A STUDY ON CHALLENGES OF e-LEARNING DURING COVID-19 PANDEMIC AMONG STUDENTS OF INDIRA GANDHI GOVERNMENT COLLEGE OF ARUNACHAL PRADESH

ANJANGMAI MAM

(20PEX003)

Thesis Submitted to

Avinashilingam Institute for Home Science and Higher Education for Women,

Coimbatore – 641043

In partial fulfillment of the requirements for the

Degree of Master of Science in Extension and Communication

May– 2022

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Signature of Head of Department | Signature of the External Examiner | Signature of the Guide

CERTIFICATE

This is to certify that the dissertation entitled on "**A Study On Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh**" is submitted to the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore–641043 impartial fulfillment of the requirements for the award of the degree of Master of Science in Extension and Communication is a record of original research work done by ANJANGMAI MAM (20PEX003), during the period of the study in the Department of Home Science Extension Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 641043, under my supervision and guidance, has not formed the basis for the award of any Degree/Diploma/Associateship/Fellowship or similar title of other University.

Signature of the Guide

Signature of the Head of the Department

DECLARATION

I **Anjangmai Mam** hereby declare that the thesis, entitled "**A Study On Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh**", submitted to the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, impartial fulfillment of the requirements for the award of the **Master of Science in Extension and Communication** is a record of original and independent research work done by me during six month under the Supervision and Guidance of **Dr. (Mrs.) R. Jansi Rani**, Assistant Professor (SG) and it has not formed the basis for the award of any Degree/Diploma/Associateship/Fellowship or other similar title to any candidate in any University.

Anjangmai

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

The investigator exalts **GOD Almighty** for being her refuge and strength and praises him for his everlasting love, bountiful mercy and amazing grace showered on her throughout the study.

The investigator expresses her immense gratitude to **Dr. S.P. Thyagarajan, Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, for providing the opportunity to conduct the research in this esteemed university.

The investigator owes her heartfelt thanks to **Dr. (Mrs.) V. Bharathi Harishankar, M.A., M.Phil., Ph.D., Vice Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the amenities provided for the successful completion of the study.

The investigator extends her sincere thanks to **Dr. (Mrs.) S. Kowsalya, M.Sc., M.Phil., Ph.D.,** Registrar, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing all facilities to carry out the study.

The investigator expresses her respectful regards and sincere thanks to **Dr. (Mrs.) N.Vasugi Raja, M.Sc., M.B.A., M.Phil., Ph.D.,** Dean, School of Home Science, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for her encouragement towards the research work.

The investigator expresses her profound sense of gratitude to **Dr. (Mrs.) S.Rajalakshmi, M. Sc, M. Phil, Ph. D, NET**, Associate professor and Head, Department of Home Science Extension Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her innovative, excellent, intellectual guidance, meticulous supervision, valuable advice, untiring help and constant encouragement and learned counsel each and every minute offered throughout the course of research work.

The investigator feels extremely happy and fortunate to place on record the sense of gratitude to **Dr. (Mrs.) R. Jansi Rani, M. Sc, B. Ed, M. Phil, Ph. D**, Assistant Professor (SG) Department of Home Science Extension Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her constant encouragement, help, approachable attitude throughout the practical work and support at all the times of need. Also

extends gratitude for her valuable help, guidance and encouragement rendered throughout the period.

The investigator expresses her sincere thanks to all the beloved **Teachers** in the Department of Home Science Extension Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for their advice and support throughout the study.

On a moral personal note, she owes a special thanks to her **Family** and **Friends** for their encouragement offered throughout the period.

Lastly, she offers her regards and profound thanks to all those who supported her in any respect during the course and completion of the study.

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INTRODUCTION

Corona Virus Disease, better called Covid-19, is a new kind of corona virus that attacks the human respiratory system (Wijayanengtias and Claretta, 2020). The disease was first identified in December 2019 in Wuhan, the capital of China's Hubei Province, and has spread globally throughout the planet without exception. This condition affects every part of human life quickly. The Covid-19 pandemic has caused unprecedented damage to the education system throughout the planet. Additionally to measurable economic impacts in the short and long term, there's an intangible collapse in educational institutions (Basilaia and Kvavadze, 2020).

