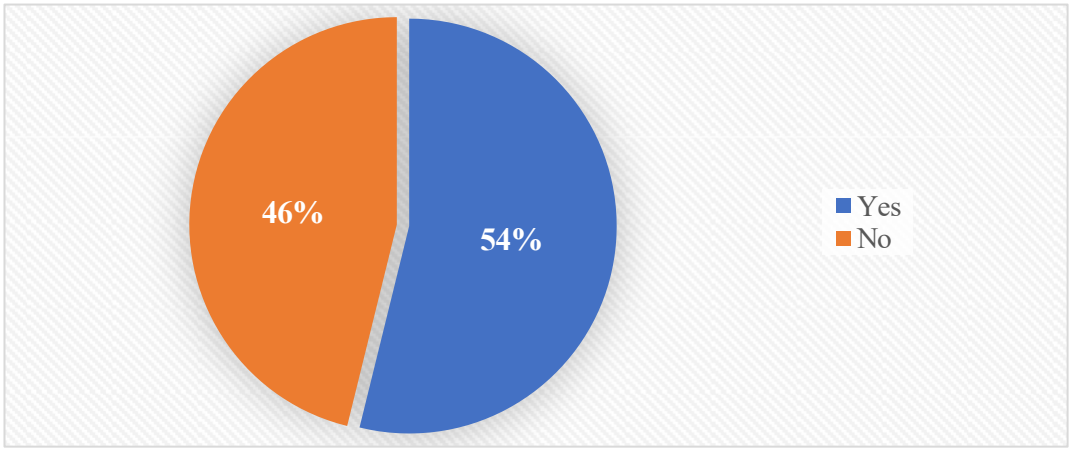


Fig. 4.17.2. Overall satisfaction of e-resources provided by Manipur University Library

Figure 4.17.2. shows that the majority of the respondents 28 (54%) are satisfied with the e-resources provided while 24 (46%) are not satisfied with the provided e-resources.

4.17.3. Satisfaction of e-resources provided by Mizoram University Library

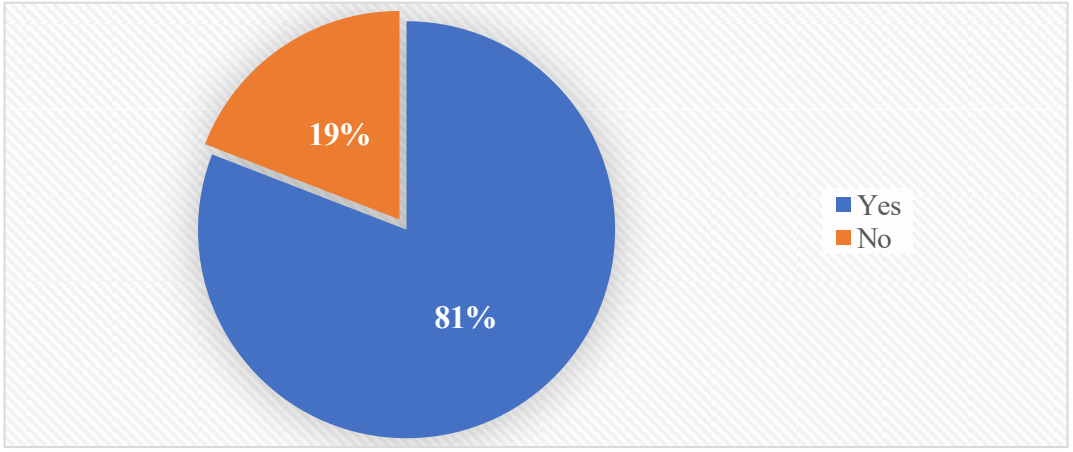


Fig. 4.17.3. Overall satisfaction of e-resources provided by Mizoram University Library

Figure 4.17.3. shows that the majority of the respondents 55 (81%) are satisfied with the e-resources provided while 13 (19%) are not satisfied with the provided e-resources.

4.17.4. Satisfaction of e-resources provided by Nagaland University Library

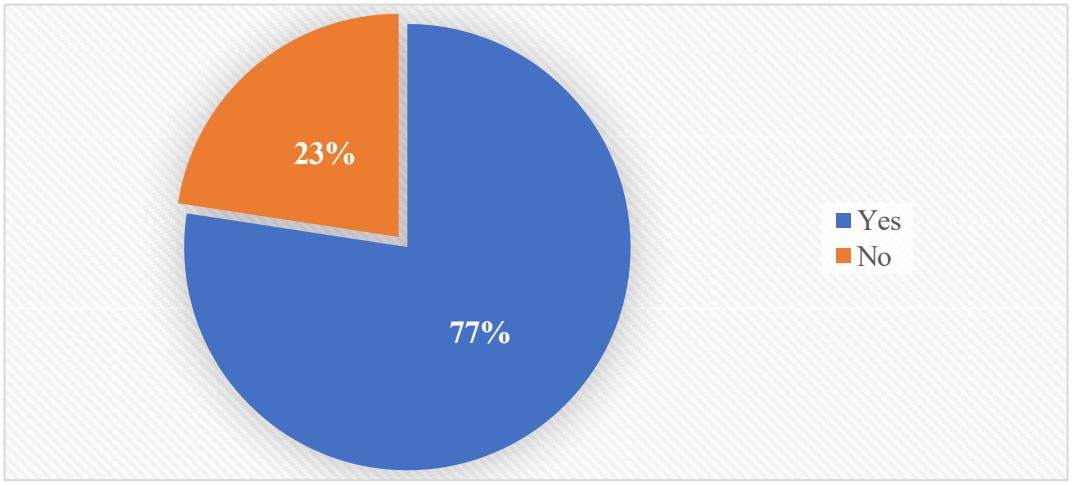


Fig. 4.17.4. Overall satisfaction of e-resources provided by Nagaland University Library

Figure 4.17.4. shows that the majority of the respondents 48 (77%) are satisfied with the e-resources provided while 14 (23%) are not satisfied with the provided e-resources.

4.17.5. Satisfaction of e-resources provided by North Eastern Hill University Library

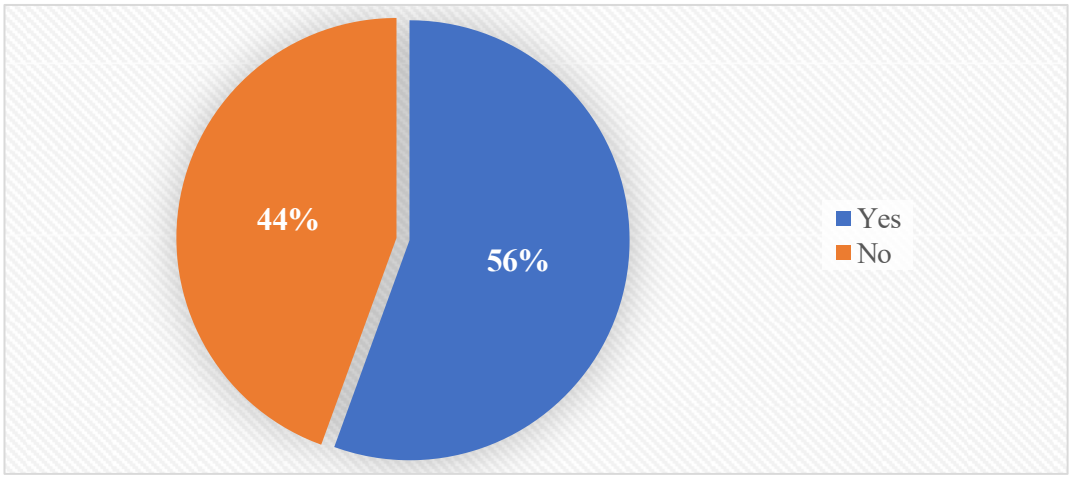


Fig. 4.17.5. Overall satisfaction of e-resources provided by NEHU Library

Figure 4.17.5. shows that the majority of the respondents 30 (56%) are satisfied with the e-resources provided while 24 (44%) are not satisfied with the provided e-resources.

4.17.6. Satisfaction of e-resources provided by Rajiv Gandhi University Library

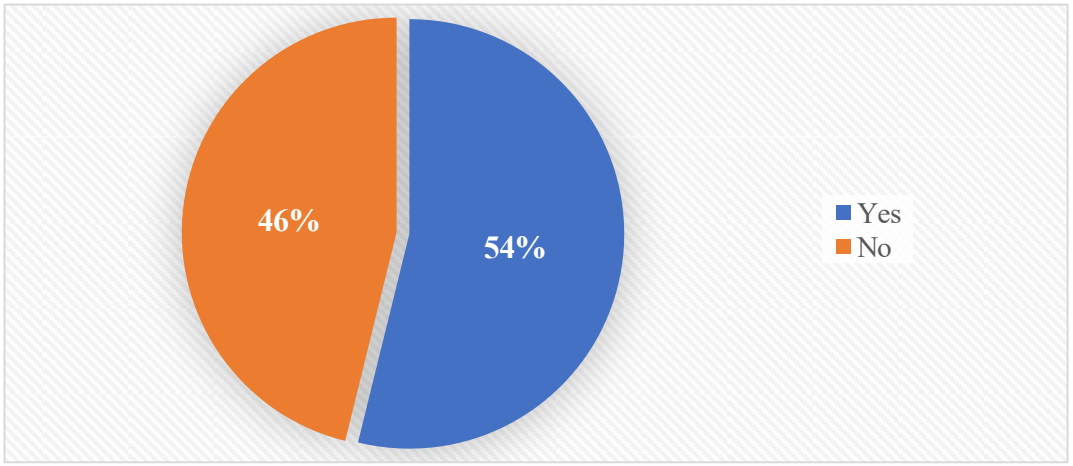


Fig. 4.17.6. Overall satisfaction of e-resources provided by Rajiv Gandhi University Library

Figure 4.17.6. shows that the majority of the respondents 42 (54%) are satisfied with the e-resources provided while 36 (46%) are not satisfied with the provided e-resources.

4.17.7. Satisfaction of e-resources provided by Sikkim University Library

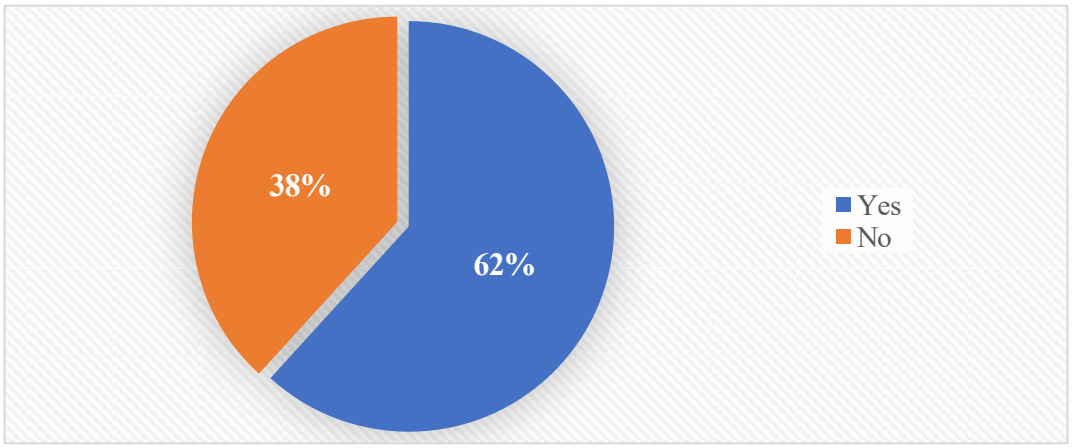


Fig. 4.17.7. Overall satisfaction of e-resources provided by Sikkim University Library

Figure 4.17.7. shows that the majority of the respondents 42 (62%) are satisfied with the e-resources provided while 26 (38%) are not satisfied with the provided e-resources.

4.17.8. Satisfaction of e-resources provided by Tezpur University Library

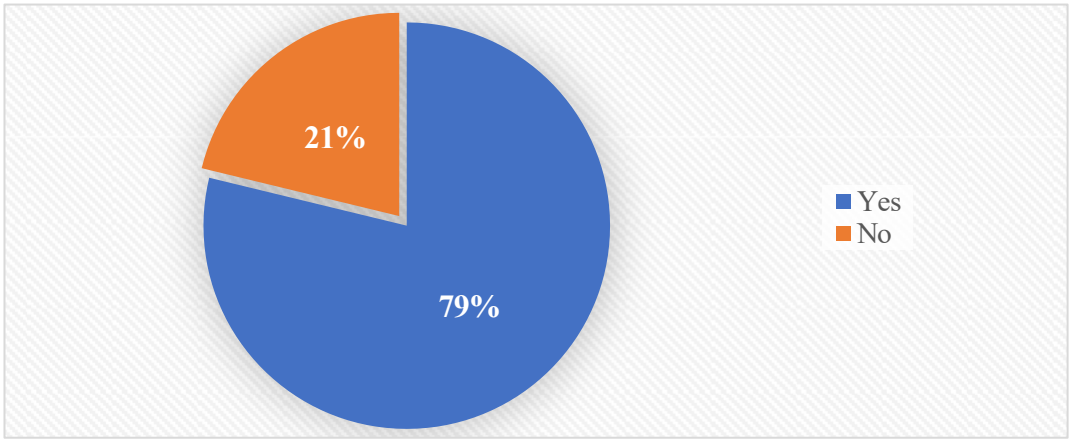


Fig. 4.17.8. Overall satisfaction of e-resources provided by Tezpur University Library

Figure 4.17.8. shows that the majority of the respondents 52 (79%) are satisfied with the e-resources provided while 14 (21%) are not satisfied with the provided e-resources.

4.17.9. Satisfaction of e-resources provided by Tripura University Library

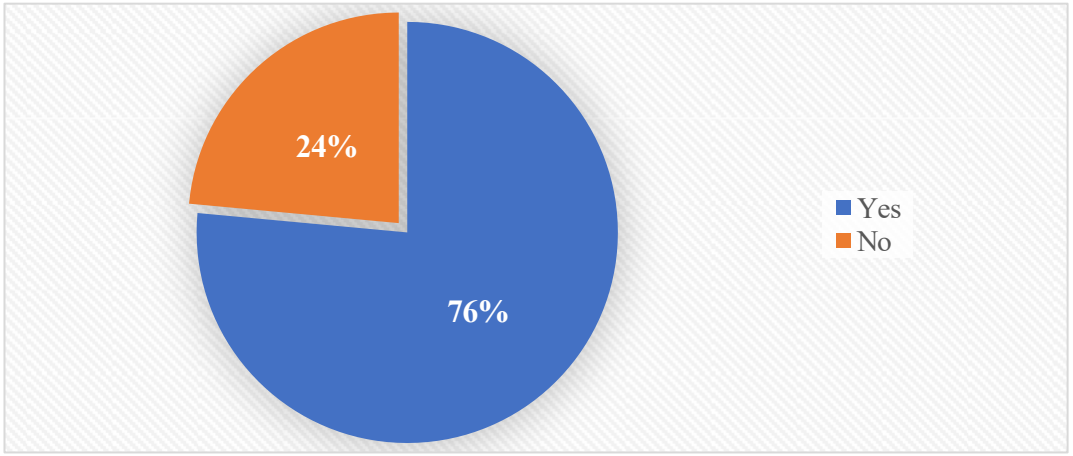


Fig. 4.17.9. Overall satisfaction of e-resources provided by Tripura University Library

Figure 4.17.9. shows that the majority of the respondents 52 (76%) are satisfied with the e-resources provided while 16 (24%) are not satisfied with the provided e-resources.

4.18. Overall understanding of PDF application in social media.

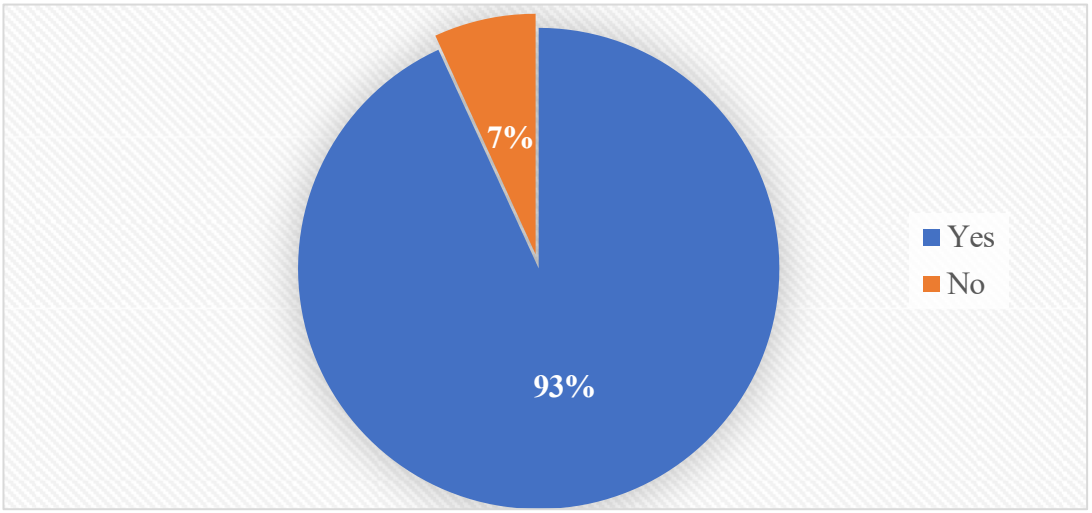


Fig. 4.18. Overall understanding of PDF application

Figure 4.18. shows that the majority of the respondents 531 (93%) have good knowledge on how to use PDF in social media applications while only 39 (7%) of the respondents do not have sufficient knowledge.

4.18.1. Assam University understanding of PDF application in social media

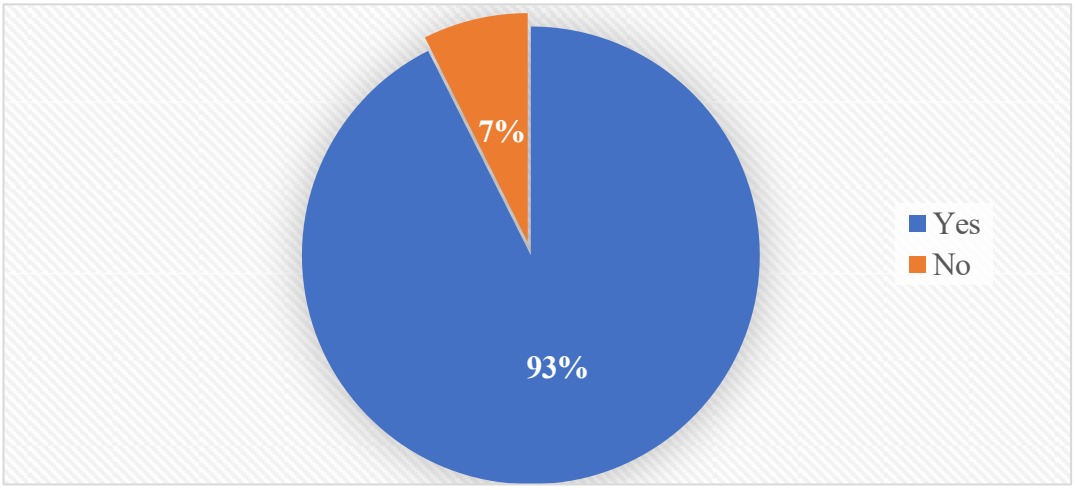


Fig. 4.18.1. Assam University understanding of PDF application in social media

Figure 4.18.1. shows that the majority of the respondents 50 (93%) have good knowledge and 4 (7%) do not have adequate knowledge on using PDF in social media applications.

4.18.2. Manipur University understanding of PDF application in social media

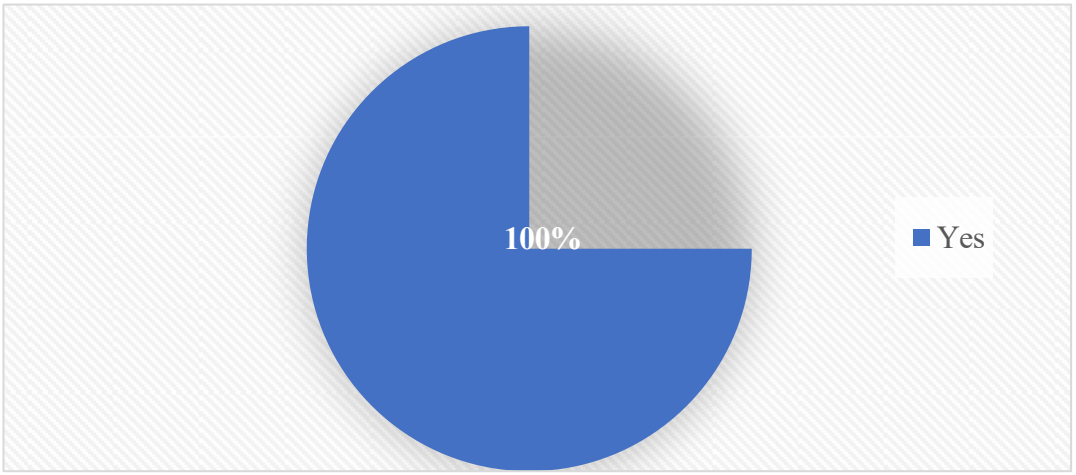


Fig. 4.18.2. Manipur University understanding of PDF application in social media

Figure 4.18.2. shows that all of the respondents 52 (100%) have good knowledge on using PDF in social media applications.

4.18.3. Mizoram University understanding of PDF application in social media

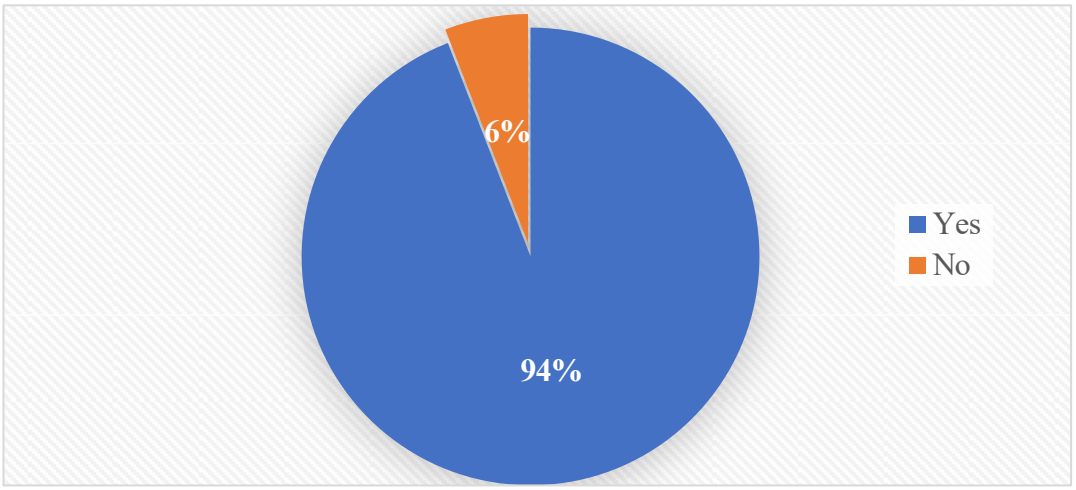


Fig. 4.18.3. Mizoram University understanding of PDF application in social media

Figure 4.18.3. shows that the majority of the respondents 64 (94%) have good knowledge on using PDF while 4 (6%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.4. Nagaland University understanding of PDF application in social media

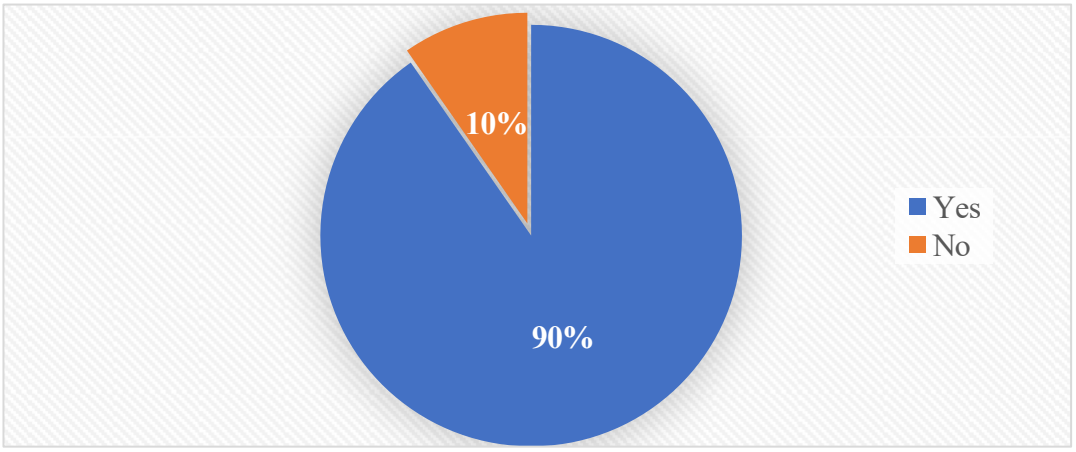


Fig. 4.18.4. Nagaland University understanding of PDF application in social media

Figure 4.18.4. shows that the majority of the respondents 56 (90%) have good knowledge on using PDF while 6 (10%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.5. North Eastern Hill University understanding of PDF application in social media

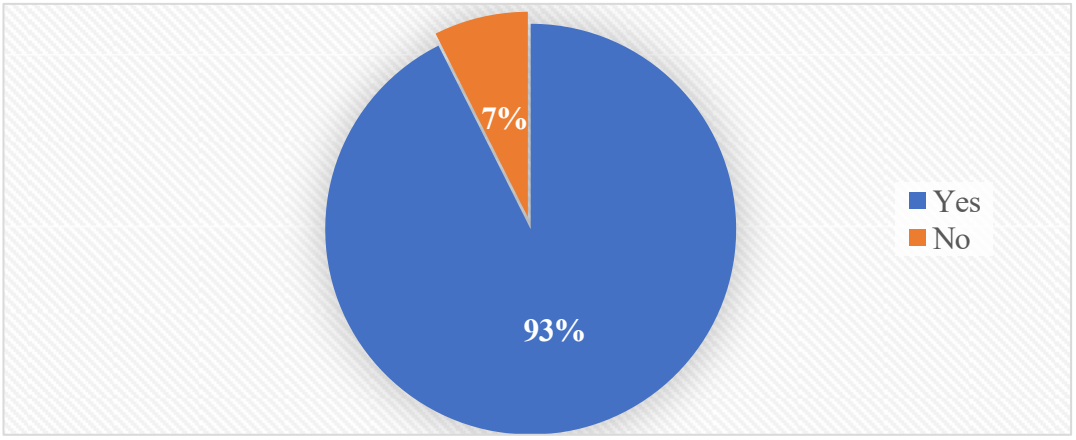


Fig. 4.18.5. NEHU understanding of PDF application in social media

Figure 4.18.5. shows that the majority of the respondents 50 (93%) have good knowledge on using PDF while 4 (7%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.6. Rajiv Gandhi University understanding of PDF application in social media