Corona virus which is usually called as covid-19 is a communicable disease. This is a new and its spread ratio is extremely fast. The foremost common symptoms of corona virus are fever, cough, and shortness of breath. Some patients may have aches and pains, nasal congestion, running nose and raw throat. Particularly, educators, the foremost critical intellectual resources of any educational organization, must face various kinds of difficulties, including financial, physical, and mental, due to COVID-19. Provincial and native governments issued policies to temporarily eliminate face-to-face learning, which was replaced by 'study from home' through online or online learning. The policy has been applied at the elementary, secondary, and university levels. This step has been taken into consideration appropriate to forestall the spread of Covid-19 within the schools, colleges or campus environment, although a limited initial survey conducted by some researchers showed that implementation within the sphere continues to be diverse. And e-learning is a good solution for activating classrooms although schools or universities are closed, given the large risks during this pandemic (Herliandry et al., 2020).

The term "e-learning" was coined by Elliot Masie at his Tech Learn Conference in 1999; this was the primary instance that the term was utilized knowledgeable context (Gutierrez, 2014). The term e-learning covers a wide set of applications and processes including computer-based learning, web-based learning, virtual classrooms, and digital collaboration (Hambraecht, 2000).

e-learning is a new concept of education which is different from traditional learning. It provides a new brand arrangement for learning. The main feature of e- learning is that the presentation and communication of learning contents is finished through internet system. The learning environment is expanded by using internet in e-learning. And e-learning the new concept of education prepares environment for lifelong education and also provides opportunity to society for actual learning. It is defined as a versatile, interactive, self-pacing, and elaborate pedagogical method introducing educational approaches using a wide variety of platforms. After the spread of COVID-19, universities and academic institutes had two options for the migration to e-learning; the primary option was buying or using other platforms, and universities had to integrate the current distance-learning platforms. The opposite option was for the universities to create or use their own platforms (Adedoyin and Soykan, 2020).

The term e-learning connotes electronic method of learning which is related to computerized learning in an interactive interface at the convenience of both the learners and lecturers. It is an innovative means of instruction without physical contact with the learners and the lecturers. e-learning provides platform for students and lecturers to attach computer/mobile phone to a network or radio/television set that gives the chance to show from anywhere, at any time and by any means. Lecturers and students might have to download some apps like Zoom, FoxFi, and Audio boo among others to push e-learning. It involves the implementation of advancements in technology to direct, design and deliver the educational content, and to facilitate two-way communication between students and faculty. Furthermore, the authors also seen that it contains features like whiteboards, chat rooms, polls, quizzes, discussion forums and surveys that allow instructors and students to speak online and share course content side by side (Mukhtar et al., 2020).

There are numerous benefits of e-learning. The advantages of the e-learning include better content delivery, interactivity, quality content delivery and confidence of both learners and lecturers within the educational sector. Continuing, the authors also stressed that it also allows students to check at their open pace and convenience because the lecture material is instantly available and therefore the content delivery of the lecturer is sort of accessible to them. And e-learning is an innovative platform for transmitting knowledge and skills to the learners; it is cheap, saves time, and incorporates a wider coverage, and similarly promoting team learning and collaboration (Eduard et al., 2020).

e-learning platforms offer many advantages to learners like control over the content, control over the time spent learning, and thus the method may be adapted according to the learners needs and objectives of learning. It is a process that allows a student to try numerous education related stuffs like it supports the education development, the education in virtual environment and also it provides the standard of education process. So we account that e-learning process support on to the education purpose in teaching students in numerous ways (Coman et al., 2020).

The term e-learning is an interactive learning system that has the learner with the employment of communication and knowledge technologies and depends on an integrated digital electronic environment that displays courses across electronic networks, provides guidance and organizes tests similarly as managing and evaluating resources and processes. The importance of e-learning lies in solving the matter of the knowledge explosion and therefore the increasing demand for education and expanding opportunities for admission to education, additionally to enabling training and education of workers without leaving their jobs and contributing to breaking psychological barriers between the teacher and therefore the learner as well as satisfying the requirements and characteristics of the learner while raising the return on investment by reducing the price of education (Akram Jabar Najim, 2020).