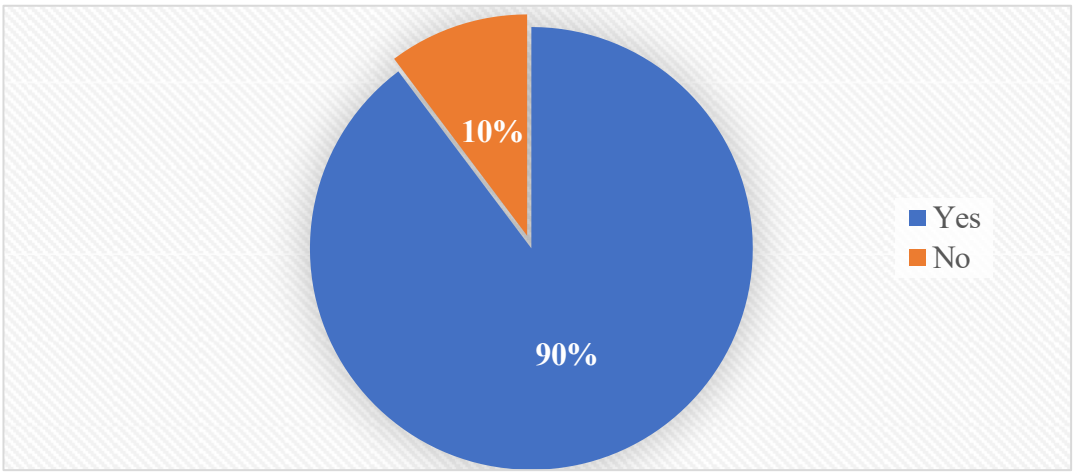


Fig. 4.18.6. Rajiv Gandhi University understanding of PDF application in social media

Figure 4.18.6. shows that the majority of the respondents 70 (90%) have good knowledge on using PDF while 8 (10%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.7. Sikkim University understanding of PDF application in social media

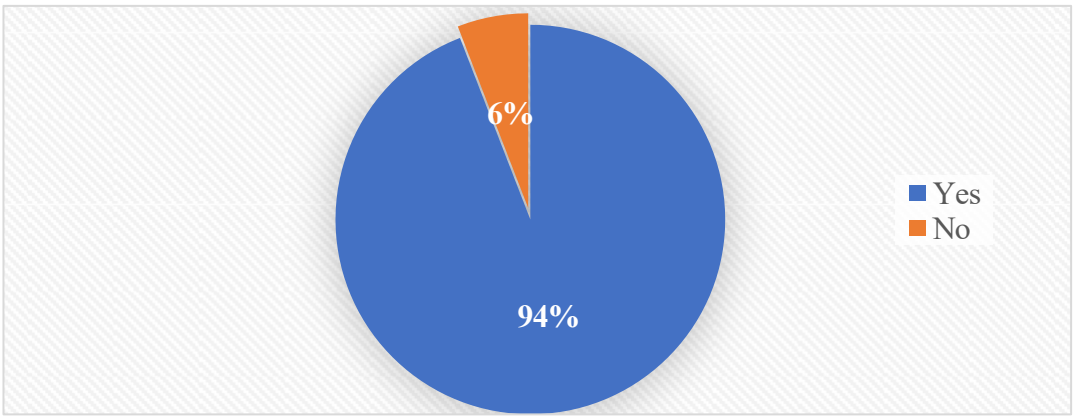


Fig. 4.18.7. Sikkim University understanding of PDF application in social media

Figure 4.18.7. shows that the majority of the respondents 64 (94%) have good knowledge on using PDF while 4 (6%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.8. Tezpur University understanding of PDF application in social media

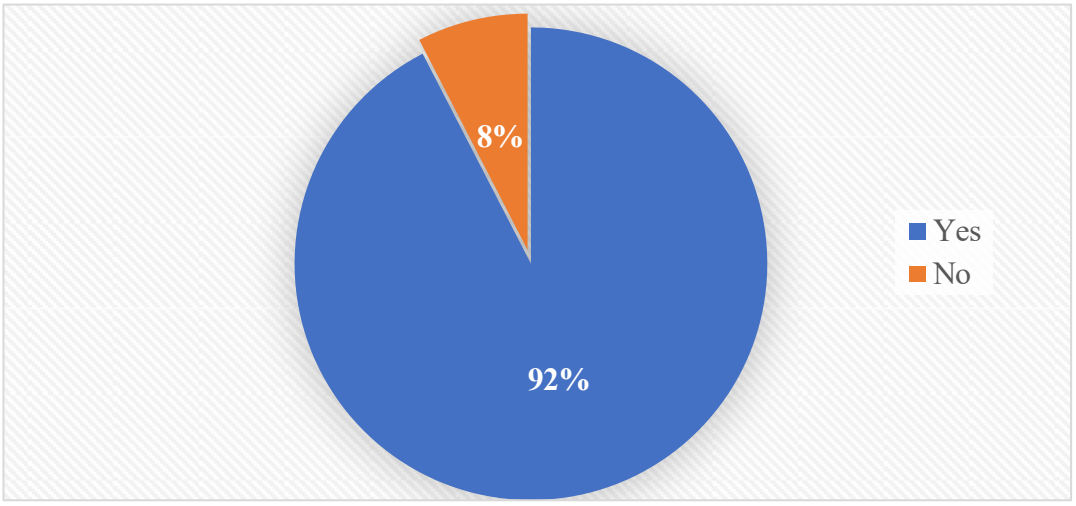


Fig. 4.18.8. Tezpur University understanding of PDF application in social media

Figure 4.18.8. shows that the majority of the respondents 61 (92%) have good knowledge on using PDF while 5 (8%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.18.9. Tripura University understanding of PDF application in social media

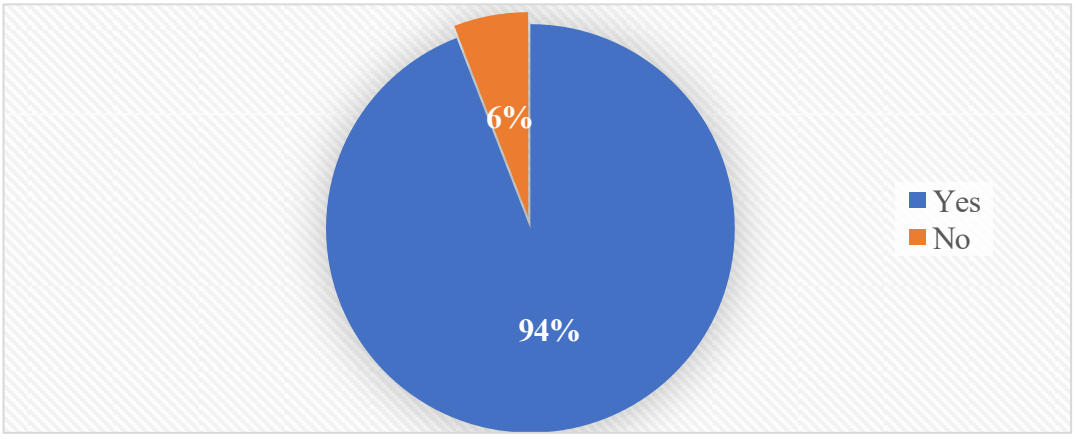


Fig. 4.18.9. Tripura University understanding of PDF application in social media

Figure 4.18.9. shows that the majority of the respondents 64 (94%) have good knowledge on using PDF while 4 (6%) of the respondents do not have adequate knowledge on using PDF in social media applications.

4.19. Overall ideal document for exchanging files

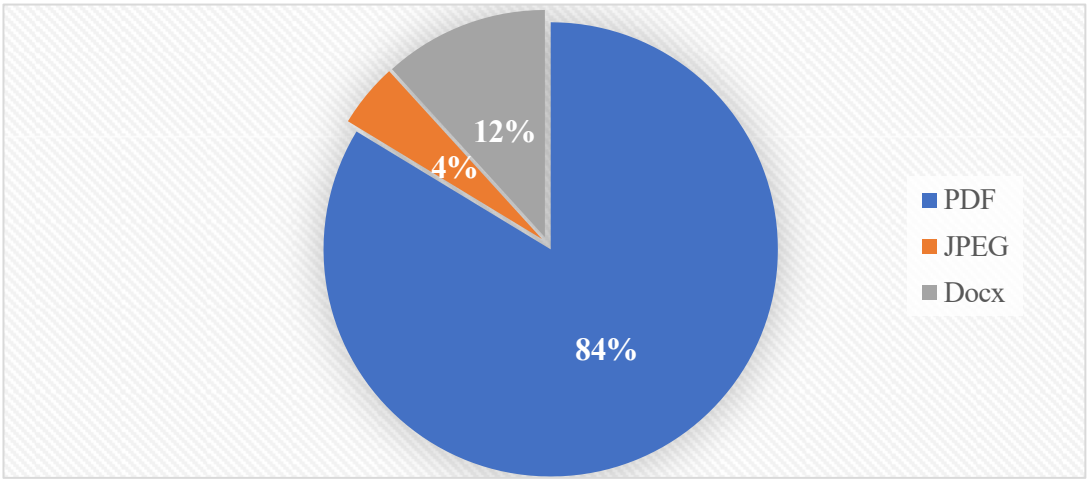


Fig. 4.19. Overall ideal document for exchanging files

From figure 4.19. we can find that the majority of the respondents 477 (84%) choose PDF as the ideal format for receiving and sending documents through social media applications, 67 (12%) of the respondents prefer Docx (MS word format) and 26 (4%) of the respondents prefer jpeg (picture format).

4.19.1. Ideal document for exchanging files in Assam University

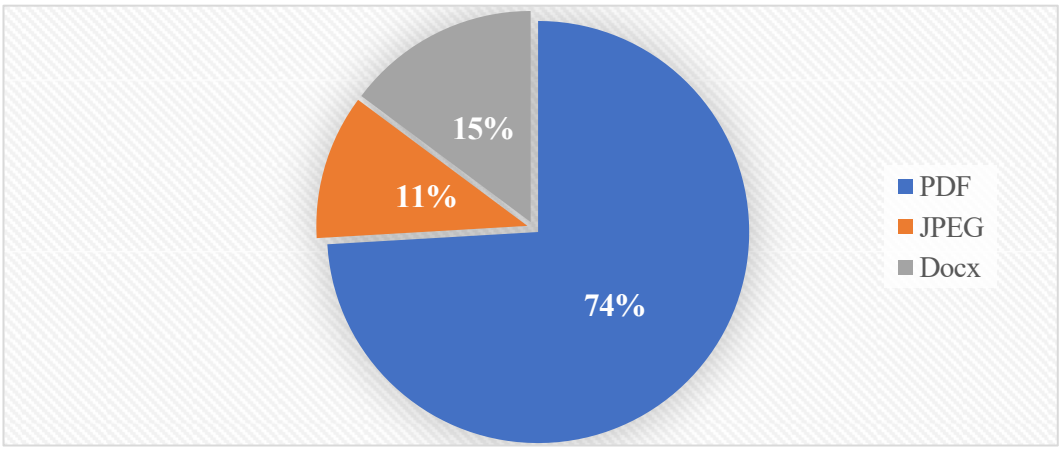


Fig. 4.19.1. Ideal document for exchanging files in Assam University

Figure 4.19.1. shows that the majority of the respondents 40 (74%) prefer using PDF while 8 (15%) of the respondents choose docx. 6 (11%) of the respondents prefer JPEG.

4.19.2. Ideal document for exchanging files in Manipur University

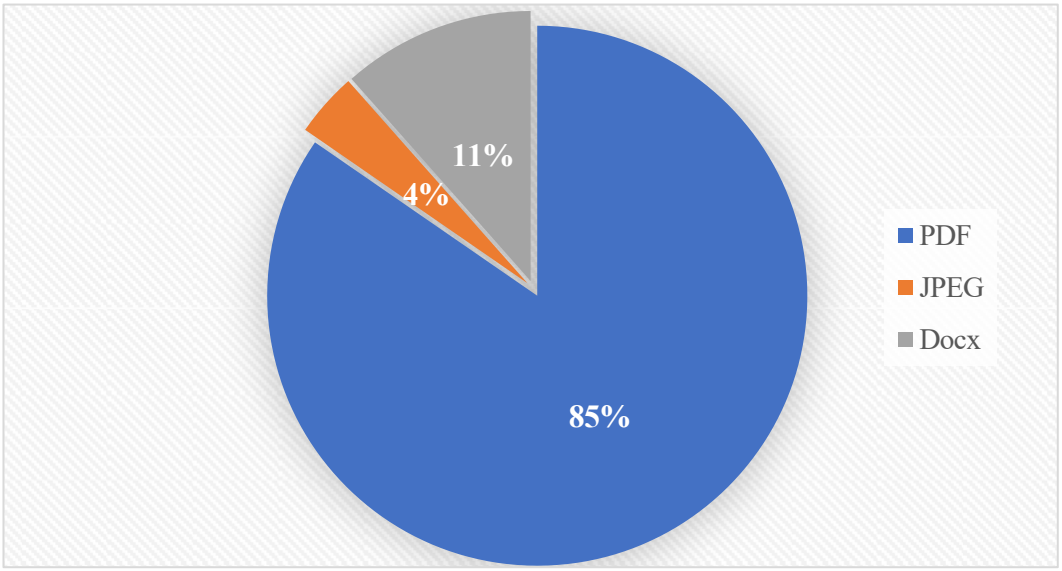


Fig. 4.19.2. Ideal document for exchanging files in Manipur University

Figure 5.19.2. shows that the majority of the respondents 44 (85%) prefer PDF while 6 (11%) of the respondents choose docx and 2 (4%) prefer JPEG.

4.19.3. Ideal document for exchanging files in Mizoram University

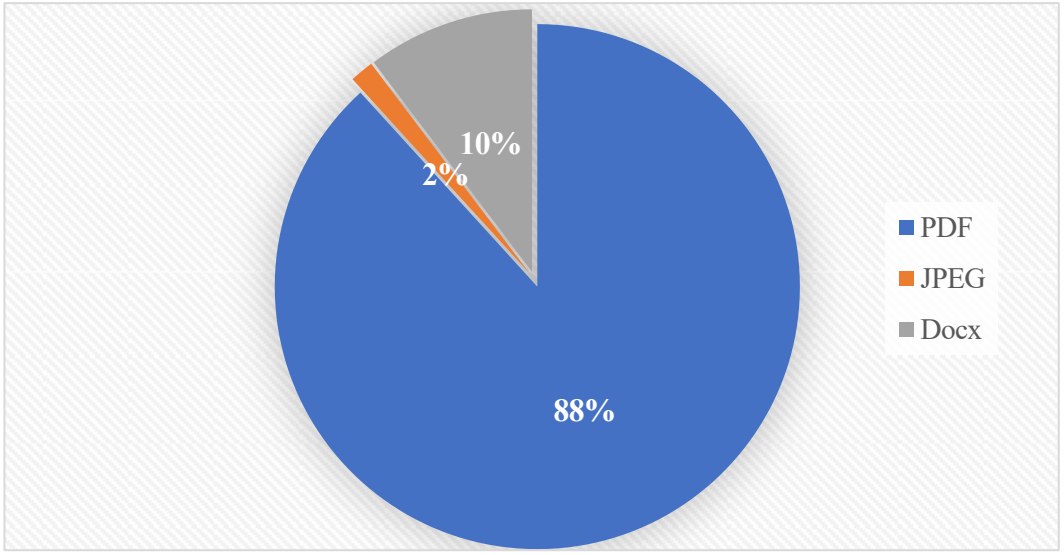


Fig. 4.19.3. Ideal document for exchanging files in Mizoram University

Figure 4.19.3. shows that the majority of the respondents 60 (88%) prefer PDF while 7 (10%) of the respondents choose docx and 1 (2%) prefer JPEG.

4.19.4. Ideal document for exchanging files in Nagaland University

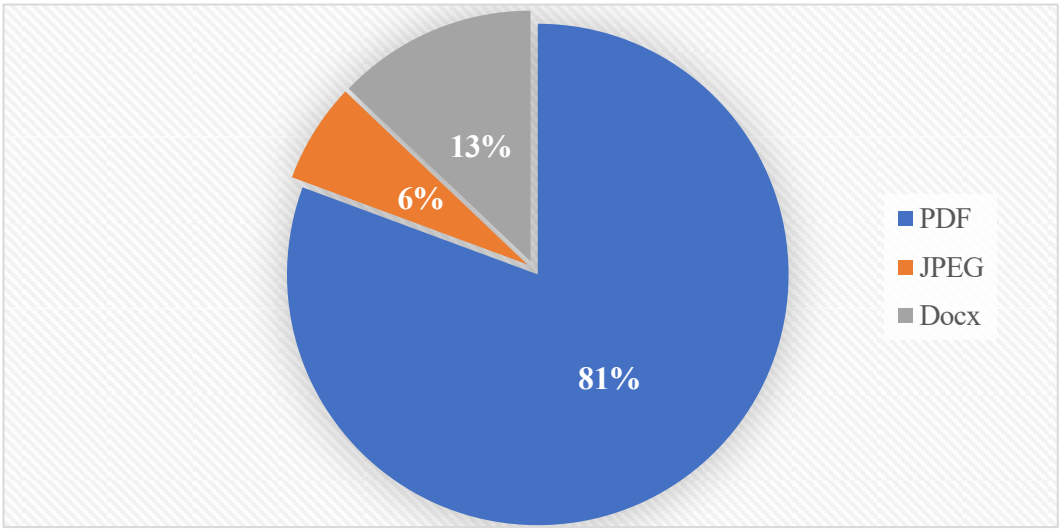


Fig. 4.19.4. Ideal document for exchanging files in Nagaland University

Figure 4.19.4. shows that the majority of the respondents 50 (81%) prefer PDF while 8 (13%) of the respondents choose docx and 4 (6%) prefer JPEG.

4.19.5. Ideal document for exchanging files in North Eastern Hill University

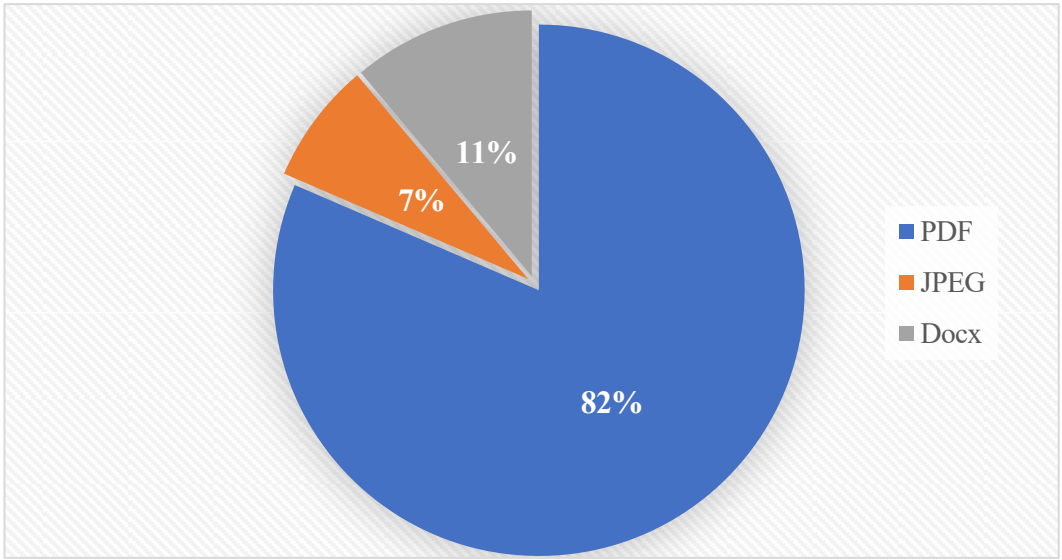


Fig. 4.19.5. Ideal document for exchanging files in NEHU

Figure 4.19.5. shows that the majority of the respondents 44 (82%) prefer PDF while 6 (11%) of the respondents choose docx and 4 (7%) prefer JPEG.

4.19.6. Ideal document for exchanging files in Rajiv Gandhi University

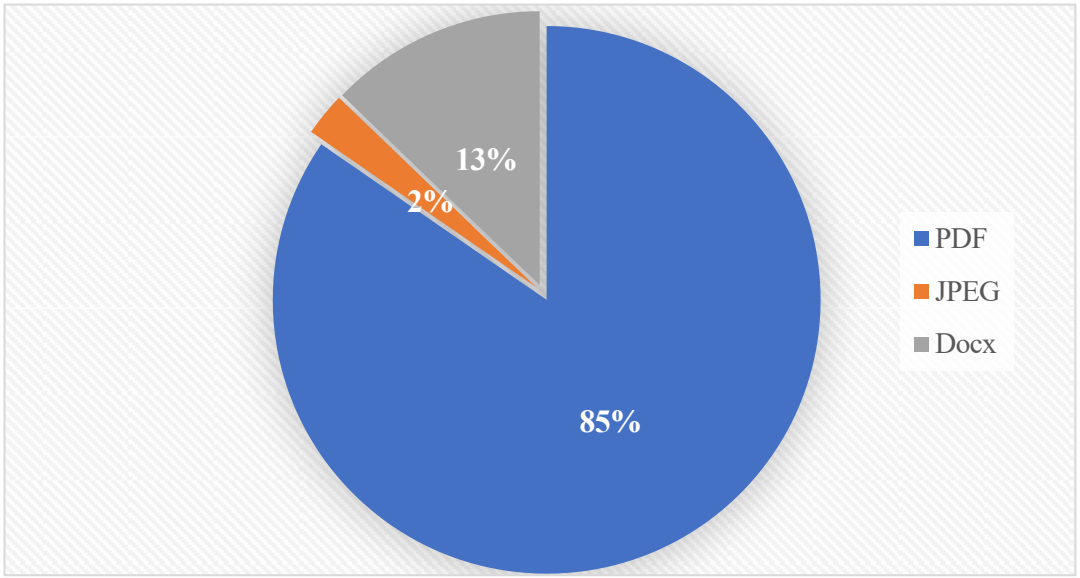


Fig. 4.19.6. Ideal document for exchanging files in Rajiv Gandhi University

Figure 4.19.6. shows that the majority of the respondents 66 (85%) prefer PDF while 10 (13%) of the respondents choose docx and 2 (2%) prefer JPEG.

4.19.7. Ideal document for exchanging files in Sikkim University

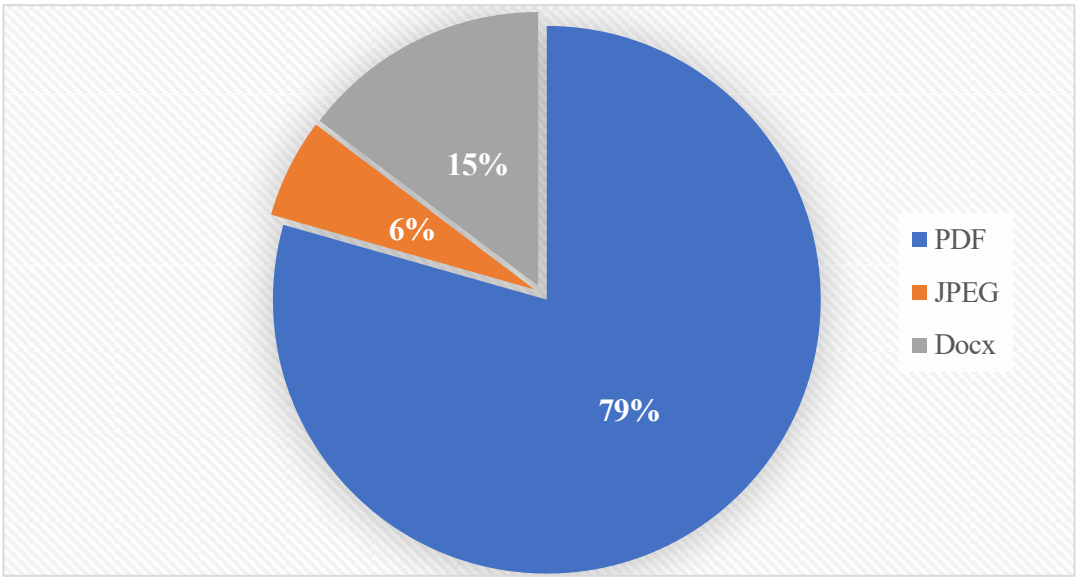


Fig. 4.19.7. Ideal document for exchanging files in Sikkim University

Figure 4.19.7. shows that the majority of the respondents 54 (79%) prefer PDF while 10 (15%) of the respondents choose docx and 4 (6%) prefer JPEG.

4.19.8. Ideal document for exchanging files in Tezpur University

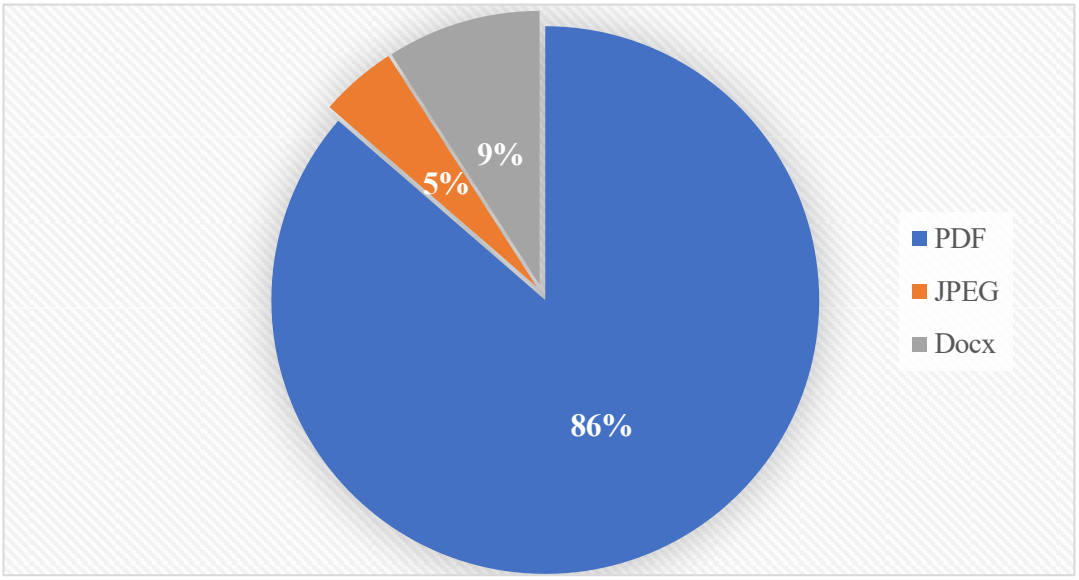


Fig. 4.19.8. Ideal document for exchanging files in Tezpur University

Figure 4.19.8. shows that the majority of the respondents 57 (86%) prefer PDF while 6 (9%) of the respondents choose docx and 3 (5%) prefer JPEG.

4.19.9. Ideal document for exchanging files in Tripura University

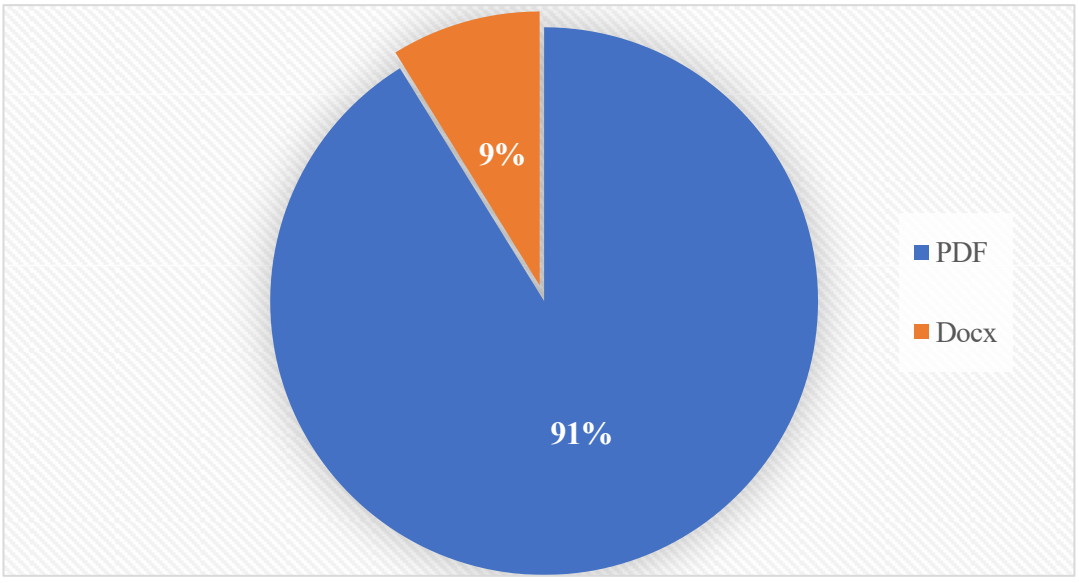


Fig. 4.19.9. Ideal document for exchanging files in Tripura University

Figure 4.19.9. shows that the majority of the respondents 62 (91%) prefer PDF while 6 (9%) of the respondents choose docx.

4.20. Overall opinion on level of distraction caused by social media during educational use

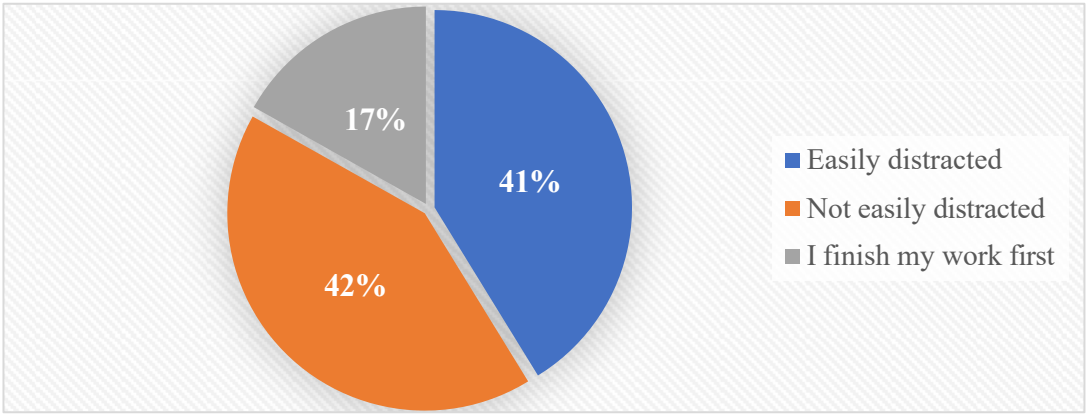


Fig. 4.20. Overall distraction level

In figure 5.20., 239 (42%) of the respondent's state that they are not easily distracted by other social media applications while using it for educational purposes however, a close 235 (41%) of the respondent's state that they are easily distracted by other social media applications. Only 96 (17%) of the respondents finish their work first before opening other social media applications.

4.20.1. Level of distraction caused by social media during educational use in Assam University

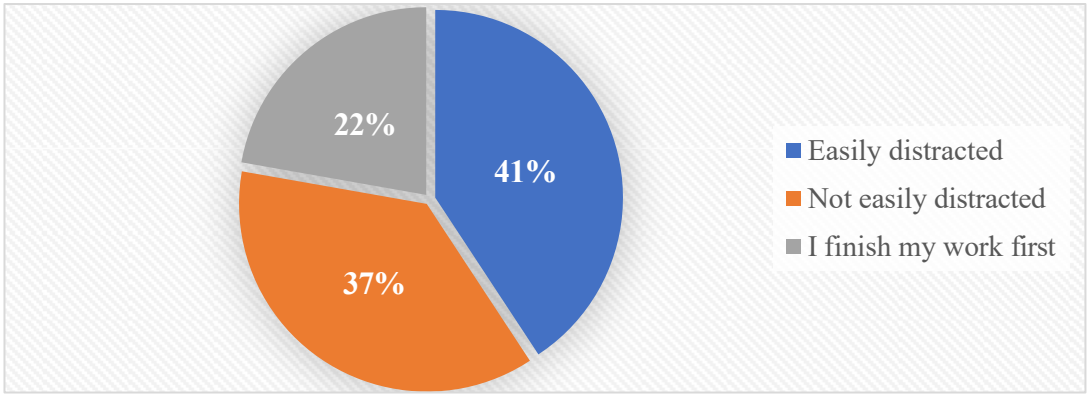


Fig. 4.20.1. Distraction level of social media in Assam University

Figure 4.20.1. shows that the majority of the respondents 22 (41%) are easily distracted by social media while 20 (37%) are not easily distracted and only 12 (22%) finish their work first before using social media applications for leisure.

4.20.2. Level of distraction caused by social media during educational use in Manipur University

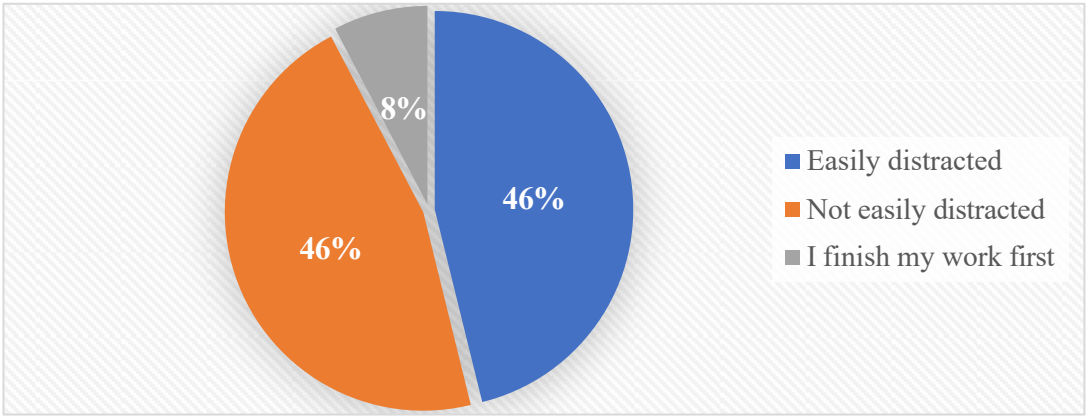


Fig. 4.20.2. Distraction level of social media in Manipur University

Figure 4.22.2. shows that the respondents 24 (46%) are easily distracted by social media while 24 (46%) are not easily distracted and only 4 (8%) finish their work first before using social media applications for leisure.

4.20.3. Level of distraction caused by social media during educational use in Mizoram University

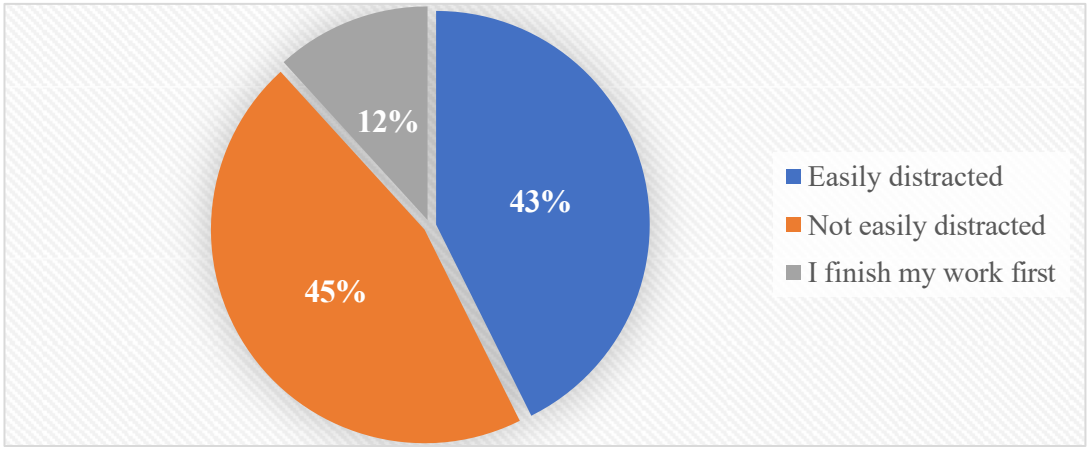


Fig. 4.20.3. Distraction level of social media in Mizoram University

Figure 4.20.3. shows that the majority of the respondents 31 (45%) are not easily distracted by social media while 29 (43%) are easily distracted and only 8 (12%) finish their work first before using social media applications for leisure.

4.20.4. Level of distraction caused by social media during educational use in Nagaland University

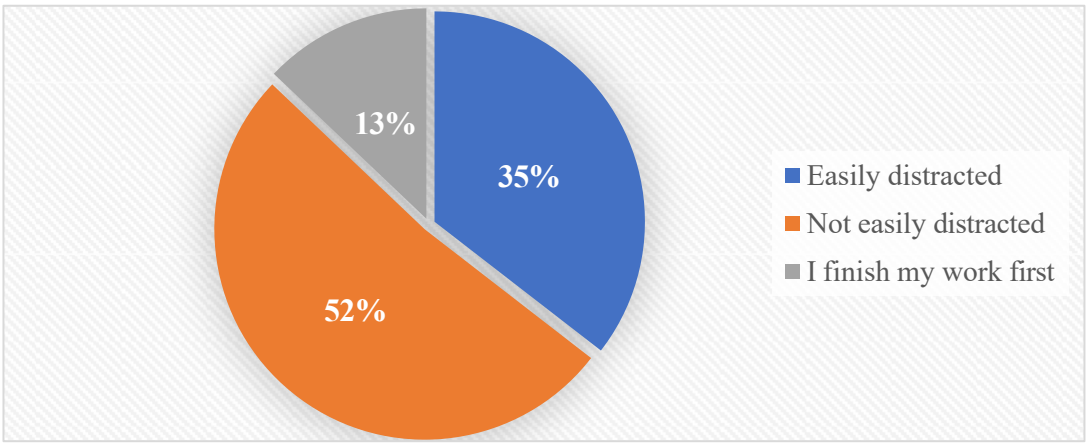


Fig. 4.20.4. Distraction level of social media in Nagaland University

Figure 4.20.4. shows that the majority of the respondents 32 (52%) are not easily distracted by social media while 22 (35%) are easily distracted and only 8 (13%) finish their work first before using social media applications for leisure.

4.20.5. Level of distraction caused by social media during educational use in North Eastern Hill University

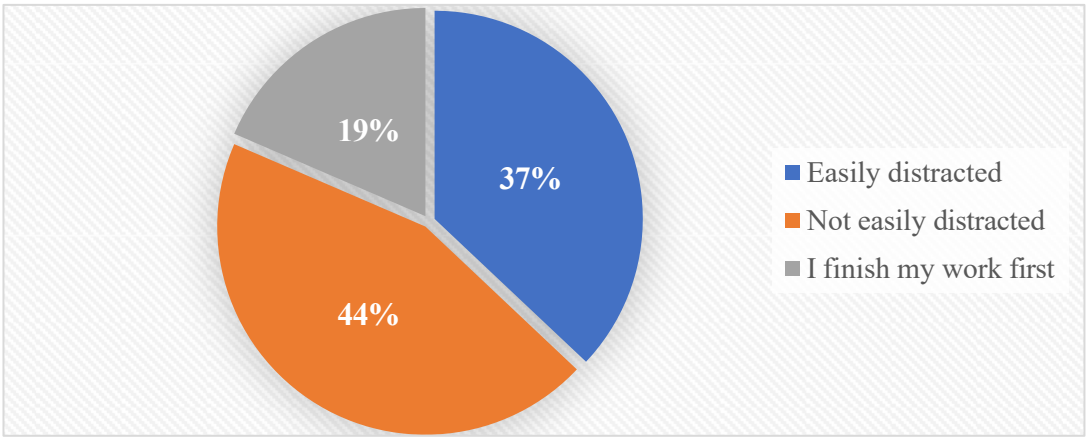


Fig. 4.20.5. Distraction level of social media in NEHU

Figure 4.20.5. shows that the majority of the respondents 24 (44%) are not easily distracted by social media while 20 (37%) are easily distracted and only 10 (19%) finish their work first before using social media applications for leisure.

4.20.6. Level of distraction caused by social media during educational use in Rajiv Gandhi University

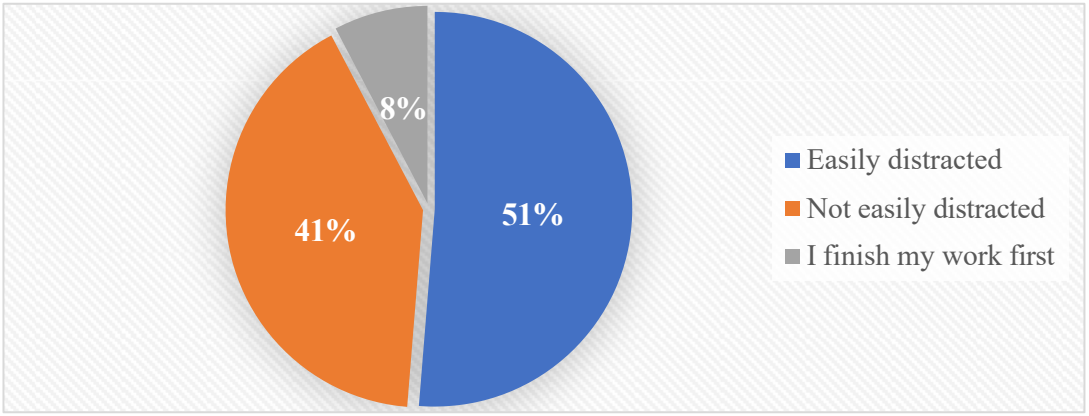


Fig. 4.20.6. Distraction level of social media in Rajiv Gandhi University

Figure 4.20.6. shows that the majority of the respondents 40 (51%) are easily distracted by social media while 32 (41%) are not easily distracted and only 6 (8%) finish their work first before using social media applications for leisure.

4.20.7. Level of distraction caused by social media during educational use in Sikkim University

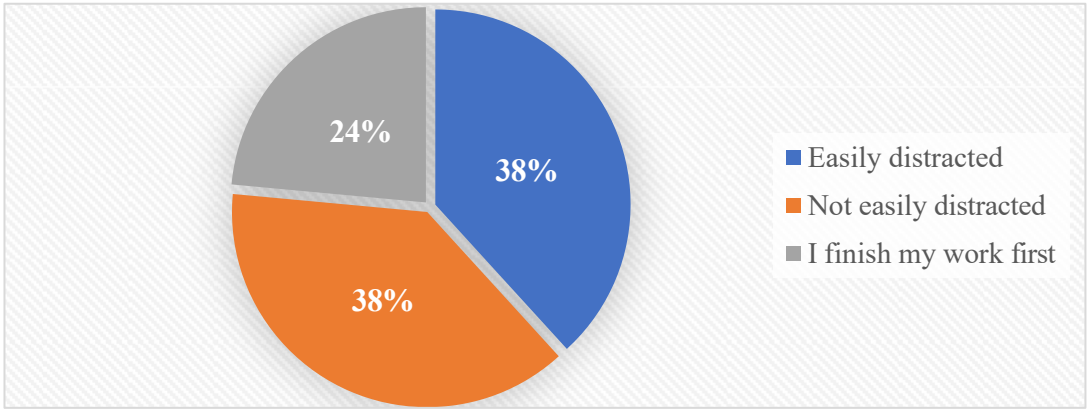


Fig. 4.20.7. Distraction level of social media in Sikkim University

Figure 4.20.7. shows that the respondents 26 (38%) are easily distracted by social media while 26 (38%) are not easily distracted and only 16 (24%) finish their work first before using social media applications for leisure.

4.20.8. Level of distraction caused by social media during educational use in Tezpur University

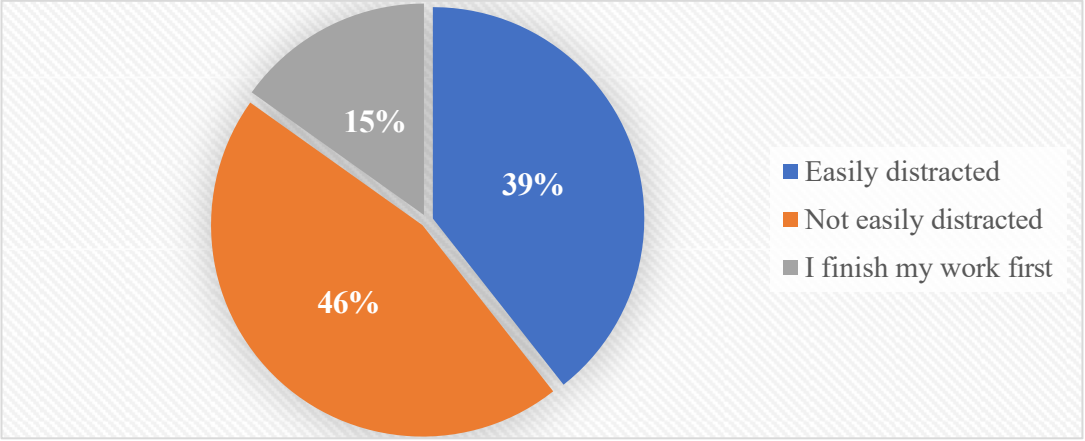


Fig. 4.20.8. Distraction level of social media in Tezpur University

Figure 4.20.8. shows that the majority of the respondents 30 (46%) are not easily distracted by social media while 26 (39%) are easily distracted and only 10 (15%) finish their work first before using social media applications for leisure.

4.20.9. Level of distraction caused by social media during educational use in Tripura University

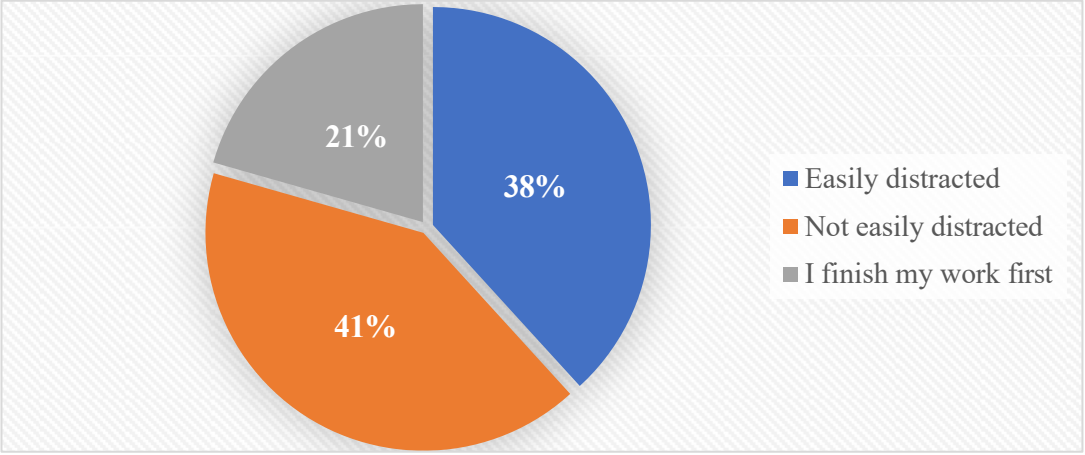


Fig. 4.20.9. Distraction level of social media in Tripura University

Figure 4.20.9. shows that the majority of the respondents 28 (41%) are not easily distracted by social media while 26 (38%) are easily distracted and 14 (21%) finish their work first before using social media applications for leisure.

4.21. Overall difficulty of learning new social media applications

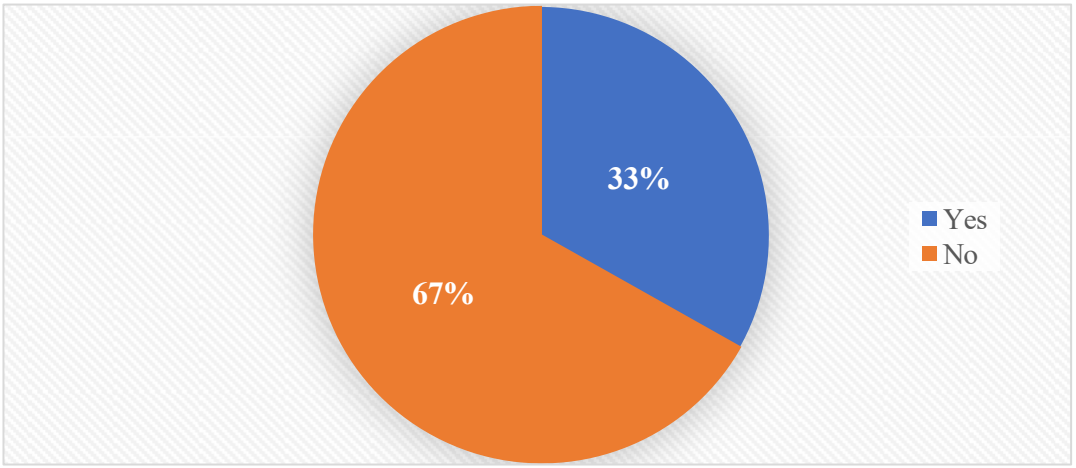


Fig. 4.21. Overall difficulty of learning new social media applications

From figure 4.21. we can understand that the majority of the respondents 381 (67%) do not have a hard time adapting, adjusting and learning new social media applications while 189 (33%) of the respondents have a hard time adapting, adjusting and learning the changes in other social media applications.

4.21.1. Difficulty of learning new social media applications in Assam University

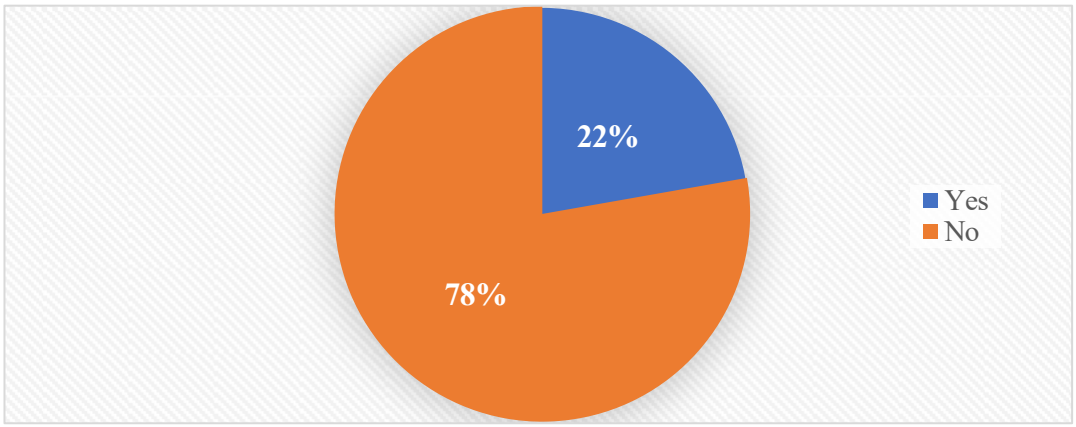


Fig. 4.21.1. Difficulty of learning new social media applications in Assam University

Figure 4.21.1. shows that the majority of the respondents 42 (78%) do not have a hard time learning new social media applications while 12 (22%) of the respondents find it difficult to learn new social media applications.