e-learning can be delivered in three modes: (i) using the net as a supplement to face-to-face instruction, (ii) using the web in a mixed mode with face-to-face instruction or distance learning scenario, and (iii) using web-based instruction as completely online with no face-to-face student or student-teacher interaction. The e-learning tools are utilized by most of the academic institutions either to interchange or improve training models and traditional learning models. This technology innovation brings a smooth move from traditional training to web design courses. Some educational scientists have identified varieties of e-learning consistent with learning tools, while others had chosen to specialized in different metrics like synchronicity and learning content. There are 10 easily distinguishable varieties of e-learning. These are the 10 different kinds of e-learning like Computer Managed Learning (CML), Computer Assisted Instruction (CAI), Synchronous Online Learning, Asynchronous Online Learning, Fixed E-Learning, Adaptive E-Learning, Linear E-Learning, Interactive Online Learning, Individual Online Learning, and Collaborative Online Learning (Akram Jabar Najim, 2020).

The term e-learning (electronic learning) is on the increase, and as technology is consistently evolving and new inventions appear, e-learning concept is changing too. Practitioners and researchers also re-adapt their perspective and have yet to agree on common definitions and also on terminologies of the term. It is the best choice available to make sure that epidemics don't spread, as it guarantees spatial distancing despite the challenges and studied figures, which indicate that students are less likely to learn from this sort of education (Lizcano et al.,2020).

e-learning has many interpretations but briefly it stands for learning by electronic means. This implies learning circuitously from lecture notes, books or face-to-face from teacher but through electronic means. The common forms are computer-based training and web based lessons or on-line lessons. With the arrival of advanced technology, lessons are also taken anytime anywhere (Rajan Bhandari, 2020).

e-learning is at the nexus point of the convergence of pedagogical and as well as technological innovations. It geared towards creating a community of inquiry independent of time and location through the utilization of knowledge and communication technologies . It enables the development of perfect learning content through the application of sound instructional design principles to perfectly analyze the fundamental requirements of learning in addition to learning objectives (CommLab India Bloggers et al., 2020).

Additionally e-learning is a learning system that refers to the utilization of electronic media and information and communication technologies (ICT) in education. It is the use of technology to enable people to be taught anytime and anywhere. It includes training, the delivery of just-in-time information and guidance from experts. And it also includes numerous style of media that deliver text, audio, images, animation, streaming video, audio or video tape, television, CD or DVD-ROM and computer-based, as well as web-based learning. And e-learning can occur in or also out of the classroom. And e-learning has proven to be the most cost effective way to transmit knowledge to the most number of individuals no matter their location and their devices (Sammya Lokhande, 2019).

The process of studying through electronic devices is named e-learning or electronic learning. This e-learning is additionally said to be online education. Computers and internet connections are the main components of e-learning. During this digital era where the technology develops rapidly, the usage rate of online education is additionally pretty high.

Online education also offers the capacity to save and share materials, e-notes in all types of formats consisting of films, slideshows, phrase files, and pdfs (Azad Hossen et al., 2019).

The term e-learning is a learning system which formalized teaching but with the assistance of electronic resources. It is the tutorial which is facilitated and supported by Information Communication Technology (ICT) to enable people to be taught at anytime and anywhere. It involves the utilization of multi-media to boost learning. It may include training, the delivery of just-in time information and guidance from experts. While teaching is commonly based in or also out of the lecture rooms, the employment of computers and also the online forms are the foremost component of e-learning. And e-learning is termed as a network enabled transfer of skills and knowledge through which the delivery of education is made to an outsized number of recipients at the identical or different times. It is a platform that provides anywhere, anytime quick access for up gradation of knowledge and skills. It provides a platform where the individual gets a customized package associated with key thematic areas through a self- guided process (Nandita Kaushal, 2020).

Keeping in the view, the present study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh was taken by the investigator with the following objectives: To

1. Study the socio-economic background of the respondents
2. Know the students perception of e-learning during covid-19 pandemic
3. Identify the different responses about the challenges faced during e-learning from the respondents
4. Analyse the challenges and obstacles faced by the respondents

2. REVIEW OF LITERATURE

The Review of Literature pertaining to **"A Study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh"** is reviewed under the following headings**:**

2.1 Students Perception on Online Learning

2.2 Traditional Learning and Online Learning

2.3 Studies Related to Challenges of e-Learning

2.1 Students Perception on Online Learning

Perception is automatically related to certain nature of human being, which are human psychological features. Perception is a process which starts from the sense organs. That is a process related to acceptance of information by human brain that is said that during the process a person continually interacts with his or her environment. Students are the main and the most important resource in the teaching and learning process. Student's perception is the process of preferential treatment of students toward information they get from an object. It is important to understand student's perceptions of how the perceive teachers questions and answer questions in class. Those perceptions affect student's willingness to participate actively in question and answer sessions (Slameto et al., 2010).

Students opined that an online class has a significant impact on their learning style, and they also agreed that they get support from the teacher in online class like getting good reading material and also clarifying their doubt through online tools. But students do not believe that an online class replaces the traditional face-to-face classroom teaching, and they feel that online courses are not comfortable when compared to the conventional method of teaching. This is because online classes are in its infancy in an educational institution. While analyzing each item of the students' perception, it is observed that it can be divided into two aspects, i.e. positive perception and negative perception. A positive attitude is based on all positive beliefs of students towards online class, and negative perception is based on all negative feelings or demerits of an online course (Anupama Nayak, 2020).

The student’s perception about e-learning is that it provides them much freedom to connect with their teachers, fellow students and engage with their study materials at the comfort and flexibility of space and time. The easy access of study resources is found to be one of the major reasons for the students to opt for e-learning. Perceptions of Delhi’s school students towards virtual learning as it increased the technological literacy of students, traveling time can be saved in the online classes and it is more flexible in time and space, whereas it is not comfortable when compared with the offline classes (Mohammed Arshad Khan, 2021).

Based on the opinion of the students e-learning is effective in increasing knowledge and it was highly accepted. It is important not to focus only on increasing knowledge, but also on clinical and social skills. The students evinced a positive attitude towards online classes in the wake of corona. They also indicated the need for interactive sessions with quizzes and assignments at the end of each class to optimize the learning experience. Most students also reported that online classes could be more challenging than traditional classroom because of the technological constraints, delayed feedback and inability of the instructor to handle effectively the Information and Communication Technologies (Muthuprasad et al., 2021).

Online learning is better than face to face mode of learning, most of the students found it a better choice for learning in the midst of COVID 19 pandemic. Students found interest in carry out their study through online mode after the lock down period. Students felt that they could speed up their learning through online mode and students found that online mode of learning allows for comprehensive study. Students think that online learning promotes self learning. The perception of students on online learning student that curriculum can be completed through online mode of teaching and learning. Student agreed that subjects can be effectively taught and practicum activities can be learnt through online mode of teaching respectively (Ramakanta Mohalik, 2020).

The student revealed that distance learning is excellent and essential for their degrees, but their access to the computer and other devices they used for online learning is sometimes not accessible and averagely available. They also believed that the university branch's online or distance learning is moderately successful, and that the university and their subject professors are moderately helpful in providing support, and that their instructors understand during this type of learning arrangement. Similarly, they are inspired to use educational technologies and

often use various learning techniques during the COVID-19 pandemic (Ernie and Avila, 2020).

Students appear to be ambiguous regarding the effectiveness of online learning when compared with traditional methodologies. Students believe that they can make the same grade in an online learning course. They believe that online learning is more effective than traditional course. Students do not seem to prefer online learning to traditional courses. Students tended to agree that they could learn the same amount in an OL course (John Malley, 2000).

Students described the option of online education as a good option during lockdown period and also liked it a lot and also consider the online classes as a great option to reduce the distance between students and teachers and diversify knowledge. But they also believe that this system is not good for completing syllabus and clearing the doubt of related subjects (Kamal Ahmad, 2020).

Students stated that a lack of immediate feedback from tutors and peers can be an important challenge in an online environment, affecting learning outcomes as expressed by the following quotation, We need more reflection from the tutor in discussion type sessions to give direction if we go to the wrong direction or missed something (Neha Batura, 2015).

Some students had expressed that access to learning course material should be an interactive session with faculties. There should be a platform where educative videos and important case based presentations can be shared. Online discussions and online work submissions should also be incorporated. They requested that a proper implementation, both at institutional and university level should also be done (Mehandi Vinayak Mahajan and Kalpana R, 2018).

Student's revealed that one important benefit of these online modules was that it provided most them with first experience using e-learning. The students stated that there would have been more favorable if shorter online units were utilized, if the two modules had been spread over a longer period of time, or if only one of the two learning units had been required. And it had represented an important, growing trend in the application of technology to facilitate them especially in colleges where programs and curricula must evolve to meet the changing needs of a competitive global economy (Karl L et al., 2019).