4.21.2. Difficulty of learning new social media applications in Manipur University

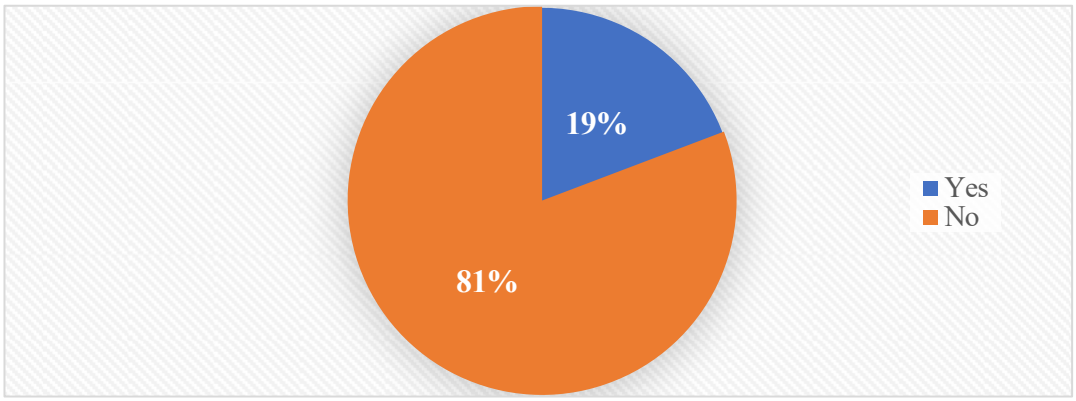


Fig. 4.21.2. Difficulty of learning new social media applications in Manipur University

Figure 4.21.2. shows that the majority of the respondents 42 (81%) do not have a hard time learning new social media applications while 10 (19%) of the respondents find it difficult to learn new social media applications.

4.21.3. Difficulty of learning new social media applications in Mizoram University

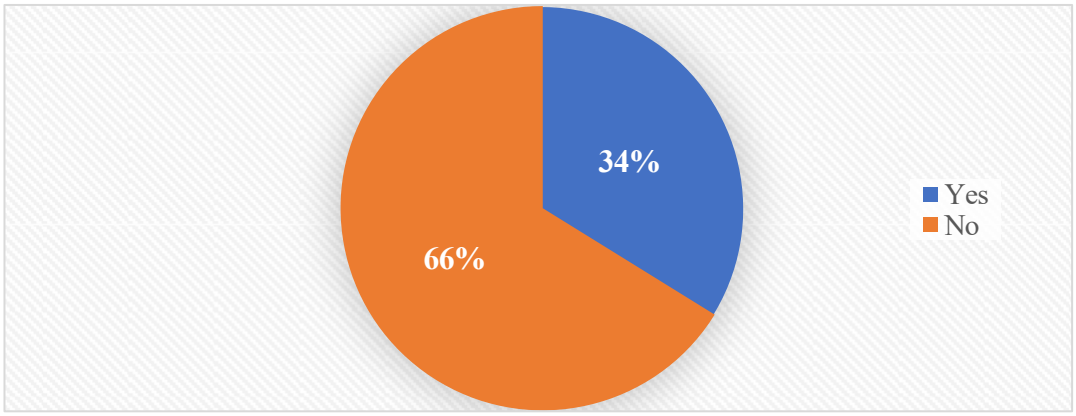


Fig. 4.21.3. Difficulty of learning new social media applications in Mizoram University

Figure 4.23.3. shows that the majority of the respondents 45 (66%) do not have a hard time learning new social media applications while 23 (34%) of the respondents find it difficult to learn new social media applications.

4.21.4. Difficulty of learning new social media applications in Nagaland University

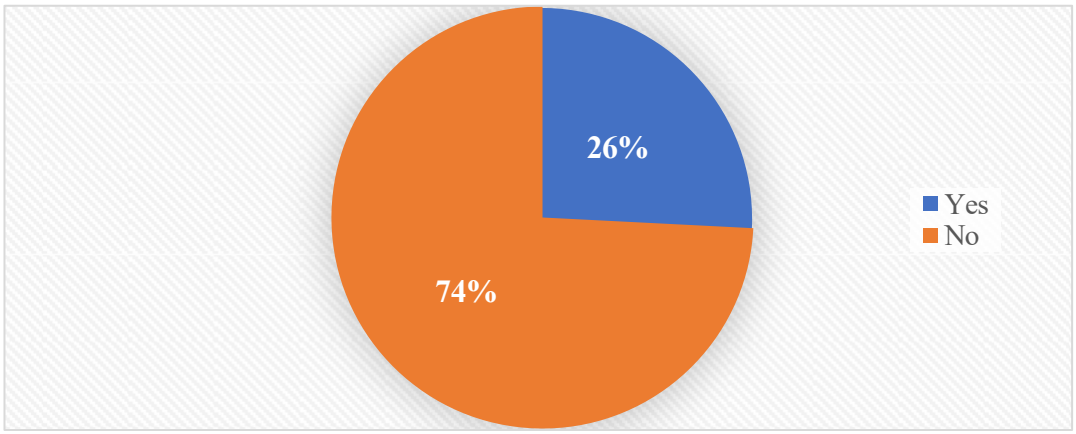


Fig. 4.21.4. Difficulty of learning new social media applications in Nagaland University

Figure 4.21.4. shows that the majority of the respondents 46 (74%) do not have a hard time learning new social media applications while 16 (26%) of the respondents find it difficult to learn new social media applications.

4.21.5. Difficulty of learning new social media applications in North Eastern Hill University

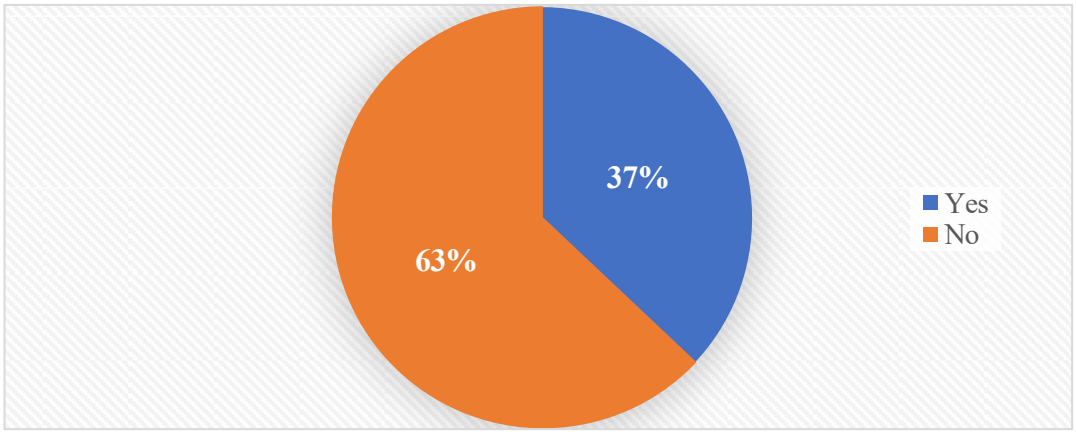


Fig. 4.21.5. Difficulty of learning new social media applications in NEHU

Figure 4.21.5. shows that the majority of the respondents 34 (63%) do not have a hard time learning new social media applications while 20 (37%) of the respondents find it difficult to learn new social media applications.

4.21.6. Difficulty of learning new social media applications in Rajiv Gandhi University

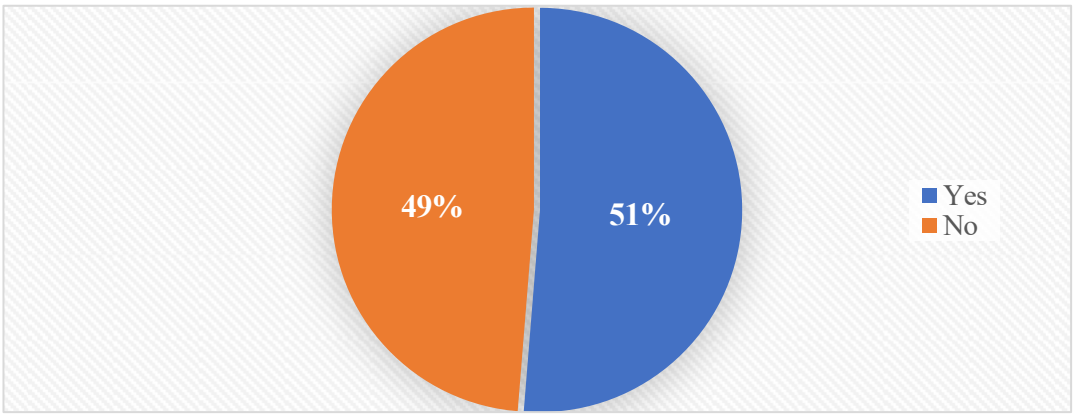


Fig. 4.21.6. Difficulty of learning new social media applications in Rajiv Gandhi University

Figure 4.21.6. shows that the majority of the respondents 40 (51%) find it difficult to learn new social media applications while 38 (49%) of the respondents do not have a hard time learning new social media applications.

4.21.7. Difficulty of learning new social media applications in Sikkim University

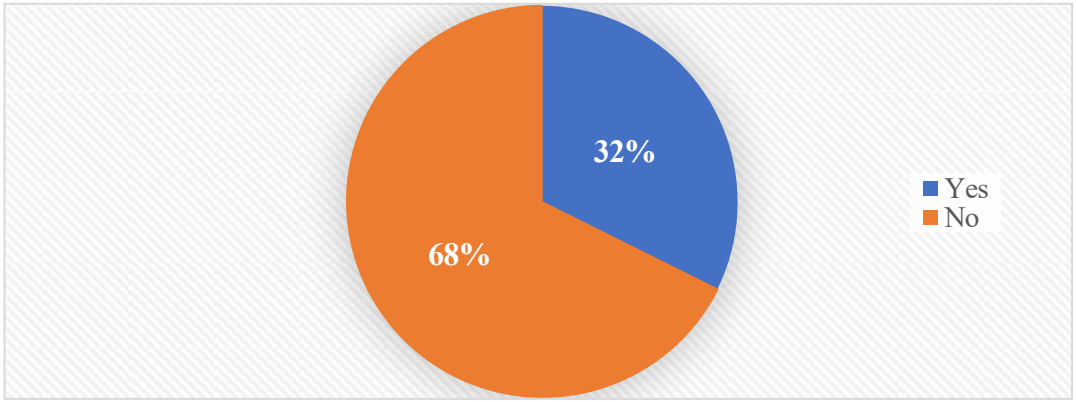


Fig. 4.21.7. Difficulty of learning new social media applications in Sikkim University

Figure 4.21.7. shows that the majority of the respondents 46 (68%) do not have a hard time learning new social media applications while 22 (32%) of the respondents find it difficult to learn new social media applications.

4.21.8. Difficulty of learning new social media applications in Tezpur University

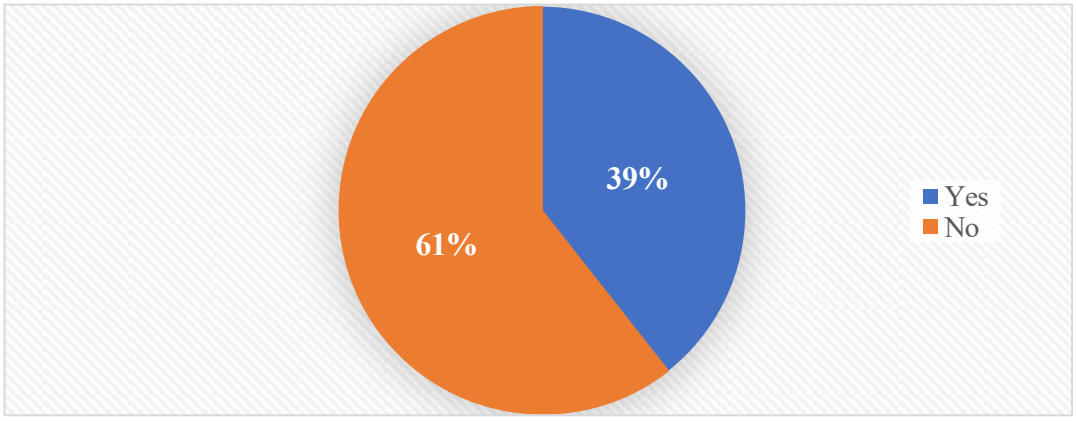


Fig. 4.21.8. Difficulty of learning new social media applications in Tezpur University

Figure 4.21.8. shows that the majority of the respondents 40 (61%) do not have a hard time learning new social media applications while 26 (39%) of the respondents find it difficult to learn new social media applications.

4.21.9. Difficulty of learning new social media applications in Tripura University

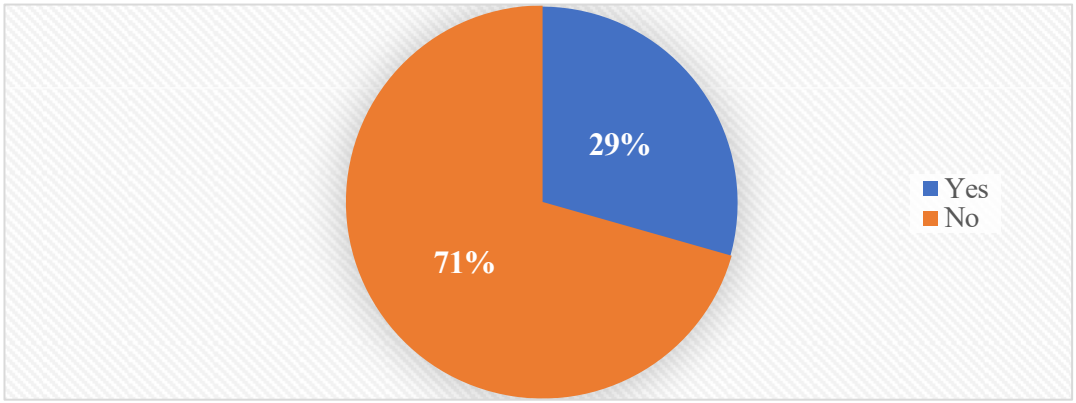


Fig. 4.21.9. Difficulty of learning new social media applications in Tripura University

Figure 4.21.9. shows that the majority of the respondents 48 (71%) do not have a hard time learning new social media applications while 20 (29%) of the respondents find it difficult to learn new social media applications.

4.22. Overall reliance on book-based documents

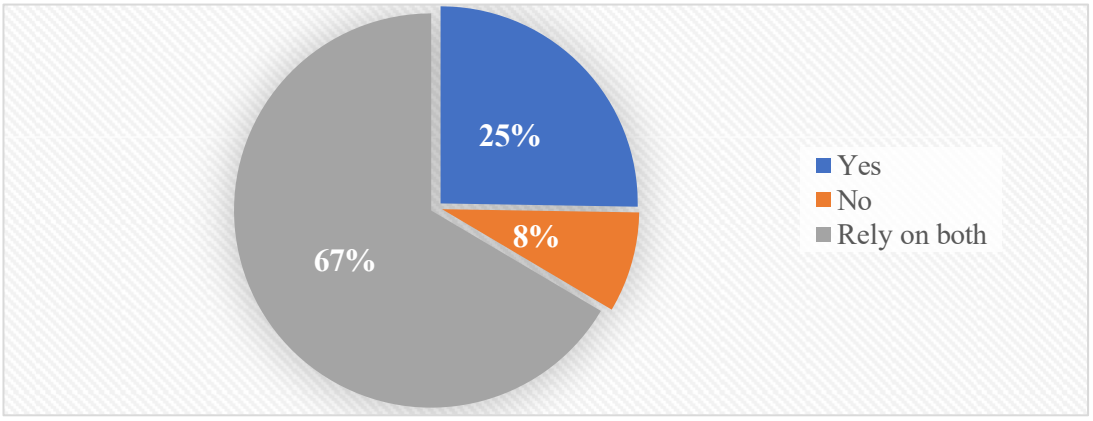


Fig. 4.22. Overall reliance on book-based documents

Figure 4.22. shows that even though social media applications have changed the way in which we acquire information 144 (25%) of the respondents solely rely on book-based documents for their educational needs, while 47 (8%) of the respondents rely purely on digital media for gathering knowledge and information. The majority of the respondents 379 (67%) rely on both book and digital documents for acquiring their educational needs.

4.22.1. Reliance on book-based documents in Assam University

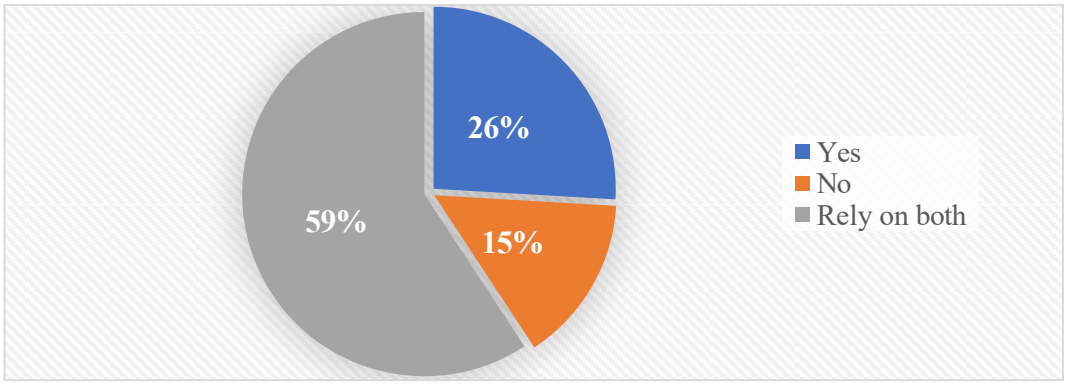


Fig. 4.22.1. Assam University reliance on book-based documents

Figure 4.22.1. shows that the majority of the respondents 32 (59%) rely on both book based and digital documents for education while 14 (26%) of the respondents rely on only book-based documents and 8 (15%) of the respondents do not rely on book-based documents.

4.22.2. Reliance on book-based documents in Manipur University

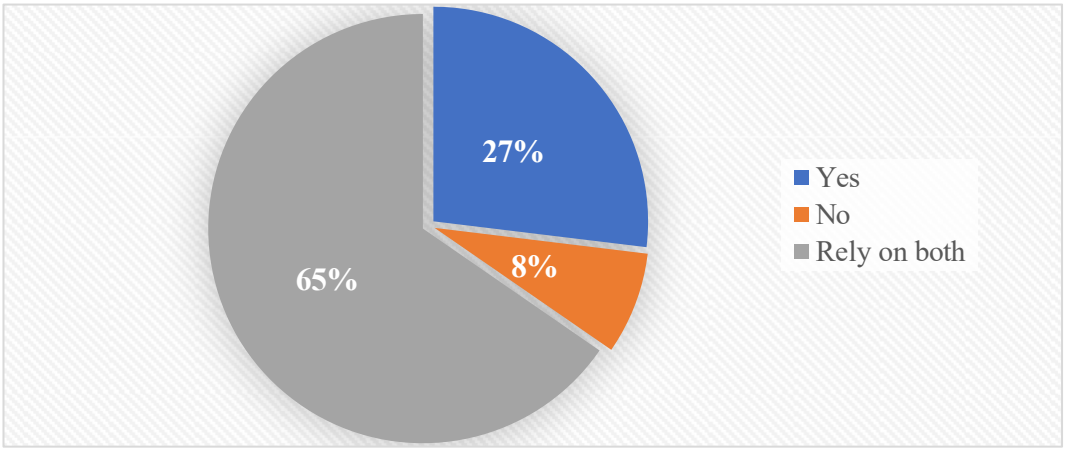


Fig. 4.22.2. Manipur University reliance on book-based documents

Figure 4.22.2. shows that the majority of the respondents 34 (65%) rely on both book based and digital documents for education while 14 (27%) of the respondents rely on only book-based documents and 4 (8%) of the respondents do not rely on book-based documents.

4.22.3. Reliance on book-based documents in Mizoram University

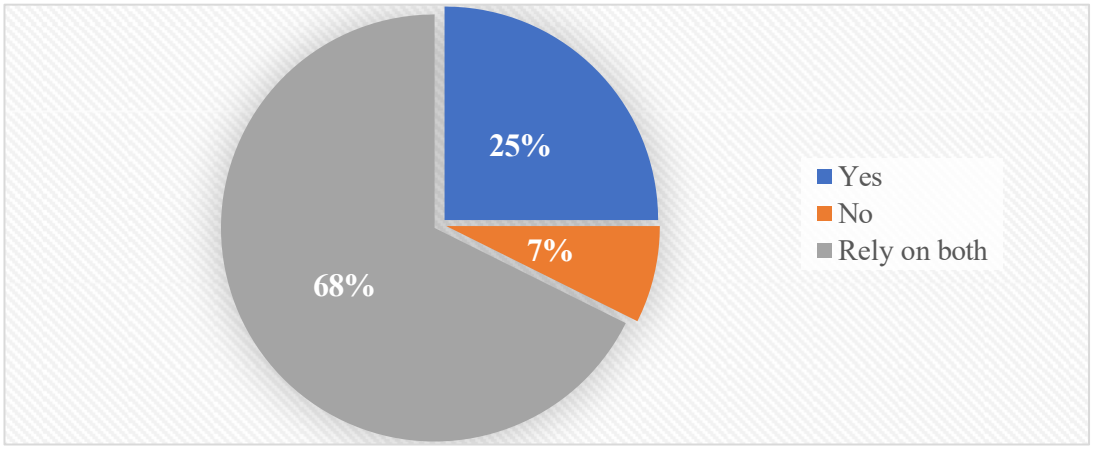


Fig. 4.22.3. Mizoram University reliance on book-based documents

Figure 4.22.3. shows that the majority of the respondents 46 (68%) rely on both book based and digital documents for education while 17 (25%) of the respondents rely on only book-based documents and 5 (7%) of the respondents do not rely on book-based documents.

4.22.4. Reliance on book-based documents in Nagaland University

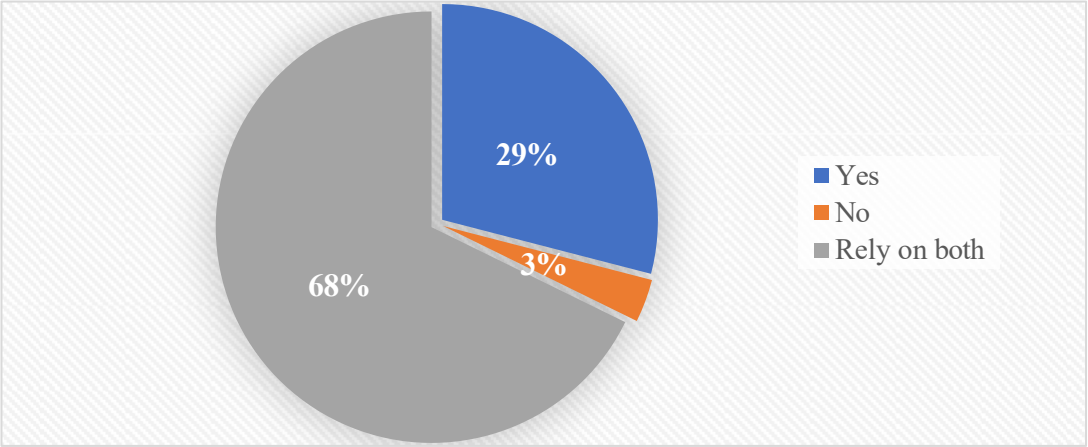


Fig. 4.22.4. Nagaland University reliance on book-based documents

Figure 4.22.4. shows that the majority of the respondents 42 (68%) rely on both book based and digital documents for education while 18 (29%) of the respondents rely on only book-based documents and 2 (3%) of the respondents do not rely on book-based documents.

4.22.5. Reliance on book-based documents in North Eastern Hill University

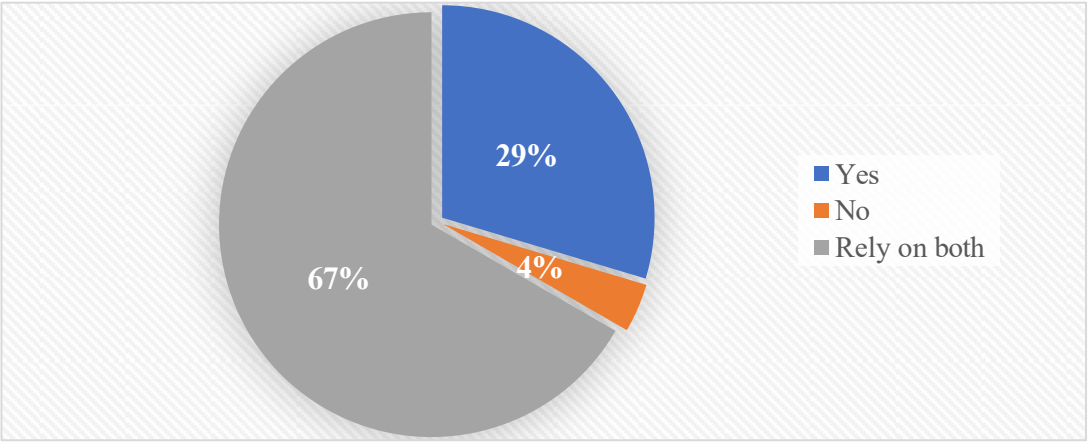


Fig. 4.22.5. NEHU reliance on book-based documents

Figure 4.22.5. shows that the majority of the respondents 36 (67%) rely on both book based and digital documents for education while 16 (29%) of the respondents rely on only book-based documents and 2 (4%) of the respondents do not rely on book-based documents.

4.22.6. Reliance on book-based documents in Rajiv Gandhi University

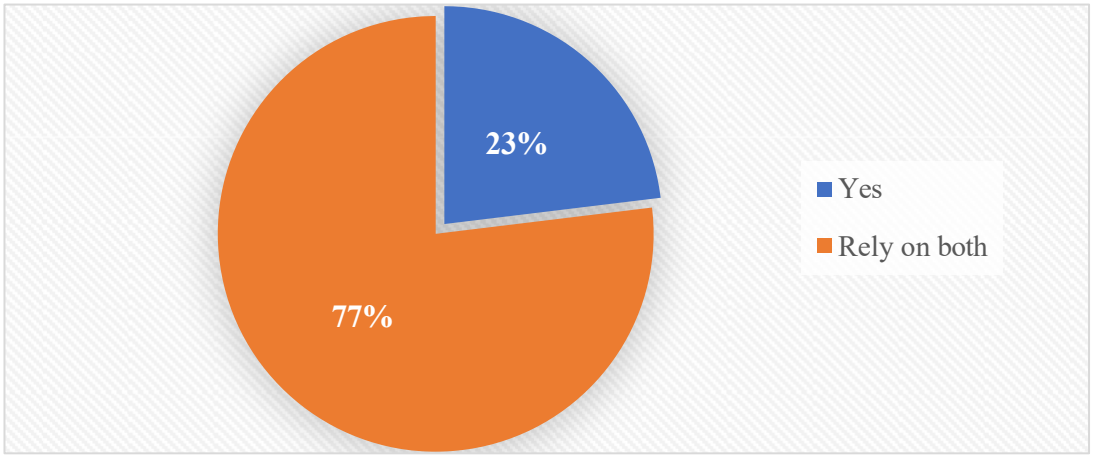


Fig. 4.22.6. Rajiv Gandhi University reliance on book-based documents

Figure 4.22.6. shows that the majority of the respondents 60 (77%) rely on both book based and digital documents for education while 18 (23%) of the respondents rely on only book-based documents.