2.2 Traditional Learning and Online Learning

Traditional learning

Traditional learning always involves a ‘sage on the stage’: the teacher who communicates in-person with a group of students in a brick and mortar facility. This method of learning typically involves students gathering in physical classrooms during a certain timeframe with the purpose of learning about specific topics or to gain specific hands-on job training and experience (David Ciccarelli, 2020).

Traditional classes are more suitable for young children, teenagers, and young adolescents who are yet to join the workforce. Regular attendance in classes helps them interact with other individuals of their own age, be better disciplined, follow a regular schedule, and improve their physical fitness and mental alertness. Classroom learning helps students and teachers know each other in a better manner. This allows teachers to know the students and evaluate their strengths and weaknesses better, act as mentors, and guide students in their career possibilities (Barindra de, 2018).

Traditional learning or education takes place in a classroom setting. A trainer who moderates and regulates the flow of information and knowledge. Then, the trainer expects the employees to deepen their knowledge through written exercises at home. Nowadays, technology is incorporated in the classroom more and more. However, in face-to-face instruction scenarios, the primary source of information comes from the trainer **(**Caroline, 2021).

Merits of traditional learning

Face-to-face learning: Learning in-person allows students and teachers to get to know each other much better. Teachers can pick up on physical queues and nuances that might typically go unnoticed in an online setting. Most importantly, interacting with a teacher face-to-face allows students to build an intimate sort of trust with the educator.

Creates good routines: For many children and young adults, the discipline of following a daily school schedule establishes important routines and sets them up for success as a working adult.

Hands-on examples: Educators have the opportunity to provide students with real life examples they can touch and interact with. This is a crucial element for hands-on learners.

Teaches good social skills: The idea of being put into a class with people of all different backgrounds and personality types allows for countless social opportunities that won't necessarily experience in an online format.

Better for physical health: Students are way more likely to get physical exercise if they have scheduled time carved out each day to do so, or have a campus gym nearby (David Ciccarelli, 2020).

Demerits of traditional learning

No flexible hours: Teachers and students might find the strict schedule of the educational institution difficult to keep if they have multiple commitments or other jobs.

Commuting: Driving back and forth to the facility every day takes up a lot of time for both educators and learners. Time and money, vehicle maintenance or public transit will be spent towards getting to the school.

Larger student loans: Piggybacking of the last point, the loans taken out by students who do traditional learning in-person will be much greater due to living costs (residence or off-campus), commuting and more expensive tuition.

Passive listening: When educators deliver a lecture or lesson at the front of the class, students can be left listening passively and the potential for disengagement skyrockets (Robins, 2019).

Online learning

Online learning, referred to as online learning or electronic learning, it is the acquisition of knowledge which takes place through electronic technologies and media. In simple language, e-learning is defined as "learning that is enabled electronically". Typically, e-learning is conducted on the Internet, where students can access their learning materials online at any place and time. And e-learning most often takes place in the form of online courses, online degrees, or online programs (Sander Tamm, 2020).

Online learning is defined by Ministry of Communication and Technology of New Zealand (2008) as "learning facilitated by the use of digital tools and content that involves some form of interactivity, which may include online interaction between the learner and their teacher or peers". Online learning is the delivery of individualized, comprehensive, dynamic learning content in real time, aiding the development of community's knowledge, linking learners and practitioners with experts (Ahmed and Khalifa, 2016). Online learning refers to the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance (Rosenberg, 2015).Online learning is the use of network technology to design, deliver, select, administer, and extend learning (Elliot Masie, 2019). Online learning is the convergence of learning and the internet (Banc of America, 2020).

Online learning encompasses a range of technologies such as the worldwide web, email, chat, new groups and texts, audio and video conferencing delivered over computer networks to impart education. It helps the learner to learn at their own pace, according to their own convenience. Online education requires a great deal of resources and careful planning. In this, teachers act as facilitators rather than transmitters of content knowledge, and ICT were regarded as resource that enhances the learning experience of students. Learners learn through e-learning tools which are available to all. The term e-learning has brought back the joy in learning through its innovative and interactive content delivery and had proved to be more appealing among students (Indira Dhull, 2017).