4.22.7. Reliance on book-based documents in Sikkim University

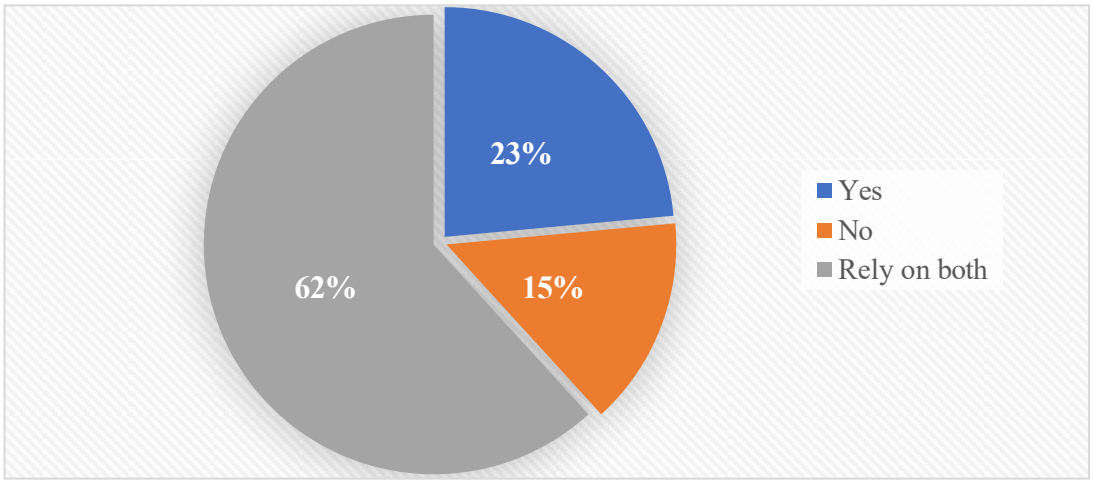


Fig. 4.22.7. Sikkim University reliance on book-based documents

Figure 4.22.7. shows that the majority of the respondents 42 (62%) rely on both book based and digital documents for education while 16 (23%) of the respondents rely on only book-based documents and 10 (15%) of the respondents do not rely on book-based documents.

4.22.8. Reliance on book-based documents in Tezpur University

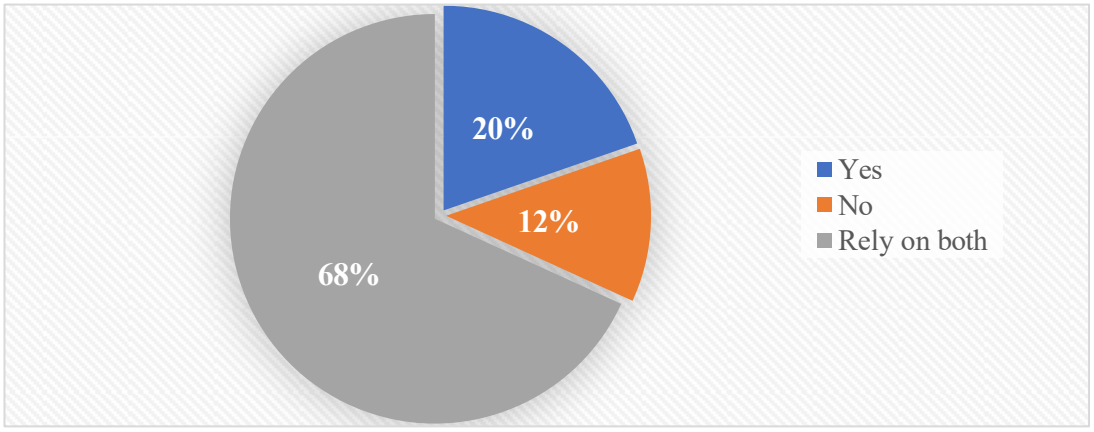


Fig. 4.22.8. Tezpur University reliance on book-based documents

Figure 4.22.8. shows that the majority of the respondents 45 (68%) rely on both book based and digital documents for education while 13 (20%) of the respondents rely on only book-based documents and 8 (12%) of the respondents do not rely on book-based documents.

4.22.9. Reliance on book-based documents in Tripura University

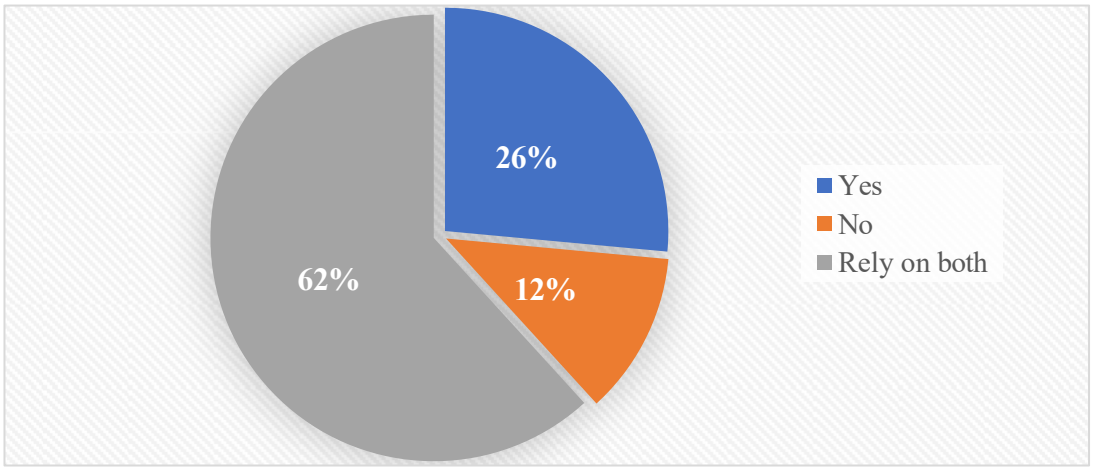


Fig. 4.22.9. Tripura University reliance on book-based documents

Figure 4.22.9. shows that the majority of the respondents 42 (62%) rely on both book based and digital documents for education while 18 (26%) of the respondents rely on only book-based documents and 8 (12%) of the respondents do not rely on book-based documents.

4.23. Overall feedback on the guidance of social media provided by the library

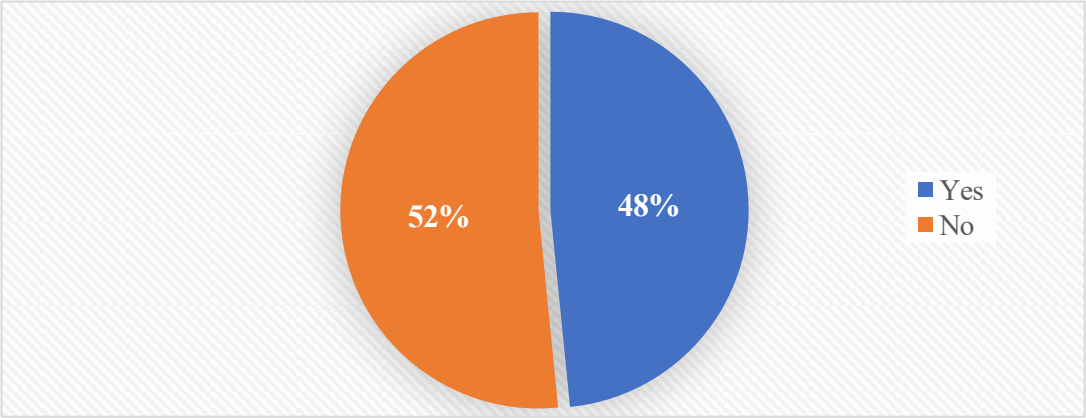


Fig. 4.23. Overall guidance on social media provided in the library

Figure 4.23 clearly shows that the majority of the respondents 294 (52%) stated that their institution's library does not provide guidance on how to use the social media applications implemented by the library, while 276 (48%) of the respondents stated positive that their institution's library provides enough guidance.

4.23.1. Feedback on the guidance of social media provided by Assam University Library

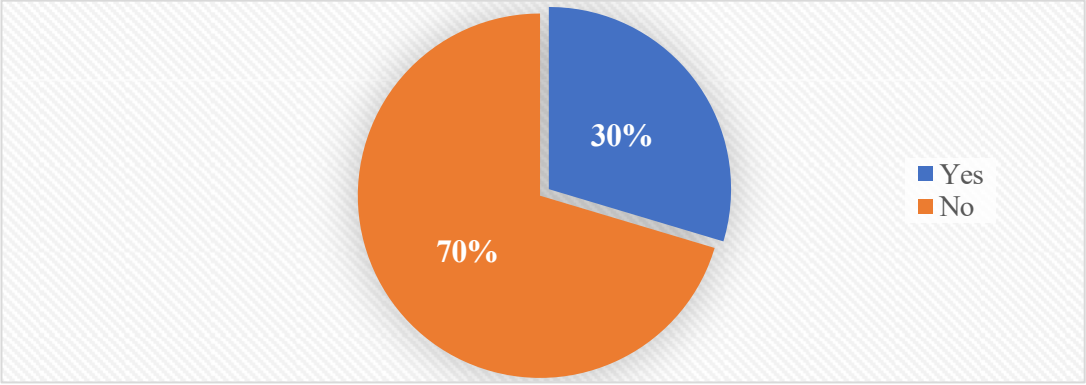


Fig. 4.23.1. Guidance on social media provided in Assam University Library

Figure 4.23.1. shows that the majority of the respondents 38 (70%) are not satisfied with the guidance on using social media applications used by their institution's library while 16 (30%) are satisfied by the guidance on using social media applications used by their institution's library.

4.23.2. Feedback on the guidance of social media provided by Manipur University Library

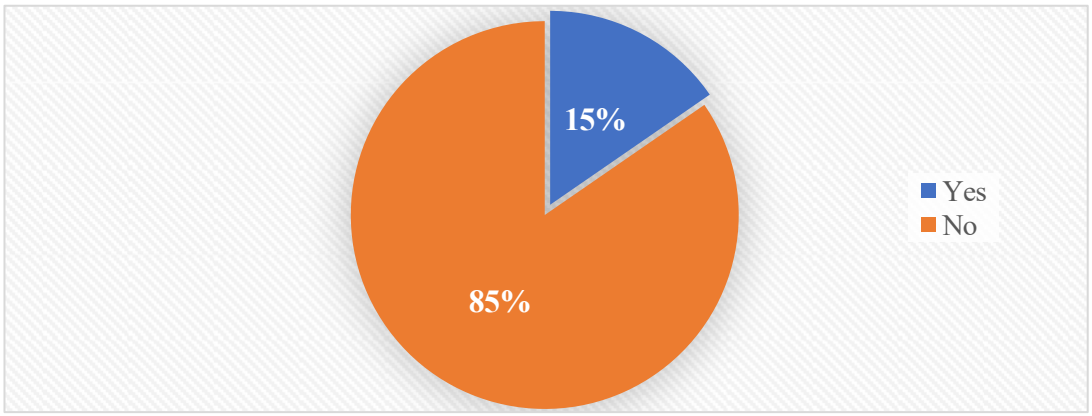


Fig. 4.23.2. Guidance on social media provided in Manipur University Library

Figure 4.23.2. shows that the majority of the respondents 44 (85%) are not satisfied with the guidance on using social media applications used by their institution's library while 8 (15%) are satisfied by the guidance on using social media applications used by their institution's library.

4.23.3. Feedback on the guidance of social media provided by Mizoram University Library

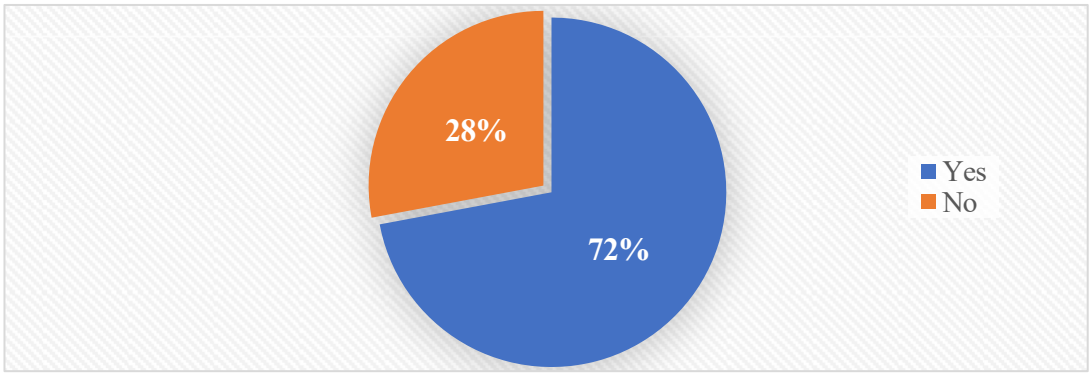


Fig. 4.23.3. Guidance on social media provided in Mizoram University Library

Figure 4.23.3. shows that the majority of the respondents 49 (72%) are satisfied with the guidance on using social media applications used by their institution's library while 19 (28%) are not satisfied by the guidance on using social media applications used by their institution's library.

4.23.4. Feedback on the guidance of social media provided by Nagaland University Library

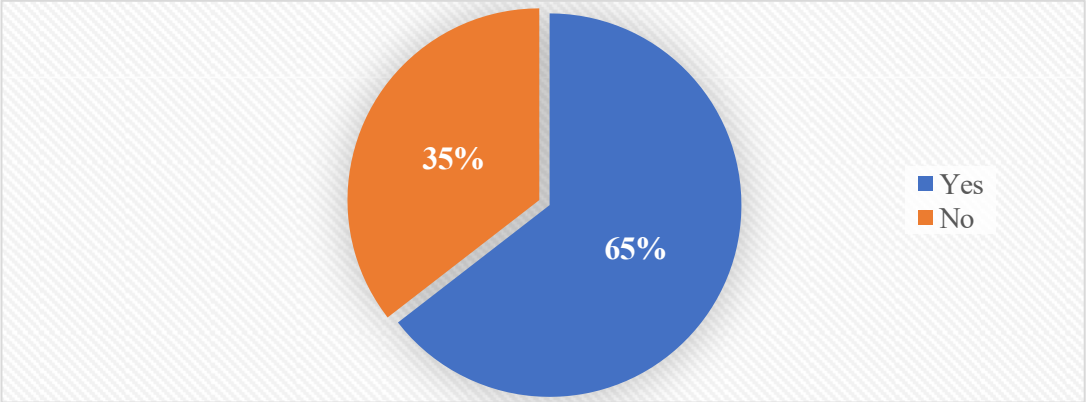


Fig. 4.23.4. Guidance on social media provided in Nagaland University Library

Figure 4.23.4. shows that the majority of the respondents 40 (65%) are satisfied with the guidance on using social media applications used by their institution's library while 22 (35%) are not satisfied by the guidance on using social media applications used by their institution's library.

4.23.5. Feedback on the guidance of social media provided by North Eastern Hill University Library

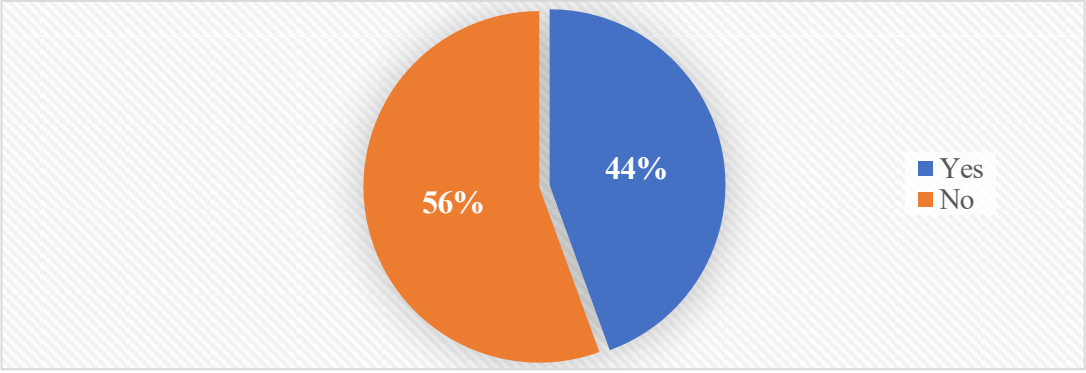


Fig. 4.23.5. Guidance on social media provided in NEHU Library

Figure 4.23.5. shows that the majority of the respondents 30 (56%) are not satisfied with the guidance on using social media applications used by their institution's library while 24 (44%) are satisfied by the guidance on using social media applications used by their institution's library.

4.23.6. Feedback on the guidance of social media provided by Rajiv Gandhi University Library

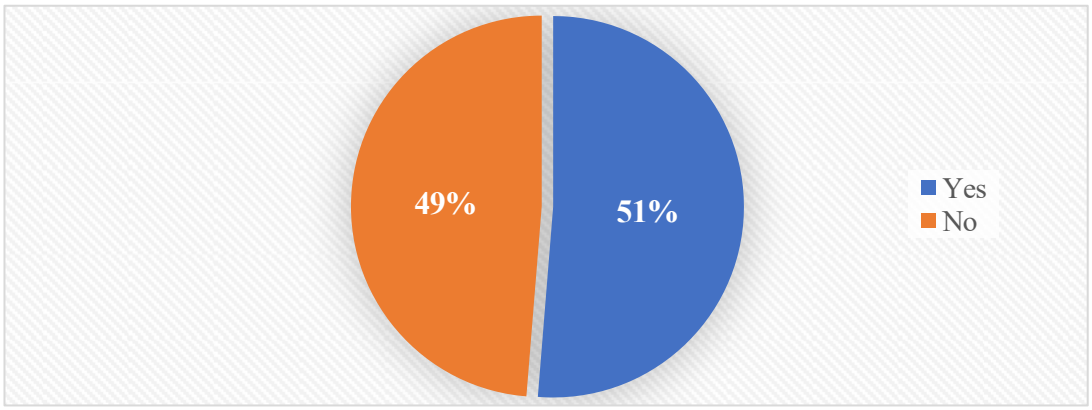


Fig. 4.23.6. Guidance on social media provided in Rajiv Gandhi Library

Figure 4.23.6. shows that the majority of the respondents 40 (51%) are satisfied with the guidance on using social media applications used by their institution's library while 38 (49%) are not satisfied by the guidance on using social media applications used by their institution's library.

4.23.7. Feedback on the guidance of social media provided by Sikkim University Library

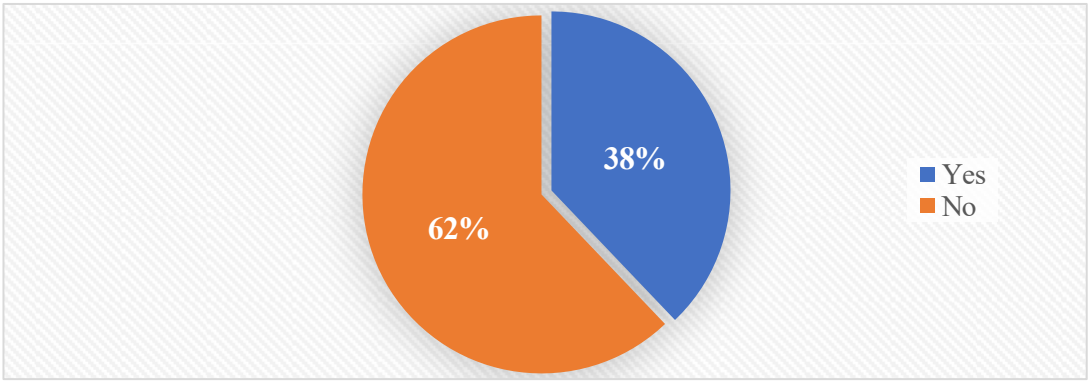


Fig. 4.23.7. Guidance on social media provided in Sikkim Library

Figure 4.23.7. shows that the majority of the respondents 41 (62%) are not satisfied with the guidance on using social media applications used by their institution's library while 25 (38%) are satisfied by the guidance on using social media applications used by their institution's library.

4.23.8. Feedback on the guidance of social media provided by Tezpur University Library

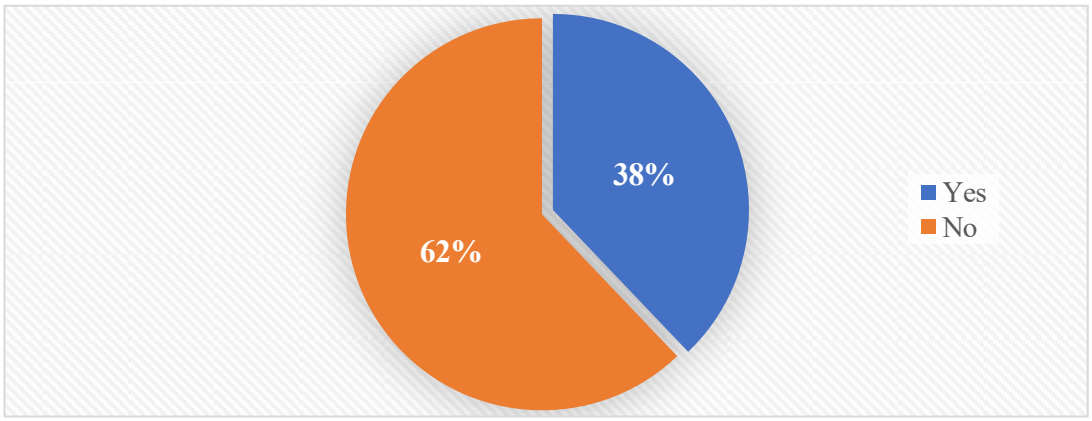


Fig. 4.23.8. Guidance on social media provided in Tezpur Library

Figure 4.23.8. shows that the majority of the respondents 41 (62%) are not satisfied with the guidance on using social media applications used by their institution's library while 25 (38%) are satisfied by the guidance on using social media applications used by their institution's library.

4.23.9. Feedback on the guidance of social media provided by Tripura University Library

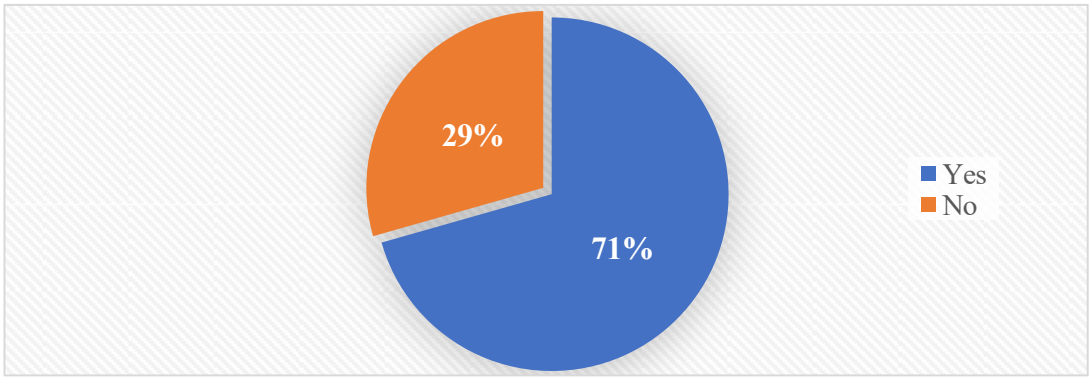


Fig. 4.23.9. Guidance on social media provided in Tripura Library

Figure 4.23.9. shows that the majority of the respondents 48 (71%) are satisfied with the guidance on using social media applications used by their institution's library while 20 (29%) are not satisfied by the guidance on using social media applications used by their institution's library.

4.24. Overall feedback on the disadvantage of using social media for education

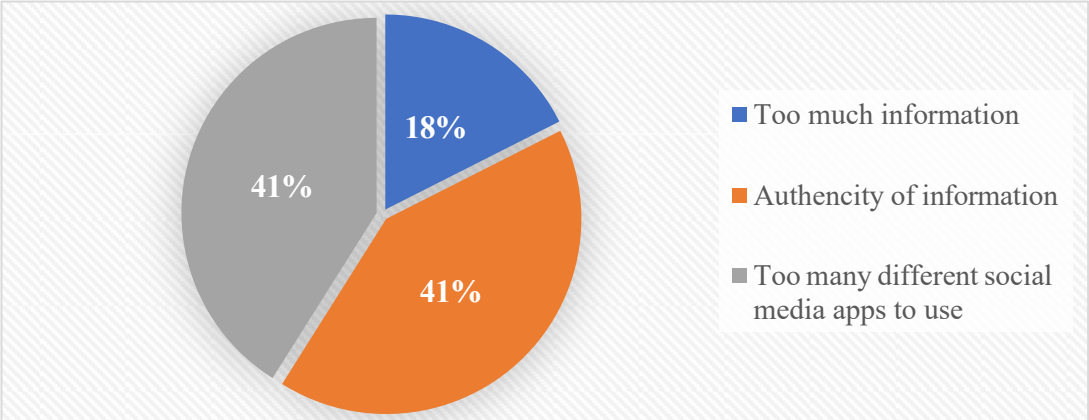


Fig. 4.24. Overall disadvantage of using social media

From figure 5.26. we can see that the respondents 236 (41%) have stated that the disadvantage they faced using social media is the authenticity of information, while the other 234 (41%) states that there are too many social media apps to use 100 (18%) have state that too much information of information overload is the main disadvantage of social media applications.