Online learning is an environment where the participants or students learning takes place in an online format. A teacher would upload or post content on learning management software (LMS) and share it with the class digitally. The learning content can be accessed on devices that are connected to the internet (Robins et al., 2019).

Online learning is an interactive learning in which the learning input/experience/ content is available online and provides automatic feedback to the learner's learning activities. Online communication with real teachers may or may not be included but the focus of e-learning is usually more on learning content than on communication between learners and teachers. And e-learning also covers a wide set of digital learning applications and processes such as web-based learning, computer-based learning, virtual classroom, etc. It includes delivery of content via internet, intranet, audio and videocassettes, satellite broadcast, interactive television, CD-ROM, etc (Paulsen, 2003).

The term e-learning offers the ability and facility to share material in all kinds of formats such as videos, slideshows, word documents and PDFs between users, to conduct webinars including live online classes, and to promote effective and real time communication and interaction between distance teachers and learners (Talentlms, 2014).

Merits of online learning

Through online learning instructors have learning in any time and in any place, it is a good option for those who have commitment of time with family or work. Online learning can help in changing and supporting the idea of ongoing assessment. Students learn more than they do in traditional courses. Online courses have increased student retention rates. Online learning increases student's interaction with their teachers especially for shy students (Andriotis, 2016).

According to Priyanka Gautam, (2020) merits of online learning

Efficiency: Online learning offers teachers an efficient way to deliver lessons to students. Online learning has a number of tools such as videos, PDFs, podcasts, and teachers can use all these tools as part of their lesson plans. By extending the lesson plan beyond traditional text books to include online resources, teachers are able to become more efficient educators.

Accessibility of time and place: Another advantage of online education is that it allows students to attend classes from any location of their choice. It also allows schools to reach out to a more extensive network of students, instead of being restricted by geographical boundaries. Additionally, online lectures can be recorded, archived, and shared for future reference. This allows students to access the learning material at a time of their comfort. Thus, online learning offers students the accessibility of time and place in education.

Affordability: Another advantage of online learning is reduced financial costs. Online education is far more affordable as compared to physical learning. Moreover online learning eliminates the cost points of student transportation, student meals, and most importantly, real estate. Additionally, all the course or study materials are available online, thus creating a paperless learning environment which is more affordable, while also being beneficial to the environment.

Improved student attendance: Since online classes can be taken from home or location of choice, there are fewer chances of students missing out on lessons.

Suits a variety of learning styles: Every student has a different learning journey and a different learning style. Some students are visual learners, while some students prefer to learn through audio. Similarly, some students thrive in the classroom, and other students are solo learners who get distracted by large groups. The online learning system, with its range of options and resources, can be personalized in many ways. This is the best way to create a perfect learning environment suited to the needs of each student.

Demerits of online learning

According to Nelson Mandela, (2020) these are the disadvantages of e-learning

- Online student feedback were limited
- e-learning can cause social Isolation
- e-learning requires strong self-motivation and time management skills
- Lack of communicational skill development in online students
- Prevention cheating during online assessments were complicated
- Online instructors tend to focus on theory rather than practice
- e-learning lacks face-to-face communication
- e-learning was limited to certain disciplines
- Online learning would be inaccessible to the computer illiterate population
- Lack of accreditation and quality assurance in online education

According to Priyanka Gautam, (2020) demerits of online learning are

Internet connection problems: There was a problem with internet system, online learning not possible. The user cannot do anything over on it because of slow connection.

Lacks the warmth of face to face interaction: Learning in a physical classroom is interesting and more involving as human interactions were present. There are classmates to connect with and an instructor to consult for immediate feedback. This lacks in online learning.

Lack of motivation: Online learners lack motivation while studying because they easily get distracted towards any other thing. Working at their own pace becomes a disadvantage for students who have difficulty with time management and a tendency of procrastination. These students tend to be more successful with the structure of traditional learning.

Inability to focus on screens: For many students, one of the biggest challenges of online learning was struggled with focusing on the screen for long periods of time. With online learning, there is also a greater chance for students to be easily distracted by social media or other sites. Therefore, it is imperative for the teachers to keep their online classes crisp, engaging, and interactive to help students stay focused on the lesson.

Unsuitable for hands-on fields: There are courses that require many practical sessions such as surgery, medicine, and the sciences.

Technology issues: Another key challenge of online classes is internet connectivity. While internet penetration has grown in leaps and bounds over the past few years, in smaller cities and towns, a consistent connection with decent speed is a problem. Without a consistent internet connection for students or teachers, there is a lack of continuity in learning for the child. This is detrimental to the education process.

Sense of isolation: Students learn a lot from being in the company of their peers. But, in an online class, there are minimal physical interactions between students and teachers. This often results in a sense of isolation for the students. In this situation, it is imperative that the school allow for other forms of communication between the students, peers, and teachers. It had included online messages, emails and video conferencing that will allow for face-to-face interaction and reduce the sense of isolation.

Teacher training: Online learning requires teachers to have a basic understanding of using digital forms of learning. However, this was not the case always. Very often, teachers have a very basic understanding of technology. Sometimes, they don't even have the necessary resources and tools to conducts online classes. To combat this, it was important for schools to

invest in training teachers with the latest technology updates so that they can conduct their online classes seamlessly.

Manage screen time: Many parents are concerned about the health hazards of having their children spend so many hours staring at a screen. The increase of screen time was one of the biggest concerns and disadvantages of online learning. Sometimes students also develop bad posture and other physical problems due to staying hunched in front of a screen.

2.3 Studies Related to Challenges of e-Learning

Neha Batura, (2015) Conducted a Case Study on **"Exploring Student Perceptions and Experience of a Course in Economic Evaluation".** This study explored the perceptions and experiences of a group of students enrolled in an online course in economic evaluation. A mixed methods approach was adopted for the data collection, and thematic analysis was used to synthesize the data collected and highlight key findings. This study had three main objectives: (a) to explore student perceptions of online learning before their exposure to the course, (b) to understand the student experience of learning economic evaluation online, and (c) to consider how the design of an online learning experience can overcome negative perceptions and meet or exceed positive expectations. The participants identified several positive and negative perceived attributes of online learning, many of which was well documented in the literature. In addition, after exposure to the course, participants reported several factors that affected their learning experience on this course, some of which had not yet been reported in the wider literature. The five main factors affecting learning on this course include: pace of learning in an online environment, learning style, immediacy of feedback, method of content delivery, and issues around navigating content. These findings could help improve online teaching practice and learning quality in future courses.

Adnan and Anwar,(2020) conducted a study to examine "**The Attitudes of Pakistani Higher Education Students Towards Compulsory Digital and Distance Learning University Courses Amid Corona Virus (COVID-19)".** Objective of the study was to find out the perspectives of Undergraduate and Postgraduate about online education in Pakistan. The findings of the study highlighted that online learning cannot produce desirable results in underdeveloped countries like Pakistan, where a vast majority of students were unable to access the internet due to technical as well as monetary issues. The lack of face-to-face interaction with the instructor, response time and absence of traditional classroom

socialization were among some other issues highlighted by higher education students. This study claims that during the lockdown period, around 70 percent of learners were involved in e-learning. Most of the learners used android mobile for attending e-learning. Students had been facing various problems related to depression anxiety, poor internet connectivity, and unfavorable study environment at home. Students from remote areas and marginalized sections mainly faced enormous challenges for the study during this pandemic. This study suggests targeted interventions to create a positive space for study among students from the vulnerable section of society. Strategies were urgently needed to build a resilient education system in the state that ensured to develop the skill for employability and the productivity of the young minds.

Alturise, (2020) conducted a study on **"Learners and Teachers Satisfaction in the Online Learning Model Using the Blackboard Platform at Qassim University, Saudi Arabia".** The study concluded that e-learning mode was advancement in education, but significant works were needed to improve online learning applications. Some researchers investigate challenges and obstacles in e-learning during COVID-19 according to their educational environment and provided facilities by different institutes. The objective and the focus of this study were to identify university student's obstacles during the current global crisis and the possible solutions that could improve the learner's performance and overcome these problems in the future. This study suggested targeted interventions to create a positive space to study among students from the vulnerable section of society. Strategies were urgently needed to build a resilient education system in the state that ensured to develop the skill for employability and the productivity of the young minds.