4.24.1. Assam University on the disadvantage of using social media for education

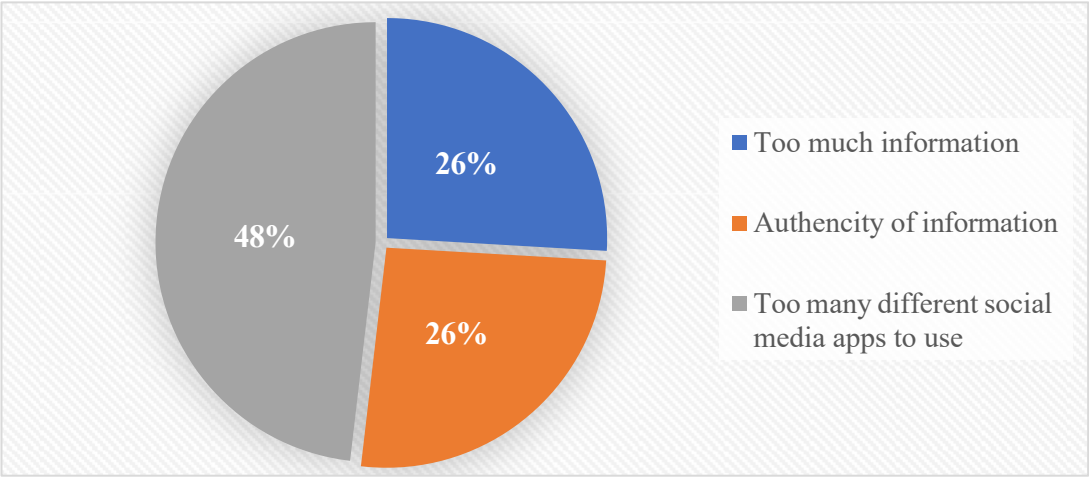


Fig. 4.24.1. Assam University on disadvantage of using social media

Figure 4.24.1. shows that the majority of the respondents 26 (48%) answered that there are too many social media applications to use 14 (26%) of the respondents

answered due to the vast availability of social media applications and 14 (26%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.2. Manipur University on the disadvantage of using social media for education

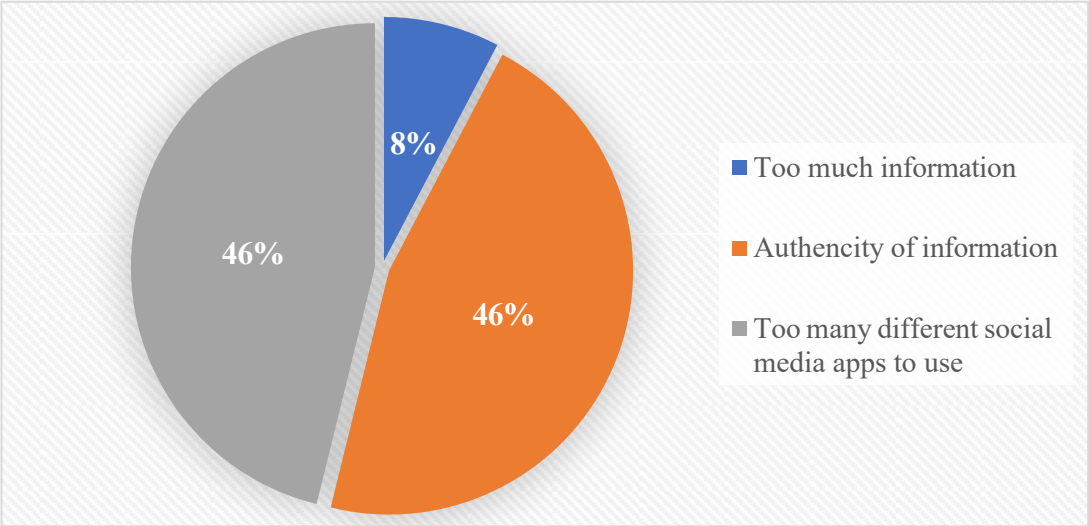


Fig. 4.24.2. Manipur University on disadvantage of using social media

Figure 4.24.2. shows that the respondents 24 (46%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 24 (46%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information and 4 (8%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.3. Mizoram University on the disadvantage of using social media for education

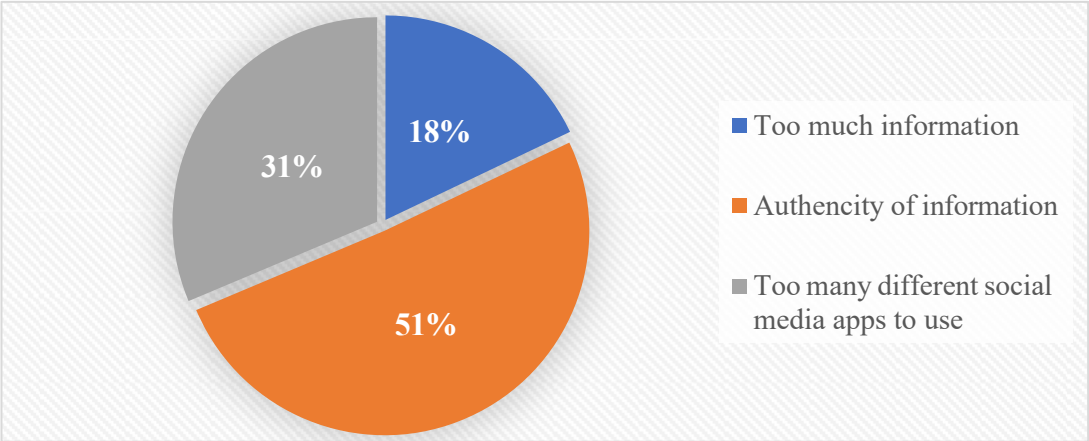


Fig. 4.24.3. Mizoram University on disadvantage of using social media

Figure 4.24.3. shows that the majority of the respondents 34 (51%) answered that due to the vast availability of social media applications it is hard to get authentic information. 21 (31%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 12 (18%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.4. Nagaland University on the disadvantage of using social media for education

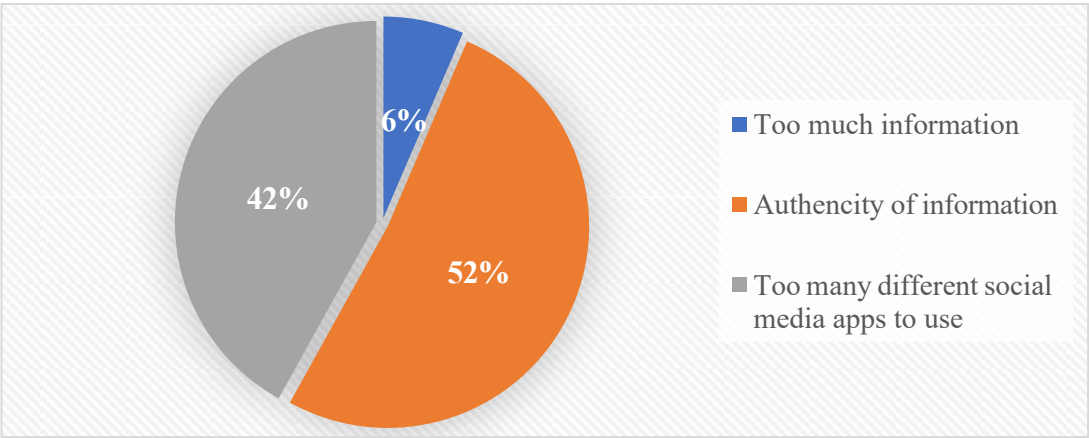


Fig. 4.24.4. Nagaland University on disadvantage of using social media

Figure 4.24.4. shows that the respondents 32 (52%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 26 (42%) answered that there are too many social media applications to

use which hinders their process in getting their desired educational content and 4 (6%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.5. North Eastern Hill University on the disadvantage of using social media for education

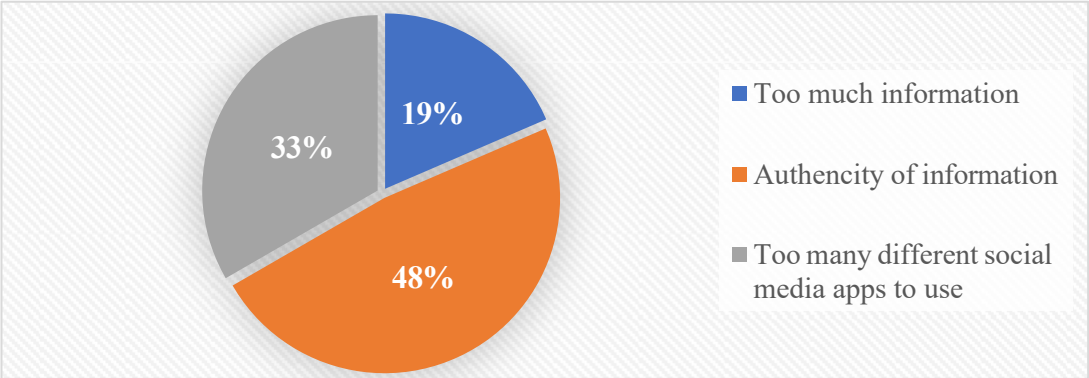


Fig. 4.24.5. NEHU on disadvantage of using social media

Figure 4.24.5. shows that the respondents 26 (48%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 18 (33%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content and 10 (19%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.6. Rajiv Gandhi University on the disadvantage of using social media for education

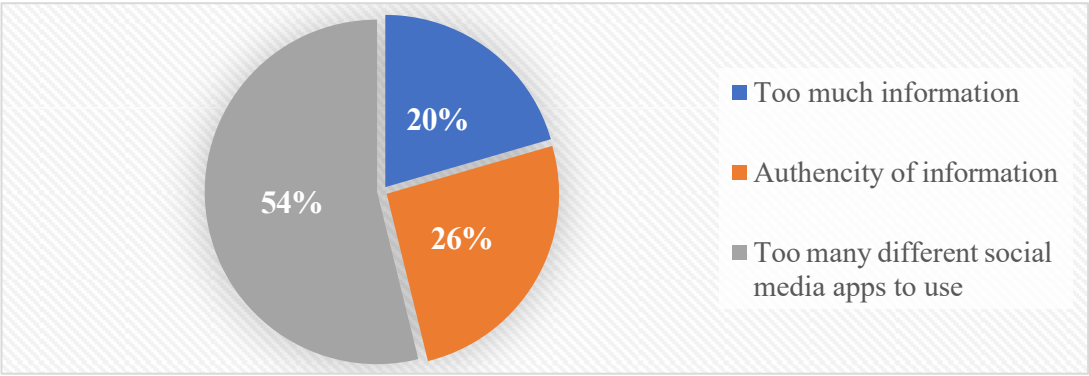


Fig. 4.24.6. Rajiv Gandhi University on disadvantage of using social media

Figure 4.24.6. shows that the respondents 42 (54%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 20 (26%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 16 (20%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.7. Sikkim University on the disadvantage of using social media for education

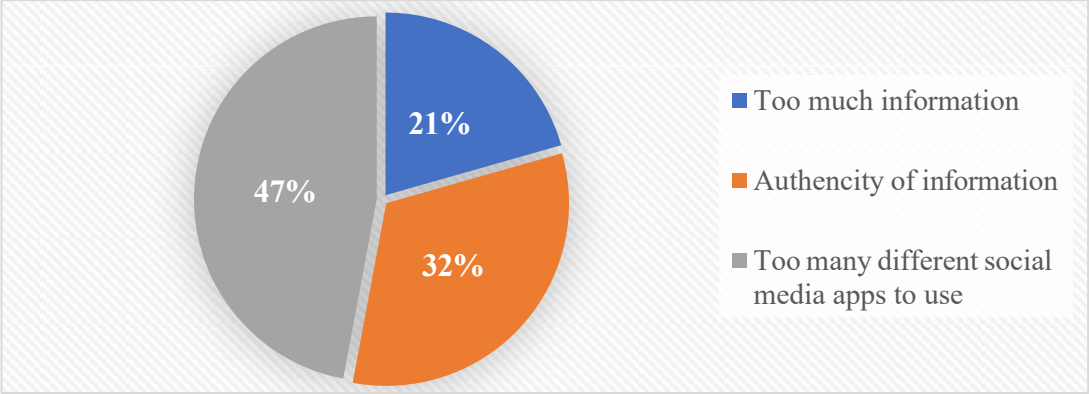


Fig. 4.24.7. Sikkim University on disadvantage of using social media

Figure 4.24.7. shows that the respondents 32 (47%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 22 (32%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 14 (21%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.8. Tezpur University on the disadvantage of using social media for education

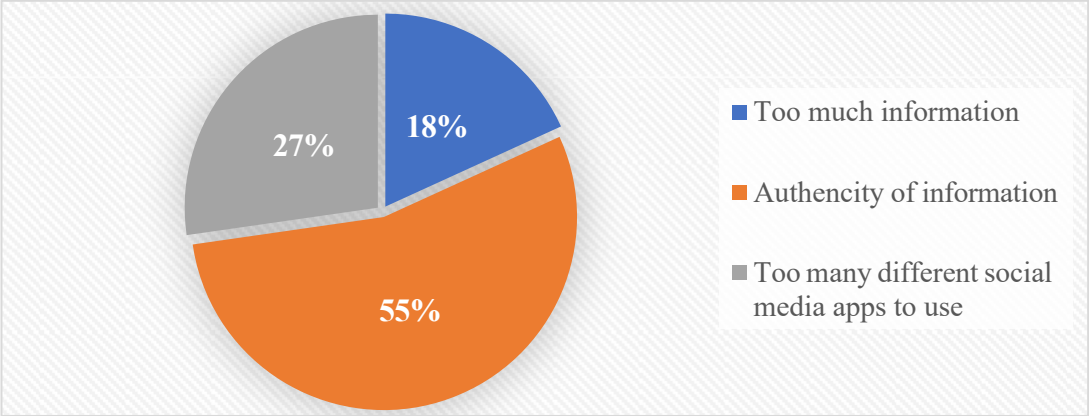


Fig. 4.24.8. Tezpur University on disadvantage of using social media

Figure 4.24.8. shows that 36 (55%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 18 (27%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 12 (18%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.24.9. Tripura University on the disadvantage of using social media for education

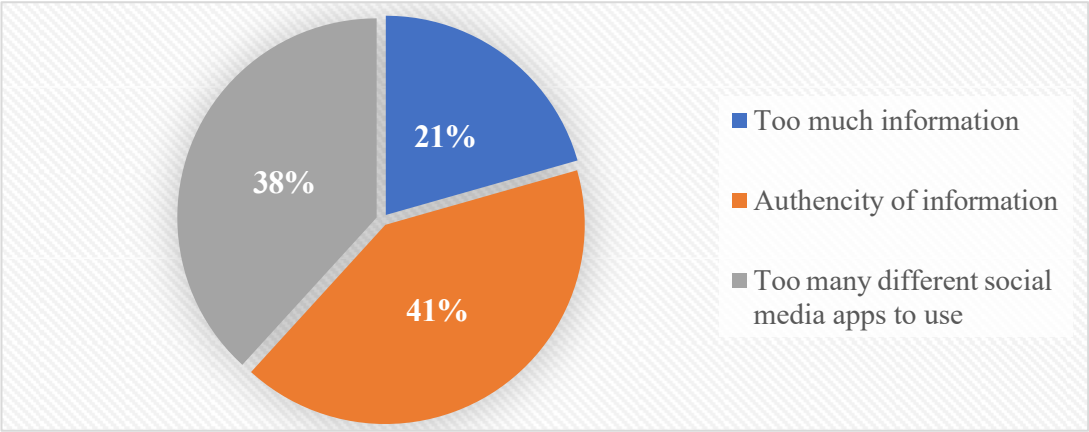


Fig. 4.24.9. Tripura University on disadvantage of using social media

Figure 4.24.9. shows that 28 (41%) of the respondents answered that due to the vast availability of social media applications it is hard to get authentic information. 26 (38%) answered that there are too many social media applications to use which hinders their process in getting their desired educational content. 14 (21%) of the respondents answered that there is too much information to process when using different social media applications for education.

4.25. Findings

This section presents the findings related to the application of social media tools in central universities libraries in North East India. It discusses on how the users of these central libraries benefit from the use of social media tools implemented in their institution's library in their academic life and also the constraints and further developments needed to be implemented for reaching out further to the library users. The data was collected from 9 (nine) selected central universities and concludes with suggestions for improving the effective use of existing social media tools and recommendations for introducing additional platforms to better connect with library users.

4.25.1 Findings according to the objectives of the study

Four objectives were defined before conducting the study and the findings of each objective are discussed below:

Objective 1: To assess the present scenario of social media tools and its applications in the 9 (nine) Central University Libraries of North East India.

i. Results shows that the majority of the respondents 91% use smart phones as their main device for accessing social media and 7% are using laptops to access social media tools while only 1% of the respondents are using desktop computer for accessing social media applications. The majority of the respondents in Assam University (85%), Manipur University (96%), Mizoram University (91%), Nagaland University (94%), NEHU (81%), Rajiv Gandhi University (97%), Sikkim University (88%), Tezpur University (85%) and

Tripura University (97%) claim that smart phones are the main devices used to access social media content. The data clearly shows that impact smart phones have for accessing social media as the popularity of personal computers and laptops are declining for accessing social media content.

ii. Analysis shows that the majority of the respondents 93% have good knowledge of the use of PDF, as it is the most common digital format used for sharing information and 7% of the respondents do not have a good knowledge on PDF. The majority of the respondents in Assam University (93%), Manipur University (100%), Mizoram University (94%), Nagaland University (90%), NEHU (93%), Rajiv Gandhi (90%), Sikkim University (94%), Tezpur University (92%) and Tripura University (94%) have good knowledge on the use and sharing of PDF.

iii. According to the analysis, the majority of the respondents 84% prefer PDF as their ideal format for receiving and sending documents, 12% of the respondents prefer Docx (MS Word document) and 4% prefer JPG (pictures) as their ideal format for receiving and sending documents. The majority of the respondents in Assam University (74%), Manipur University (85%), Mizoram University (88%),
Nagaland University (81%), NEHU (82%), Rajiv Gandhi (85%), Sikkim University (79%), Tezpur University (86%) and Tripura University (91%) report that they prefer PDF as their main digital format for sending and sharing documents.

iv. The analysis reveals that the majority of the respondents 37% are using social media for 3-5 hours daily, 34% of the respondents use it for 1-3 hours daily while 19% of the respondents use social media for 5-7 hours and 10% of the respondents use social media for more than 7 hours daily. The data clearly shows how much time users spent on browsing social media content daily. The majority of the respondents in Assam University (44%), Nagaland University (39%) and NEHU (37%) are using social media for not more than 1 -3 hours per day.

While the majority in Manipur University (35%), Mizoram University (44%), Rajiv Gandhi University (39%), Sikkim University (68%), Tezpur University (44%) and Tripura University (38%) are using social media for not more than 3 – 5 hours daily.

v. The findings show that overall, the majority of the respondents 53% have a good skill and understanding of using social media tools while 25% of the respondents state that they have very good skill on using social media and 22% of respondents claim to have average skills when using social media tool. The majority of the respondents in Assam University (59%), Manipur University (54%), Mizoram University (54%), Nagaland University (68%), NEHU (41%), Rajiv Gandhi University (41%), Sikkim University (44%), Tezpur University (64%), and Tripura University (59%) state that they have good skills when using the social media that they are familiar with.

vi. The findings indicate that the majority of the respondents 67% do not have a difficult time when learning new social media applications while 33% of the respondents have a difficult time learning and adjusting to new social media applications. The result shows that even if new social media applications are suddenly used by the University libraries, the majority of the users can quickly adapt to these changes. The majority of the respondents from Assam University (78%), Manipur University (81%), Mizoram University (66%), Nagaland University (74%), NEHU (63%), Sikkim University (68%), Tezpur University (61%) and Tripura University (71%) claim that they can easily adjust to new social media application quickly while the majority respondents from Rajiv Gandhi University (51%) find it hard to quickly adapt to new social media tools.

vii. According to the findings of the study of the selected 9 (nine) Central University Libraries, it is found that all the libraries under the study have implemented library digitization and are all fully digitized libraries. However, social media tools have not yet been implemented in all the libraries under the study in which 77% of the libraries under

the study i.e. 7 (seven) out of the 9 (nine) Central University Libraries, have implemented at least one social media tool in their library and only 23 % i.e. 2 (two) central university libraries, Manipur University library and Nagaland University library have yet to implement social media tools in their library through the library website.

viii. Facebook is the most popular social media among the Central University Libraries under the study in which 6 out of the 9 Central University Libraries. Sikkim University Central Library, Tezpur University Central Library and Rajiv Gandhi University Central Library have implemented it on their library website while Assam University Central Library, Mizoram University Central Library and NEHU Central Library, although having a dedicated Library Facebook page, have not yet implemented it in their library website.

ix. YouTube is the second most popular social media tool implemented by 2 out of the 9 Central University Libraries which are Tripura University Central Library and Tezpur University Central Library. They have a dedicated Library YouTube Channel which can be accessed through their library website.

x. Instagram is another social media tool implemented by 2 out of the 9 Central University Libraries which are Tezpur University Central Library and Mizoram University Central Library. However, only Tezpur University Central Library provides a dedicated link to their Instagram page while Mizoram University does not provide a dedicated link to access their Instagram page.

xi. X (Twitter) is one of the most popular short form social media tools but is only implemented by Tezpur University Central Library.

xii. The findings show that dedicated library applications are implemented such as Knimbus by Mizoram University, EBSCO by Assam University Central Library, and Teesta Indus Central Library app by Sikkim University Central Library.

Objective 2: To elaborate the benefits of social media tools in teaching, learning and research.

i. The analysis shows that the majority of the respondents 48% agree that social media tools have the maximum importance in their studies, assignments, exams and projects, 43% of the respondents feel that social media only has moderate importance for their studies while 9% of the respondents state that social media does not have any significant importance for preparation of their exam, assignment and projects. The findings shows that social media has made a significant impact on the lives of the respondents in which the majority claims that social media is playing a very important for their studies with regards to their assignments, exams, projects and research. The majority of the respondents in Assam University (52%), Mizoram University (51%), Tezpur University (50%) state that social media has moderate importance in their education. The majority of the respondents from Nagaland University (41%), NEHU (63%), Rajiv Gandhi University (49%), Sikkim University (53%) and Tripura University (65%) claim that social media has the maximum importance for their studies. While the majority of the respondents in Manipur University (50%) claim that social media tools does not have a significant impact for their studies.

ii. According to the analysis of the study collected from the respondents, the majority of the respondents 56% are using social media for academic and educational purposes everyday, 15% of the respondents use social media for educational content more than 5 times a week, 10% of the respondents are using social media for educational content 4 times a week , 11% are using it 3 times week and 8% of the respondents are using social media only 2 times a week for their educational needs. The results show that social media tools play an important role for acquiring academic and educational knowledge. The majority of the respondents in Assam University (67%), Manipur

University (54%), Mizoram University (45%), Nagaland University (55%), NEHU (37%), Rajiv Gandhi University (59%), Sikkim University (62%), Tezpur University (57%) and Tripura University (62%) are using social media tools everyday for their academic and educational purposes.

iii. Results shows that the majority of the respondents 42% are using social media mainly for acquiring knowledge on the latest news and information, 26% of the respondents are using social media for their academic knowledge, 21% of the respondents are using social media for socializing with their friends and relatives and only 11% of the respondents claim to use social media for only entertainment purposes. It can be found that the majority of the respondents agree that social media is an important tool for acquiring knowledge on the latest news and information which can be beneficial for teachers, students and researchers. The majority of the respondents in Assam University (52%), Mizoram University (40%), Nagaland University (45%), NEHU (44%), Rajiv Gandhi University (43%), Sikkim University (59%) and Tripura University (47%) are using social media for the main purpose of acquiring the latest news and information. The majority of the respondents from Manipur University (35%) are using social media for socializing as the main purpose While, the majority of the respondents Tezpur University (41%) are using social media mainly for academic purposes.

iv. The findings shows that the majority of the respondents 42% are not easily distracted when using social media for acquiring their educational content, 41% of the respondents state that they are easily distracted by notifications from other social media applications while 17% claim that they finish their work first before opening notifications from other social media applications. The majority of the respondents in Assam University (41%), Manipur University (46%), Rajiv Gandhi University (51%) and Sikkim University (38%) claim that they are easily distracted when using social media tools for

education. The majority of the respondents in Mizoram University (45%), Nagaland University (52%), NEHU (44%), Tezpur (46%) and Tripura University (41%) state that they are not easily distracted.

v. As per the analysis, the majority of the respondents 67% rely on both print and digital documents, while 25% of the respondents rely mostly on print documents and only 8% of the respondents rely only of digital documents for acquiring information. The majority of the respondents in Assam University (59%), Manipur University (65%), Mizoram University (68%), Nagaland University (68%), NEHU (67%), Rajiv Gandhi University (77%), Sikkim University (62%), Tezpur University (68%) and Tripura University (62%) all claim that rely on both book based and digital documents for acquiring their educational content.

vi. As per the analysis, the majority of the respondents 54% agree that due to the easy access to online educational materials, print media will be replaced by online material in the future while 46% of the respondents disagree that online educational materials will erase the need for print media in the future. The findings show that although the majority of the respondents feel that online content can erase the need for print media, many of the respondents state that the need for print media will not be erased due to online materials. The majority of the respondents in Assam University (56%), NEHU (56%), Rajiv Gandhi University (62%), Sikkim University (71%), Tezpur University (51%) and Tripura University (62%) claim that the ease of access to online educational content will erase the need print materials. While, the majority of the respondents in Manipur University (54%), Mizoram University (51%) and Nagaland University (65%) state that online educational materials will not erase the need for print materials.

vii. The analysis reveals that 41% of the respondents agree that the main disadvantage of using social media application for educational purposes is the need to use too many different platforms. Another 41% of the respondents agree that the main disadvantage of using

social media applications is that the information obtained from social media is difficult to very and authenticate while 17% of the respondents agree that the main disadvantage of using social media application due to too much information leading to information overload for users. The majority of the respondents in Manipur University (46%), Mizoram University (51%), Nagaland University (52%), NEHU (48%), Sikkim University (32%), Tezpur University (55%) and Tripura University (41%) claim that the main disadvantage of using social media is due to the difficulty in checking the authenticity of the information provided by social media tools. The majority of the respondents in Assam University (48%) and Rajiv Gandhi University (54%) claim that the main disadvantage of using social media is due to the need of using many different social media tools.

Objective 3: To present the technologies associated with social media tools and its applications through library web sites.

i. The results shows that the majority of the respondents 56% are visiting the library less than 3 times a month while 21% of the respondents claim that they visit the library more than 7 times and 4% visit the library less than 7 times a month. The data shows that library users are visiting the library less due to the growth of digitization and the ease of access to library resources through the library websites. The majority of the respondents in Assam University (33%), Manipur University (58%), Mizoram University (81%), Nagaland University (61%), NEHU (52%), Rajiv Gandhi University (67%), Sikkim University (59%) and Tripura University (59%) are visiting the library less that 3 times a month while The majority of the respondents in Tezpur University are visiting the library more than 7 times a month.

ii. According to the analysis, the majority of the respondents 75% are aware of the presence of their institution's library website while 25% are not aware of the presence of their institution's library website. The

majority of the respondents in Assam University (52%), Manipur University (58%), Mizoram University (78%), Nagaland University (77%), NEHU (93%), Rajiv Gandhi University (77%), Sikkim University (59%), Tezpur University (94%) and Tripura University (79%) are aware that their institution's library has a dedicated library website.

iii. Analysis shows that the majority of the respondents 51% rarely visit their institution's library website while 40% of the respondents report to sometimes visit their library's website and 9% of the respondents state that they frequently visit their institution's library website. The majority of the respondents in Assam University (52%), Manipur University (50%), Mizoram University (68%), Nagaland University (68%), NEHU (52%) and Rajiv Gandhi University (51%) state that they rarely visit their library's website. A majority of the respondents in Tezpur University (47%) and Tripura University (47%) reported that they sometimes visit their library's website.

iv. The analysis shows that the majority of the respondents 57% are not aware of their institution's library website providing a service to directly interact with the librarian while 43% of the respondents are aware of their institution providing a service to directly interact with the librarian. All of the library websites under the study provide a service for interacting with the librarian through ask-a-librarian function or by the librarian's e-mail address which is highlighted in all the libraries websites. The majority of the respondents in Assam University (81%), Manipur University (77%), NEHU (63%), Rajiv Gandhi University (56%), Sikkim University (65%) and Tripura University (53%) report that they are unaware of whether their institution's library website offers a service to communicate with the librarian. While the majority of the respondents in Mizoram University (66%) and Nagaland University (55%) are aware that their institution's library website provides a service to interact with the librarian. 50% of the respondents in Tezpur University are aware of

the service to communicate with the librarian through the library website while the other 50% are not aware of such service provided by the library.

v. The results shows that the majority of the respondents 65% are satisfied by the e-resources provided through the library websites while 35% of the respondents are not satisfied of the e-resources provided. The majority of the respondents in Manipur University (54%), Mizoram University (81%), Nagaland University (77%), NEHU (56%), Rajiv Gandhi University (54%), Sikkim University (62%), Tezpur University (79%) and Tripura University (76%) are satisfied with the e-resources provided by the library in the library website while the majority of the respondents in Assam University (59%) are not satisfied with the available e-resources in their institution's library website.

vi. Analysis shows that the majority of the respondents 52% state that their institution's library does not provide guidance on the use of social media applications implemented by the library while 48% state that their institution's library provides guidance on the social media tools implemented by the library.

vii. The majority of the respondents 57% agree that the social media applications provided by their institution's library website is satisfactory while 43% of the respondents are not satisfied by the implemented social media applications tools. The analysis shows that although the majority of the library users are content with the social media tools provided by the library, there is a need for more social media tools to be implemented by the libraries for its users. The findings show that the majority of the respondents in Mizoram University (74%), NEHU (52%), Rajiv Gandhi University (62%), Tezpur University (71%) and Tripura University (62%) are satisfied with the social media tools present in the library website. The findings also show that the majority of the respondents in Assam University (59%) and Sikkim University (56%) are not satisfied with the social

media tools implemented in the library website. Although Manipur University Central Library and Nagaland University Central Library have not yet implemented social media tools, the data shows that there is great interest among the users for the implementation of social media tools.

viii. According to the results, the majority of the respondents 51% rely on SMS for seeking library updates and notifications from their institution's website, while 22% of the respondents rely of Facebook for receiving library updates, 19% of the respondents rely on Instagram and 8% of the respondents rely on X(Twitter) for seeking library updates. The majority of the respondents in Assam University (41%), Manipur University (46%), Nagaland University (51%), NEHU (52%), Rajiv Gandhi University (49%), Sikkim University (53%), Tezpur University (64%) and Tripura University (68%) report that even though social media has gain much popularity, they still rely on SMS for receiving their institution's library updates. The majority of the respondents in Mizoram University (49%) prefer Instagram for receiving library updates which shows the popularity of Instagram among the library users of Mizoram University.

Objective 4: To propose the most relevant social media tools for Central Universities which are dedicated to the development of academic and research activities.

According to the analysis of the acquired data from the respondents, and from the suggestions of the respondents on the questionnaire it clearly shows that social media tools are playing an important role in the way we gather, collect and search for information in regards to our academic and research activities. However, social media applications are not made equal in terms of usability and ease of understanding. Here are some of the most relevant social media tools which central universities can implement for their users academic and research activities.

i. The findings show that social media tools play a very important role among the respondents for their studies, exam and projects (figure.4.8.) which shows the popularity of social media tools among users for acquiring their educational content.

ii. As the results show that, the most popular social media tool among the respondents is WhatsApp (figure 4.3.), followed by Instagram and YouTube, libraries should consider adopting at least these three platforms to enhance user interaction and ensure broader dissemination of information.

iii. The results indicate that the majority of respondents possess sufficient skills in using social media (figure 4.4.), suggesting that users are well prepared to adopt and engage with any new social media tools introduced by the library.

iv. The results reveal that many respondents are satisfied with the e-resources provided by the institution's library, however, libraries should enhance awareness by sharing better guidance through social media tool on how to access and effectively use these valuable e-resources.

v. The findings show that the main disadvantage of using social media for education is due to the difficulty of checking the authenticity of the information provided in social media tools and the abundance of too many social media tools that are available for use. Libraries can help with this problem by providing seminars and workshops to teach users on how to check the authenticity of information provided to them and provide links to official library social media groups in the library websites to redirect users to the correct social media tools used.

4.26. Social media tools used in the best central universities in India

Social media tools are required in the modern-day library because they can play a key factor in helping libraries connect with their users, promote library resources and services by creating awareness of new books, journals, e-journals and digital

collections that are available in the library using social media tools. Social media tools also help libraries in promoting workshops, seminars, webinars, book clubs and cultural programs and other various events that are being held in the library.

By using platforms like Facebook, Instagram and Twitter, libraries can develop a strong user community where users can interact with librarians and staff in answering questions, to receive quick updates on libraries services, policies and library hours on special occasions. These tools make libraries more visible, accessible and interactive particularly for tech-savvy users. Libraries can support education and research by sharing tutorials, research tips, subject guides and literacy programs through social media. Social media can serve as an important feedback channel to allow the library users to share suggestions, reviews and experience.

Using a case study method the researcher has collected the best practices for implementing social media in leading central university libraries in India.

4.26.1 Jawaharlal Nehru University Central Library

Dr. B.R. Ambedkar Central Library is a 9 (nine) storey central library established in 1969 and it is located in the campus of Jawaharlal Nehru University. The library has a rich resource in social sciences, humanities and sciences. The library provides unlimited access to books, journals, e-journals, e-books, e-thesis, dissertations and reports for its users. The library is also a depository of all Govt. publications and publications of some important International Organisations such as WHO, European Union, United Nations and its allied agencies.

The central library has a collection of over 50,000 books, approximately 10,000 print journals and access to more than 20,000 e-journals with the aim of supporting academic programmes in the university and to support the research pursuits of the teaching community and the research scholars. The library has approximately 16,000 theses and dissertations with bibliographical details and content pages accessible through OPAC. Dewey Decimal Classification is used for classifying subjects and books are catalogued according to AACR2 and VIRTUA library management software is using for generating catalogues.

The central library provides different services such as a reference service so that users can easily locate their desired resource and information in both print and electronic form. The library has a cyber library area located on the ground floor which houses 200 computers for the students, researchers and faculty members. The computers can be used to access online resources subscribed by the library such as digitised theses and dissertations, digital newspaper clippings, to write their articles, theses or dissertations. A Hellen Keller Unit service is available for its visually handicapped users by providing advanced assistive technologies in the library such as JAWS (screen reading software), Kurzweil (OCR software) and computer headphones.

The central library has only implemented one social media tool, Facebook, for its users. Through Facebook the central library provides and shares useful information regarding new arrival of books, special events to be held in the library and awareness on different topics which are useful for the users of the library.

4.26.2. Delhi University Central Library

Delhi University Central Library is also known as the "Central Reference Library" and was established in 1922 with a collection of 1,380 books gifted and 86 periodicals. The current central library building was inaugurated on December 1, 1958 by Dr. S. Radhakrishnan who was the Chancellor and President of India. In 1995, the University Grants Commission (UGC) sanctioned a grant of 1 crore for the computerization and in 1999 the digitization process was implemented. This digitization process transformed the library services with the launch of web-based services and subscriptions to major electronic databases. Digitization of theses and rare books were implemented with information literacy programs and the launch of a dedicated Delhi University e-library platform enhanced the users access to digital content. The central library is a vital academic hub for teaching, learning and research across disciplines and also serves as the centre for plagiarism control.

The central library has a vast multidisciplinary collection of print and digital resources including textbooks, reference materials, periodicals, rare books, government publications and doctoral theses which are also being digitized as part of

the library's modernization process. The central library collection is updated to support new academic programs and research areas and provides access to the Delhi University e-Library platform to access subscribed content of over 1.4 million educational resources. This includes access to full text e-journals, e-books, databases and archives.

Delhi University has implemented social media tools for disseminating information to the library users and is one of the most active and effective social media tools users among the central universities in India. These social media tools that the library implements are

1. Facebook: Delhi University has a library Facebook page known as Delhi University Library System which regularly posts workshops, webinars of different subjects and topics, database awareness programs and national and international conferences and special events to be held in the library.

2. Instagram: Delhi University has an Instagram page known as dulibraries, which is used to post pictures and videos containing information about the various special events conducted within the library. Instagram is used to reach out to the new generation of learners as the popularity of Instagram is growing among the younger audience.

3. YouTube: Delhi University has a YouTube page where the library posts the full videos of the events conducted in the library and also posts tutorials and guide on different topics for teaching, learning and research. These YouTube videos are important as users can view them in their own time.

4. X(Twitter): Delhi University also has a X(Twitter) handle known as @DuLibraries which is used to post short forms of information regarding the events, announcements and other important events happening in the library, and also providing links to access the content of the shared information on X(Twitter).

5. Library app: Delhi University has a library app known as D.U. e-Library which can be downloaded from the google play store and apple app store. This application allows users to access the collection of e-resources such as e-books, e-journals,

magazines, Theses and Dissertations, video lectures from renowned publishers which are subscribed and bought by the library. The app allows the collection to be searched by publisher; discipline or media formats which makes it easier for the user to get their desired content without wasting much time.

4.26.3. University of Hyderabad Central Library

The Indira Gandhi Memorial Library is the central library of the University of Hyderabad and was established in 1975 and was named after the late Prime Minister Mrs. Indira Gandhi in 1988. The central library is one important facility of the institution as it caters information and education need for the students, researchers and teachers in the different subjects provided by the central university. The library strives to provide the most effective learning resources to the library users to contribute a higher quality of education. The library has conducted many important national and international events, conferences, webinars, seminars and guides and training of different topics related to teaching, learning and research. The central library has a huge collection of books, references, text books, braille books, print journals, serial publications, newspapers, theses and dissertations, project reports, e-journals and databases.

The India Gandi Memorial Library is equipped with the best IT infrastructures. The library has fully automated all the housekeeping operation of the library and has undertaken projects to computerize other libraries in order to provide network facilities. The library is subscribed to online search databases and full text databases, contributed university theses to e-Shodhganga. The central library provides plagiarism tools such as Turnitin for researchers, Grammarly for checking English grammar, spelling etc

The central library uses only Facebook in regards to social media tools. The central library Facebook page is used regularly to post updates, programmes, events, seminars and conferences, so that the users of the library can quickly acquire information about their interested event topics and know when and how to participate in them.

4.26.4. J.R.D. Tata Memorial Library, Indian Institute of Science

The library of the Indian Institute of Science in Bengaluru is known as J.R.D. Tata Memorial Library is one of the earliest central facilities started by the institution for teaching, learning and research. This library aims to provide supports to its users through educational and research programs using physical and online access to information, educational and research functions of the institution. The library has a vast collection of peer-reviewed literature which is a valuable source teachers, students and researchers and the library also aims to serves as a resource centre for scholars and the scientific community in India. The library regards itself as having the largest scientific and technical document collection of more than 6000 unique journal titles in both science and technology. The library is also a core member of e-ShodhSindhu, an INFLIBNET regional centre for Document Delivery Service (DDS) and a National Board for Higher Mathematics (NBHM) regional resource centre.

The central library provides the library users with access to a massive collection of e-resources as the library is subscribed to more than 14,000 e-journals, more than 13,000 e-books, 62,200 electronic print publications and more than 6,100 e-theses and dissertations. The central library also provides its users with access to e-journals through e-ShodhSindhu, J-Gate and e-books from a number of established publishers such as Oxford University Press, Academic Press (Elsvier), John Wiley etc.

J.R.D. Tata Memorial Library has implemented social media tools which are used to disseminate information to the library users. The social media tools used are:

1. Facebook: The central library has a Facebook page known as JRD Tata Memorial Library page and is the official page of the library. This page is used regularly to post the functions such as national and international events, webinars, and conferences as well as for highlighting the achievements awarded to the alumni.

2. Instagram: The central library has an official Instagram page which is actively posting and sharing images and short videos of the special events held in the library. It has an active user base among the library users.

3. X(Twitter): The central library has an official twitter handle which is used to post short form content of important announcements and to share information regarding new events as well as well arrivals in the library.

4.27. Conclusion

According to the collected data after proper analysis, we can understand that even though social media tools have affected our daily lives in acquiring information and knowledge about any topic or subject and how it is becoming more popular with the advancement of technology, Central University Libraries are more focused on acquiring better e-resources on different subject which will benefit the users greatly on their teaching, learning and research. However, even if the library has a great collection of books and e-resources, it still needs to reach its intended user for the document to become useful else it will be just another document in the library's collection. Libraries need to implement the more popular social media tools such as WhatsApp, YouTube and Instagram to advertise the educational and research services and how to access the digital repositories, electronic databases, OPAC etc so that new users of these services are not intimidated on their first use. The next chapter will focus and highlight the suggestions from the respondents, the suggestions from the researcher along the suggestions for future research.

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CHAPTER 5

SUGGESTIONS AND CONCLUSION

5.1 Introduction

This chapter contains the impact of the application of social media tools in the selected 9 (nine) central university libraries in North East India under the study. The researcher highlights the use of social media tools in central universities and proposes strategies to strengthen and improve the implemented social media tools in the library.

5.2 Suggestions from the respondents

Through the questionnaire submitted on the 9 Central University Libraries, the respondents have written their suggestions which are:

i. The respondents suggest that libraries need to organize more digital literacy and awareness programs to help communities learn how to use digital tool safely, effectively and responsibly.
ii. Libraries need to provide guidance on the advantages and disadvantages of using social media.
iii. Libraries should provide curated lists of reliable and safe websites that offer authentic information as the vast amount of information available online makes it difficult to distinguish between reliable and unreliable sources.
iv. Some respondents suggest that libraries need to implement A.I. tools in the library to help the library users.
v. Respondents suggest that libraries should develop engaging content that encourages interaction and helps build a stronger community of learners and readers.
vi. Respondents also suggest that libraries need to have a library app,

5.3 Suggestions from the researcher

The researcher has made suggestions for improving the central library's use and implementation of social media tools for the development of sharing and dissemination of knowledge among the students, researchers and teachers. The suggestions provided are based on the study's findings.

vii. Implement social media applications for polls and surveys to collect the feedback on library services.

viii. Using social media tools libraries can monitor the user interactions and identify the needs and services of students, teachers and researchers.

ix. More central libraries need to implement social media tools or at least implement the popular social media tools. A dedicated media committee can be established to handle all social media tasks such as making posts, stories and status to provide useful information to the library users.

x. Central Libraries need to implement more library applications in both android and iOS to provide virtual library access to users of the library's collections, services and make reservations on books, The library app can be used to talk to library staff and receive immediate online solutions to their queries about the library services and function from the library staff.

xi. Implementing live streaming features for broadcasting events to reach a wider audience and also for researchers who are not able to be present physically in the events.

xii. Awareness programs should be organized to educate the library users on negative and positive impact of social media tools on their education and research.

xiii. Awareness and guides on how to evaluate and retrieve reliable sources of information through social media tools.

xiv. Social media tools can be used to advertise the library website, and its resources and features.

xv. Using social media tools, libraries can make official research chat groups to encourage new researchers and promote collaborative projects and sharing of insights and knowledge.

xvi. The library can create book clubs, study groups and academic discussion groups using the popular social media tools.

5.4 Suggestions for future research

Based on the present study and its findings, additional research on how the integration of A.I. (Artificial Intelligence) in all the popular social media tools have effects on information retrieval for students and research scholars. The additional studies may be conducted on the following suggested research areas.

xvii. The study may be exclusively conducted on only popular social media tools which have integrated A.I.

xviii. The study can be extended further towards on how students and researchers rely on these A.I. services present in popular social media tools and if the information provided be these A.I. services can be relied upon as a credible source.

xix. The impact and effectiveness of A.I in supporting collaborative research and sharing of knowledge among the students, teachers and scholars.

5.5 Conclusion

The advancement in technology has made life simpler and has enabled us to reach out to the world through our finger tips. Humans are social beings so every advancement in technology also strives to improve how we interact and share information and data between each other. Before the rise in popularity of social media tools, social networking sites became popular as it allowed users to create their own personal digital space which other users can interact and communicate with.

The research studies the significance and importance of social media, its impact on teachers, students and researchers. Social media has become an important part of our daily life in which platforms such as Facebook, Instagram, WhatsApp, X (Twitter) etc help people communicate, share information and stay connected with friends and family. It has enabled us to learn new things, follow the latest news and has given the ability to express our ideas to a much larger audience

Social media tools have made significant positive as well as negative changes which can be seen through the suggestions made by the respondents, as the majority of the

respondents are requesting for more awareness campaigns on digital literacy and digital etiquette, how to decrease screen time for students, and the major flaw that the respondents have on social media is the difficulty in checking the authenticity of information available on social media. The rise of Artificial Intelligence has impacted every social media platform. Each platform has their own dedicated A.I. such as Meta AI on WhatsApp and Instagram, Grok on X (twitter) and AI video summarization and AI automatic video dubbing in YouTube.

Social media tools are here to stay so it is important for users to grow with them. These platforms are becoming powerful tools for communication, learning and sharing information so by adapting to new social media technologies, users can connect with other users to promote ideas and gain access to knowledge more easily. Therefore, libraries need to adapt social media tools more effectively to cater the needs of its users.

APPENDIX

QUESTIONNAIRE

I am pursuing a Ph.D. in Library & Information Science, Mizoram University, Aizawl in the area of "**Application of Social Media Tools in Central Universities Libraries in North East India**" under the guidance of Prof. Pravakar Rath. I kindly request you to fill up the questionnaire and I assure you that the information given by you will not be used academic purposes only.

Thanking You,

Lalremsiama

Ph.D. Scholar

Dept. of Library & Information Science

Mizoram University

Ph. No: 9774275856

e-mail: rs.hnamte@gmail.com

1. Name _____

2. Gender Male ( ) Female ( )

3. Name of the University_____

4. Department _____

5. What kind of social media do you use the most?

Instagram ( ) Facebook ( ) WhatsApp ( )

X (Twitter ( ) YouTube ( ) Any other ( )

6. How well versed are you in using social media applications for personal use?

Very Good ( ) Good ( ) Average ( ) Poor ( )

7. How many hours per day do you use social media?

1 – 3 hours ( ) 3 – 5 hours ( ) 5 – 7 hours ( )

More than 7 hours ( )

8. How often do you use social media for educational purposes?

2 times a week ( ) 3 times a week ( ) 4 times a week ( )

More than 5 times a week ( ) Everyday ( )

9. What kind of electronic device do you use the most for social media applications?

Smart Phone ( ) Desktop Computer ( ) Laptop ( )

Any other ( )

10. Does social media play a significant role in your studies/assignment/project/exam?

Maximum ( ) Moderate ( ) Minimum ( )

11. Do you think that the easy access to online educational materials will erase the need for print material?

Yes ( ) No ( )

12. What is your main purpose for using social media

Academic ( ) News and Information ( ) Entertainment only ( )

Socialization ( )

13. How often do you visit the Library

Less than 3 times a month ( ) 5 times a month ( )

7 times a month ( ) More than 7 times a month ( )

14. Does your institution have a library website

Yes ( ) No ( ) I don't know ( )

15. How often do you visit your library's website?

Not too often ( ) Sometimes ( ) Very often ( )

16. Using which social media application do you seek updates of your institution's Library.

X (Twitter) ( ) Facebook ( ) Instagram ( )

SMS ( )

17. Does your Institution's library provide a service using social media applications to directly interact with the librarian.

Yes ( ) No ( )

18. Are the social media applications used by your Institution's library satisfactory for your educational research/teaching.

Yes ( ) No ( )

19. Are the e-resources provided by your Institution's library satisfactory

Yes ( ) No ( )

20. Using social media applications most documents are exchanged in the form of PDF's. Do you have a good knowledge on how to use PDF?

Yes ( ) No ( )

21. What is your ideal file format for receiving and sending documents through social media applications?

PDF ( ) JPEG (Pictures) ( ) Docx (MS Word) ( )

22. While using social media applications for educational purposes, are you easily distracted by the different notifications from other social media applications?

Easily distracted ( ) Not easily distracted ( )

I finish my work first before opening other applications ( )

23. Do you have a difficult time learning new social media applications?

Yes ( ) No ( )

24. With the popularity of social media application and how quickly we can receive information, do you still rely on book based documents?

Yes ( ) No ( ) Rely on both ( )

25. Does your Institution's library provide a guide on how to use social media applications used by the library

Yes ( ) No ( )

26. What do you think is the main disadvantage of using social media applications for educational purposes.

Too much information ( ) Authenticity of information ( )

Too many different social media applications to use ( )

27. Suggest some measures to be undertaken by your community for effective use of social media tools.

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_____

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List of Publications

Journal Publications:

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2. **Lalremsiama** & Dr. Estherine Lalrinmawii (2026). Social Media Tools Used by Students of North East India Central Universities. *International Journal of Creative Research Thought.* 14(2), 900-905. http://ijcrt.org/viewfull.php?&p_id=IJCRT2602684
3. Zorinpuia, Ngurinkhuma, R.K., **Lalremsiama**, Vanlalfeli. (2020). Exploring the use of Online Tools for Scholarly Reading and Writing by Research Scholars at Mizoram University. 27(2). 21-34. https://doi.org/10.59670/m7bhze55

Conference/Seminar Paper:

1. **Lalremsiama**. (2025). User-centric Library services in select Central Universities of North – Eastern States. National Seminar on 'Empowering Communities: User -Centric Library Services for Advancing Sustainable Development Goals. (11th – 12th March, 2025). Organized by Central Library, Mizoram University, Aizawl.
2. **Lalremsiama**. (2023). Perception of Artificial Intelligence among College Students in Aizawl. International Conference on 'Reskilling and Upskilling Stakeholders of Higher Education through Artificial Intelligence under G20 Initiative. (May 19th – 20th, 2023). Organized by the Department of Education, Mizoram University, Aizawl.
3. **Lalremsiama**. (2020). Application of Social Media tools in Central University Libraries of North East India. National Seminar on 'Social Media and Librarianship: Connecting the Communities". (Feb. 26th – 28th, 2020). Organized by the Department of Library and Information Science, Mizoram University, Aizawl.

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ABSTRACT

APPLICATION OF SOCIAL MEDIA TOOLS IN CENTRAL UNIVERSITIES LIBRARIES IN NORTH EAST INDIA

AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

SCHOOL OF ECONOMICS, MANAGEMENT AND INFORMATION SCIENCE

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APPLICATION OF SOCIAL MEDIA TOOLS IN CENTRAL UNIVERSITIES LIBRARIES IN NORTH EAST INDIA

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Submitted

In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Library and Information Science of Mizoram University, Aizawl.

1. Introduction

The application of ICT and Internet in general and use of social media tools in particular has seen a rapid increase in growth of its users in the last decade. The use of social media tools has allowed users of all ages to quickly and easily share information to each other by using different communication applications. In order to keep up in our daily lives, it is safe to say that without social media tools we cannot function effectively in our work space. The popularity of social media tools has led to a rise in the number of internet users and has also affected India greatly. Studies show that India has the second largest number of internet users in the world and is having an exponential growth since 2015.

It is safe to assume that since the creation of social media applications, social media has grown exponentially and developed rapidly to the point that social media applications are created to be more user friendlier than ever, and they are here to stay and will be available throughout human history. The first ever globally popular social media application was Myspace, launched in 2003 by Tom Anderson and Chris DeWolfe and it paved the way in which social media applications would function. In 2004 another social media application was introduced into the world which was at the time known as 'Thefacebook.com' but, was only opened for students at Harvard University in Cambridge, Massachusetts. It allowed users to create their own profiles and have a network of friends which they can communicate and share information and media with, it was mainly used as an education-based network. In 2006, Facebook became available to the world and grabbed the attention of internet users everywhere and quickly rose in popularity. Due to its ease of use, new interaction options with its users and many other features, it quickly became the most used social media application in the world. However, the popularity of YouTube was also quickly rising as users were able to share videos with other users from all around the world.

Social media has changed the way in which we interact and communicate with individuals throughout the world. Even the world's most powerful leaders now rely on social media to disseminate information to their general public. X (Twitter) is the

most popular social media amongst governments as out of 193 U.N. member countries; 187 members have official Twitter accounts and rely on social media application to address its followers on important state of events and news about the government.

Institutions have begun incorporating social media applications for disseminating information regarding admissions that are going to opened, exam dates, important events, announcements and activities that are going to take place within the institution quickly to the students and its users. They can easily form groups using social media applications and host meetings and group discussions all within a short period. Social media applications have significantly improved the productivity of its users while both saving time and money of the users.

Social media allows the users to have closer relationships between the libraries and its users. The use of social media tools is growing among libraries by making use of different media tools such as Facebook, Twitter, Instagram, LinkedIn, WhatsApp, blogs, Flickr etc. to name a few. Using these tools the libraries can help to cover and disseminate information quickly among its users about events, exhibitions and celebrations that are occurring in the library. Social media allows its users to connect with each other by forming communities and bridge people together for social interaction. It further allows libraries to promote awareness by publicizing the library resources, its services and products and allows for interaction among the library staff and its users as a social community. Social media is essential for reaching out to the communities and is a great tool for providing library users with information in an easy and accessible manner.

1.1 Types of social media tools

Web 2.0 and 3.0 has been made compatible with library management software in which libraries have started to provide and utilize different innovative services to the user community by the use of social media tools such as:

i. Facebook

Facebook provides a broad reach and diverse user base as it allows sharing a variety of content formats such as text, images, videos and links. Facebook groups are a valuable tool for building communities. Using these communities, students, teachers and researchers can expand their knowledge and develop collaborative learning skill through peer-learning. Studies have shown that Facebook has helped to improve students' social awareness their self-efficacy and their relations with other students.

ii. YouTube

YouTube is a powerful tool for creating educational content and videos and sharing conference presentations. It can help students, teachers and researchers to understand abstract concepts deeply and more clearly as it allows its users to experience different perspectives and relive different situations that they may not encounter such as historical events, science-based experiments and different real-life situations. YouTube can help weaker students in their studies as it allows the students to visualize their subjects in a video format, which can be useful for visual learners.

iii. LinkedIn

LinkedIn is used by researchers to showcase their expertise and field of interests by allowing to connect with peers and share their related research content. LinkedIn is a powerful tool for building collaboration, to showcase one's research achievements and for finding job opportunities.

iv. X (Twitter)

X (Twitter) is popular and known for its real-time engagement and short messaging capability. It allows for dissemination of information quickly and allows networking with different experts in their interested fields and participate on relevant discussions through the use of hashtags which twitter (X) is famous for. Twitter is one of the most popular social media tools as it is also used by powerful world leaders to communicate with the public, used by large companies and industries to promote and share their products and new features. Twitter (X) uses hashtags so that users can communicate and share their opinions and voice their concerns about certain topics

and through the use of these hashtags, different powerful movements have been formed.

v. Pinterest

Pinterest is a visual bookmarking site and is primarily used for sharing and categorizing images found online. Pinterest founder Silbermann stated that." Pinterest is a catalogue of ideas rather than a social networking platform." Pinterest is a popular site for teachers as it allows them to post, collect and group teaching resources and ideas which they can use and share with others. It allows them to create theme-based pinboards which makes it easier to search for their desired topic.

vi. Blogs

Blogs are a great tool for students as it can improve their writing skills and build their confidence as writers. Blogs encourage students to experimenting, risk-taking and take ownership of their writing which will help them become better observers of others' writing. Teachers can use blogs to write their modes of teaching and its impact on their students which can be a useful tool for other teachers. Researchers make use blogs to writing their findings and state of progress on their research in a well-kept record. This can educate other researchers and facilitates collaboration among like-minded researchers.

vii. WhatsApp

WhatsApp has become a primary method of communication as it allows user to interact with their peers by send and sharing not only text but other useful digital formats such as audio, video and images. WhatsApp has the ability to create groups that are like communities where group members can interact with each other on their points of interest and knowledge. Teachers can make WhatsApp groups to communicate with their students to disseminate information about their studies and make plans and guides to help educate their students. WhatsApp is an important tool for researchers as it allows their work to be broadcasted on WhatsApp groups which can be used for reaching to a much larger audience.

viii. Instagram

Instagram is a visual-based social media tool and is more appealing to the youth as it allows users to share engaging and appealing visual contents such as short videos, images and infographics to catch the interest of its audience. It is useful for researchers by showing glimpses of their research and experiments to a younger audience who may one day be interest in the field of research.

2. Significance and scope of the study

The emergence, growth and popularity of social media tools have largely expanded the horizon of teaching, learning and research. With the development of library 2.0, social media tools have been effectively integrated in library websites to provide the user community to gain wide access to various information resources and services provided by the libraries. This has further improved the communication among the library staff, resources and community of users. The present research problem is limited to 9 (nine) Central Universities of North East Region excluding Central Agricultural University, Imphal which is specialized in nature and tries to make an in-depth study of University Libraries adopting social media tools in reaching the user community and optimal use of library resources and services. It is in this context the present research problem assumes great significance. The list of Central University Libraries is listed below, which are:

The scope of the present research is to know the application of social media tools in Central University Libraries of North East India. The list of Central University Libraries under the study are listed below.

Sl. No.	**Name of University**	**Library website**
1	North-Eastern Hill University	www.nehu.ac.in/library
2	Manipur University	mulibrary.manipuruniv.ac.in

3	Tripura University	tripurauniv.ac.in/site/index.php/en/central-library-en
4	Sikkim University	library.cus.ac.in
5	Assam University	www.aus.ac.in/library
6	Mizoram University	lib.mzu.edu.in
7	Nagaland University	library.nagalanduniversity.ac.in/
8	Rajiv Gandhi University	rgu.ac.in/library/
9	Tezpur University	www.tezu.ernet.in/Library/

Table. 1. List of central university libraries.

3. Research Design

3.1 Statement of the problem

Social Media Application in libraries in general and University libraries in particular connects its communities in providing access to library resources and services. This has made the dissemination of information to become very easy through Social Media tools. Considering its present-day importance, the scholar is motivated to take up the research problem on Application of social media Tools in Central University Libraries of North East Region in the greater interest of students, faculty and research scholars.

3.2 The objectives of the study:

1. To assess the present scenario of social media tools and its applications in the 9 (nine) Central Universities of North East India.

2. To elaborate the benefits of social media tools in teaching, learning and research.
3. To present the technologies associated with social media tools and its application through library web sites.
4. To propose the most relevant social media tools for Central Universities which are dedicated to the development of academic and research activities.

4. Research Methodology:

The present research uses a structured questionnaire to collect the data from the users, along with two other methods which are survey method and case study method for studying and research of the different library websites and applications incorporated by the Central Universities under the study.

4.1. Data Collection:

i. Questionnaire Method:

A questionnaire was designed and was distributed to 100 students of each Central University to get their feedback of the effective use of social media Tools for their teaching and learning activities. This has further facilitated to know the deficiencies and problems in offering these tools and library services from these 9 Central Universities.

ii. Survey Method

The scholar on the study investigated a detailed survey on the present library websites of 9 Central Universities in North East India and make an assessment of the effective use of social media tools. The survey identified the strength and weaknesses of the libraries under study.

iii. Case Study Method

The scholar attempted to make a detailed study of the best University Libraries in India adopting social media tools for teaching learning and research. The experiences gained from other libraries were useful to suggest the appropriate

social media tools which can be implemented by the Central Universities of North East region.

5. Findings according to the objectives of the study

Four objectives were defined before conducting the study and the findings of each objective are discussed below:

Objective 1: To assess the present scenario of social media tools and its applications in the 9 (nine) Central University Libraries of North East India.

i. Results shows that the majority of the respondents 91% use smart phones as their main device for accessing social media and 7% are using laptops to access social media tools while only 1% of the respondents are using desktop computer for accessing social media applications. The majority of the respondents in Assam University (85%), Manipur University (96%), Mizoram University (91%), Nagaland University (94%), NEHU (81%), Rajiv Gandhi University (97%), Sikkim University (88%), Tezpur University (85%) and Tripura University (97%) claim that smart phones are the main devices used to access social media content. The data clearly shows that impact smart phones have for accessing social media as the popularity of personal computers and laptops are declining for accessing social media content.

ii. Analysis shows that the majority of the respondents 93% have good knowledge of the use of PDF, as it is the most common digital format used for sharing information and 7% of the respondents do not have a good knowledge on PDF. The majority of the respondents in Assam University (93%), Manipur University (100%), Mizoram University (94%), Nagaland University (90%), NEHU (93%), Rajiv Gandhi (90%), Sikkim University (94%), Tezpur University (92%) and Tripura University (94%) have good knowledge on the use and sharing of PDF.

iii. According to the analysis, the majority of the respondents 84% prefer PDF as their ideal format for receiving and sending documents, 12% of the respondents prefer Docx (MS Word document) and 4% prefer JPG (pictures) as their ideal format for receiving and sending documents. The majority of the respondents in Assam University (74%), Manipur University (85%), Mizoram University (88%), Nagaland University (81%), NEHU (82%), Rajiv Gandhi (85%), Sikkim University (79%), Tezpur University (86%) and Tripura University (91%) report that they prefer PDF as their main digital format for sending and sharing documents.

iv. The analysis reveals that the majority of the respondents 37% are using social media for 3-5 hours daily, 34% of the respondents use it for 1-3 hours daily while 19% of the respondents use social media for 5-7 hours and 10% of the respondents use social media for more than 7 hours daily. The data clearly shows how much time users spent on browsing social media content daily. The majority of the respondents in Assam University (44%), Nagaland University (39%) and NEHU (37%) are using social media for not more than 1 -3 hours per day. While the majority in Manipur University (35%), Mizoram University (44%), Rajiv Gandhi University (39%), Sikkim University (68%), Tezpur University (44%) and Tripura University (38%) are using social media for not more than 3 – 5 hours daily.

v. The findings show that overall, the majority of the respondents 53% have a good skill and understanding of using social media tools while 25% of the respondents state that they have very good skill on using social media and 22% of respondents claim to have average skills when using social media tool. The majority of the respondents in Assam University (59%), Manipur University (54%), Mizoram University (54%), Nagaland University (68%), NEHU (41%), Rajiv Gandhi University (41%), Sikkim University (44%), Tezpur University (64%), and Tripura University (59%) state that they have good skills when using the social media that they are familiar with.

vi. The findings indicate that the majority of the respondents 67% do not have a difficult time when learning new social media applications while 33% of the respondents have a difficult time learning and adjusting to new social media applications. The result shows that even if new social media applications are suddenly used by the University libraries, the majority of the users can quickly adapt to these changes. The majority of the respondents from Assam University (78%), Manipur University (81%), Mizoram University (66%), Nagaland University (74%), NEHU (63%), Sikkim University (68%), Tezpur University (61%) and Tripura University (71%) claim that they can easily adjust to new social media application quickly while the majority respondents from Rajiv Gandhi University (51%) find it hard to quickly adapt to new social media tools.

vii. According to the findings of the study of the selected 9 (nine) Central University Libraries, it is found that all the libraries under the study have implemented library digitization and are all fully digitized libraries. However, social media tools have not yet been implemented in all the libraries under the study in which 77% of the libraries under the study i.e. 7 (seven) out of the 9 (nine) Central University Libraries, have implemented at least one social media tool in their library and only 23 % i.e. 2 (two) central university libraries, Manipur University library and Nagaland University library have yet to implement social media tools in their library through the library website.

viii. Facebook is the most popular social media among the Central University Libraries under the study in which 6 out of the 9 Central University Libraries. Sikkim University Central Library, Tezpur University Central Library and Rajiv Gandhi University Central Library have implemented it on their library website while Assam University Central Library, Mizoram University Central Library and NEHU Central Library, although having a dedicated Library Facebook page, have not yet implemented it in their library website.

ix. YouTube is the second most popular social media tool implemented by 2 out of the 9 Central University Libraries which are Tripura University Central Library and Tezpur University Central Library. They have a dedicated Library YouTube Channel which can be accessed through their library website.

x. Instagram is another social media tool implemented by 2 out of the 9 Central University Libraries which are Tezpur University Central Library and Mizoram University Central Library. However, only Tezpur University Central Library provides a dedicated link to their Instagram page while Mizoram University does not provide a dedicated link to access their Instagram page.

xi. X (Twitter) is one of the most popular short form social media tools but is only implemented by Tezpur University Central Library.

xii. The findings show that dedicated library applications are implemented such as Knimbus by Mizoram University, EBSCO by Assam University Central Library, and Teesta Indus Central Library app by Sikkim University Central Library.

Objective 2: To elaborate the benefits of social media tools in teaching, learning and research.

i. The analysis shows that the majority of the respondents 48% agree that social media tools have the maximum importance in their studies, assignments, exams and projects, 43% of the respondents feel that social media only has moderate importance for their studies while 9% of the respondents state that social media does not have any significant importance for preparation of their exam, assignment and projects. The findings shows that social media has made a significant impact on the lives of the respondents in which the majority claims that social media is playing a very important for their studies with regards to their assignments, exams, projects and research. The majority of the respondents in Assam University (52%), Mizoram

University (51%), Tezpur University (50%) state that social media has moderate importance in their education. The majority of the respondents from Nagaland University (41%), NEHU (63%), Rajiv Gandhi University (49%), Sikkim University (53%) and Tripura University (65%) claim that social media has the maximum importance for their studies. While the majority of the respondents in Manipur University (50%) claim that social media tools does not have a significant impact for their studies.

ii. According to the analysis of the study collected from the respondents, the majority of the respondents 56% are using social media for academic and educational purposes everyday, 15% of the respondents use social media for educational content more than 5 times a week, 10% of the respondents are using social media for educational content 4 times a week , 11% are using it 3 times week and 8% of the respondents are using social media only 2 times a week for their educational needs. The results show that social media tools play an important role for acquiring academic and educational knowledge. The majority of the respondents in Assam University (67%), Manipur University (54%), Mizoram University (45%), Nagaland University (55%), NEHU (37%), Rajiv Gandhi University (59%), Sikkim University (62%), Tezpur University (57%) and Tripura University (62%) are using social media tools everyday for their academic and educational purposes.

iii. Results shows that the majority of the respondents 42% are using social media mainly for acquiring knowledge on the latest news and information, 26% of the respondents are using social media for their academic knowledge, 21% of the respondents are using social media for socializing with their friends and relatives and only 11% of the respondents claim to use social media for only entertainment purposes. It can be found that the majority of the respondents agree that social media is an important tool for acquiring knowledge on the latest news and information which can be beneficial for teachers,

students and researchers. The majority of the respondents in Assam University (52%), Mizoram University (40%), Nagaland University (45%), NEHU (44%), Rajiv Gandhi University (43%), Sikkim University (59%) and Tripura University (47%) are using social media for the main purpose of acquiring the latest news and information. The majority of the respondents from Manipur University (35%) are using social media for socializing as the main purpose While, the majority of the respondents Tezpur University (41%) are using social media mainly for academic purposes.

iv. The findings shows that the majority of the respondents 42% are not easily distracted when using social media for acquiring their educational content, 41% of the respondents state that they are easily distracted by notifications from other social media applications while 17% claim that they finish their work first before opening notifications from other social media applications. The majority of the respondents in Assam University (41%), Manipur University (46%), Rajiv Gandhi University (51%) and Sikkim University (38%) claim that they are easily distracted when using social media tools for education. The majority of the respondents in Mizoram University (45%), Nagaland University (52%), NEHU (44%), Tezpur (46%) and Tripura University (41%) state that they are not easily distracted.

v. As per the analysis, the majority of the respondents 67% rely on both print and digital documents, while 25% of the respondents rely mostly on print documents and only 8% of the respondents rely only of digital documents for acquiring information. The majority of the respondents in Assam University (59%), Manipur University (65%), Mizoram University (68%), Nagaland University (68%), NEHU (67%), Rajiv Gandhi University (77%), Sikkim University (62%), Tezpur University (68%) and Tripura University (62%) all claim that rely on both book based and digital documents for acquiring their educational content.

vi. As per the analysis, the majority of the respondents 54% agree that due to the easy access to online educational materials, print media will be replaced by online material in the future while 46% of the respondents disagree that online educational materials will erase the need for print media in the future. The findings show that although the majority of the respondents feel that online content can erase the need for print media, many of the respondents state that the need for print media will not be erased due to online materials. The majority of the respondents in Assam University (56%), NEHU (56%), Rajiv Gandhi University (62%), Sikkim University (71%), Tezpur University (51%) and Tripura University (62%) claim that the ease of access to online educational content will erase the need print materials. While, the majority of the respondents in Manipur University (54%), Mizoram University (51%) and Nagaland University (65%) state that online educational materials will not erase the need for print materials.

vii. The analysis reveals that 41% of the respondents agree that the main disadvantage of using social media application for educational purposes is the need to use too many different platforms. Another 41% of the respondents agree that the main disadvantage of using social media applications is that the information obtained from social media is difficult to very and authenticate while 17% of the respondents agree that the main disadvantage of using social media application due to too much information leading to information overload for users. The majority of the respondents in Manipur University (46%), Mizoram University (51%), Nagaland University (52%), NEHU (48%), Sikkim University (32%), Tezpur University (55%) and Tripura University (41%) claim that the main disadvantage of using social media is due to the difficulty in checking the authenticity of the information provided by social media tools. The majority of the respondents in Assam University (48%) and Rajiv Gandhi University (54%) claim that the main disadvantage of using

social media is due to the need of using many different social media tools.

Objective 3: To present the technologies associated with social media tools and its applications through library web sites.

i. The results shows that the majority of the respondents 56% are visiting the library less than 3 times a month while 21% of the respondents claim that they visit the library more than 7 times and 4% visit the library less than 7 times a month. The data shows that library users are visiting the library less due to the growth of digitization and the ease of access to library resources through the library websites. The majority of the respondents in Assam University (33%), Manipur University (58%), Mizoram University (81%), Nagaland University (61%), NEHU (52%), Rajiv Gandhi University (67%), Sikkim University (59%) and Tripura University (59%) are visiting the library less that 3 times a month while The majority of the respondents in Tezpur University are visiting the library more than 7 times a month.

ii. According to the analysis, the majority of the respondents 75% are aware of the presence of their institution's library website while 25% are not aware of the presence of their institution's library website. The majority of the respondents in Assam University (52%), Manipur University (58%), Mizoram University (78%), Nagaland University (77%), NEHU (93%), Rajiv Gandhi University (77%), Sikkim University (59%), Tezpur University (94%) and Tripura University (79%) are aware that their institution's library has a dedicated library website.

iii. Analysis shows that the majority of the respondents 51% rarely visit their institution's library website while 40% of the respondents report to sometimes visit their library's website and 9% of the respondents state that they frequently visit their institution's library website. The majority of the respondents in Assam University (52%), Manipur

University (50%), Mizoram University (68%), Nagaland University (68%), NEHU (52%) and Rajiv Gandhi University (51%) state that they rarely visit their library's website. A majority of the respondents in Tezpur University (47%) and Tripura University (47%) reported that they sometimes visit their library's website.

iv. The analysis shows that the majority of the respondents 57% are not aware of their institution's library website providing a service to directly interact with the librarian while 43% of the respondents are aware of their institution providing a service to directly interact with the librarian. All of the library websites under the study provide a service for interacting with the librarian through ask-a-librarian function or by the librarian's e-mail address which is highlighted in all the libraries websites. The majority of the respondents in Assam University (81%), Manipur University (77%), NEHU (63%), Rajiv Gandhi University (56%), Sikkim University (65%) and Tripura University (53%) report that they are unaware of whether their institution's library website offers a service to communicate with the librarian. While the majority of the respondents in Mizoram University (66%) and Nagaland University (55%) are aware that their institution's library website provides a service to interact with the librarian. 50% of the respondents in Tezpur University are aware of the service to communicate with the librarian through the library website while the other 50% are not aware of such service provided by the library.

v. The results shows that the majority of the respondents 65% are satisfied by the e-resources provided through the library websites while 35% of the respondents are not satisfied of the e-resources provided. The majority of the respondents in Manipur University (54%), Mizoram University (81%), Nagaland University (77%), NEHU (56%), Rajiv Gandhi University (54%), Sikkim University (62%), Tezpur University (79%) and Tripura University (76%) are satisfied with the e-resources provided by the library in the library

website while the majority of the respondents in Assam University (59%) are not satisfied with the available e-resources in their institution's library website.

vi. Analysis shows that the majority of the respondents 52% state that their institution's library does not provide guidance on the use of social media applications implemented by the library while 48% state that their institution's library provides guidance on the social media tools implemented by the library.

vii. The majority of the respondents 57% agree that the social media applications provided by their institution's library website is satisfactory while 43% of the respondents are not satisfied by the implemented social media applications tools. The analysis shows that although the majority of the library users are content with the social media tools provided by the library, there is a need for more social media tools to be implemented by the libraries for its users. The findings show that the majority of the respondents in Mizoram University (74%), NEHU (52%), Rajiv Gandhi University (62%), Tezpur University (71%) and Tripura University (62%) are satisfied with the social media tools present in the library website. The findings also show that the majority of the respondents in Assam University (59%) and Sikkim University (56%) are not satisfied with the social media tools implemented in the library website. Although Manipur University Central Library and Nagaland University Central Library have not yet implemented social media tools, the data shows that there is great interest among the users for the implementation of social media tools.

viii. According to the results, the majority of the respondents 51% rely on SMS for seeking library updates and notifications from their institution's website, while 22% of the respondents rely of Facebook for receiving library updates, 19% of the respondents rely on Instagram and 8% of the respondents rely on X(Twitter) for seeking library updates. The majority of the respondents in Assam University

(41%), Manipur University (46%), Nagaland University (51%), NEHU (52%), Rajiv Gandhi University (49%), Sikkim University (53%), Tezpur University (64%) and Tripura University (68%) report that even though social media has gain much popularity, they still rely on SMS for receiving their institution's library updates. The majority of the respondents in Mizoram University (49%) prefer Instagram for receiving library updates which shows the popularity of Instagram among the library users of Mizoram University.

Objective 4: To propose the most relevant social media tools for Central Universities which are dedicated to the development of academic and research activities.

According to the analysis of the acquired data from the respondents, and from the suggestions of the respondents on the questionnaire it clearly shows that social media tools are playing and important role in the way we gather, collect and search for information in regards to our academic and research activities. However, social media applications are not made equal in terms of usability and ease of understanding. Here are some of the most relevant social media tools which central universities can implement for their users academic and research activities.

i. The findings show that social media tools play a very important roll among the respondents for their studies, exam and projects (figure.4.8.) which shows the popularity of social media tools among users for acquiring their educational content.
ii. As the results show that, the most popular social media tool among the respondents is WhatsApp (figure 4.3.), followed by Instagram and YouTube, libraries should consider adopting at least these three platforms to enhance user interaction and ensure broader dissemination of information.
iii. The results indicate that the majority of respondents possess sufficient skills in using social media (figure 4.4.), suggesting that users are well

prepared to adopt and engage with any new social media tools introduced by the library.

iv. The results reveal that many respondents are satisfied with the e-resources provided by the institution's library, however, libraries should enhance awareness by sharing better guidance through social media tool on how to access and effectively use these valuable e-resources.

v. The findings show that the main disadvantage of using social media for education is due to the difficulty of checking the authenticity of the information provided in social media tools and the abundance of too many social media tools that are available for use. Libraries can help with this problem by providing seminars and workshops to teach users on how to check the authenticity of information provided to them and provide links to official library social media groups in the library websites to redirect users to the correct social media tools used.

6. Conclusion

The advancement in technology has made life simpler and has enabled us to reach out to the world through our finger tips. Humans are social beings so every advancement in technology also strives to improve how we interact and share information and data between each other. Before the rise in popularity of social media tools, social networking sites became popular as it allowed users to create their own personal digital space which other users can interact and communicate with.

The research studies the significance and importance of social media, its impact on teachers, students and researchers. Social media has become an important part of our daily life in which platforms such as Facebook, Instagram, WhatsApp, X (Twitter) etc help people communicate, share information and stay connected with friends and family. It has enabled us to learn new things, follow the latest news and has given the ability to express our ideas to a much larger audience

Social media tools have made significant positive as well as negative changes which can be seen through the suggestions made by the respondents, as the majority of the respondents are requesting for more awareness campaigns on digital literacy and digital etiquette, how to decrease screen time for students, and the major flaw that the respondents have on social media is the difficulty in checking the authenticity of information available on social media. The rise of Artificial Intelligence has impacted every social media platform. Each platform has their own dedicated A.I. such as Meta AI on WhatsApp and Instagram, Grok on X (twitter) and AI video summarization and AI automatic video dubbing in YouTube.

Social media tools are here to stay so it is important for users to grow with them. These platforms are becoming powerful tools for communication, learning and sharing information so by adapting to new social media technologies, users can connect with other users to promote ideas and gain access to knowledge more easily. Therefore, libraries need to adapt social media tools more effectively to cater the needs of its users.

7. Suggestions from the researcher

The researcher has made suggestions for improving the central library's use and implementation of social media tools for the development of sharing and dissemination of knowledge among the students, researchers and teachers. The suggestions provided are based on the study's findings.

i. Implement social media applications for polls and surveys to collect the feedback on library services.
ii. Using social media tools libraries can monitor the user interactions and identify the needs and services of students, teachers and researchers.
iii. More central libraries need to implement social media tools or at least implement the popular social media tools. A dedicated media committee can be established to handle all social media tasks such as making posts, stories and status to provide useful information to the library users.

iv. Central Libraries need to implement more library applications in both android and iOS to provide virtual library access to users of the library's collections, services and make reservations on books, The library app can be used to talk to library staff and receive immediate online solutions to their queries about the library services and function from the library staff.

v. Implementing live streaming features for broadcasting events to reach a wider audience and also for researchers who are not able to be present physically in the events.

vi. Awareness programs should be organized to educate the library users on negative and positive impact of social media tools on their education and research.

vii. Awareness and guides on how to evaluate and retrieve reliable sources of information through social media tools.

viii. Social media tools can be used to advertise the library website, and its resources and features.

ix. Using social media tools, libraries can make official research chat groups to encourage new researchers and promote collaborative projects and sharing of insights and knowledge.

x. The library can create book clubs, study groups and academic discussion groups using the popular social media tools.

8. Suggestions for future research

Based on the present study and its findings, additional research on how the integration of A.I. (Artificial Intelligence) in all the popular social media tools have effects on information retrieval for students and research scholars. The additional studies may be conducted on the following suggested research areas.

i. The study may be exclusively conducted on only popular social media tools which have integrated A.I.

ii. The study can be extended further towards on how students and researchers rely on these A.I. services present in popular social media tools and if the information provided be these A.I. services can be relied upon as a credible source.

iii. The impact and effectiveness of A.I in supporting collaborative research and sharing of knowledge among the students, teachers and scholars.