Elizabeth et al., (2020) conducted a study on "**Benefit and Challenges of Online Learning in the Era of Covid-19**". Covid-19 is a pandemic ravaging the entire world. The outbreak of Covid-19 had forced the educational institutions to shift from the traditional method of imparting knowledge to digitalization method. Online learning then becomes the accepted conveyor through which teachers keep their students active. This paper, therefore, examined some of the benefits and challenges of online learning. The study employed the survey method with the use of questionnaire to gather its data. Two research questions were developed from which instrument used to gather data was designed. The population used for the study consisted students of some selected secondary schools in Yewa South Local Government Area of Ogun State. One hundred and sixty (160) respondents were randomly

selected from the population as sample size. Data collected were analyzed using mean method. Findings revealed among others that scheduling flexibility and pacing option are primary benefits of online learning. Despite these benefits, there were challenges such as lack of infrastructure, unavailability of steady power supply and unstable internet connection among others. The paper therefore, recommended that proper infrastructure such as reliable computer networks, broadband connectivity etc, that had support the online learning should be put in place so that the programme could become an integral component of educational system.

Kim, (2020) conducted a study on **"Barriers Faced by University Teachers in Online Teaching and Assessment at Home Environment".** By using Interpretative Phenomenological Analysis (IPA). The objective of the study was to understand the different barrier faced by the teachers in online teaching. They categorized barriers into four ways: Home environment barrier which included lack of basic facilities, family interruption during teaching, conducting an assessment, institutions support barriers, which includes an absence of training, lack of clarity and direction, insufficient budget for purchasing advanced technologies, technical difficulties faced by teachers which includes lack of technical infrastructure, slight awareness of online teaching platforms, security concern, teachers personal problem barrier such as negative attitude, low motivation for teaching, lack of technological knowledge become restrictions in online teaching and assessment. University students felt that online courses are not comfortable when compared with the conventional method of teaching. They did not accept that online classes could replace traditional face-to-face classes. For teachers, online classes was challenging mainly for practical subjects due to improper infrastructure facilities and lack of emotional attachment with the students. The pandemic was accompanied by isolation measures that had led students and teachers to confine to their homes. It was stressful for teachers and students to learn and teach at isolated environment due to the pandemic. Male students were more dissatisfied with current online learning, whereas female students were more dissatisfied with the current home environment that created a negative impact on their education.

Mahyoob, (2020) conducted a study on **"Challenges of e-Learning During the COVID-19 Pandemic Experienced by English Language Learners COVID-19"**has disrupted most of the industries in the world. The main objective of the study was to identify the challenges and obstacles of e-learning during the COVID-19 crisis encountered by

English language learners. Education is the only industry that was completely transferred to online mode in most countries around the world. Online learning was the best solution for continuing education during the pandemic, especially in tertiary education. This study aimed to determine the challenges and obstacles confronted by English language learners in Science and Arts College, Alula, Taibah University, Saudi Arabia, during switching to online learning in the second semester of 2020 due to the COVID-19 pandemic. The contribution of this study was to evaluate the learner's new experiences in online education and to assess the feasibility of the virtual methods of learning. This was achieved by analyzing 184 learners' responses to the survey-based questionnaire. A descriptive statistical method was used to test the validation of the study. It was found that the main problems that influence and impact online English language learners learning during COVID-19 are related to technical, academic, and communication challenges. The study result shown that most English language learners were not satisfied with continuing online learning, as they could not fulfill the expected progress in language learning performance.

Mohd Imran Mohd, (2020) conducted a study on **"Challenges and Perceptions of e-Learning among Students in a Private Institution: A Case Study in Malaysia**". The education systems in Malaysia, especially higher education institutions, were currently based on blended learning. The sudden outbreak of COVID-19 had disrupted many sectors and education is not an exception. To ensure the continuity of learning, the government had suggested for e-learning to be practiced in all institutions. The study objective was to assess the challenges and perceptions of e-learning among the tertiary level students. A study was conducted through an online survey in a private institution in Malaysia from March to April 2020. Descriptive analysis was used to assess the mean score of the challenges and perceptions. A total of 1,065 respondents participated in this study. Majority of the respondents (50.2 percent) had positive perceptions of e-learning as it was well supported. However, challenges on the Internet speed and quota affected the e-learning effectiveness. Thus, the strategies to improve instructional design on e-learning was necessary to develop more interactive activities and at the same time suits with low internet bandwidth.

Rajab et al., (2020) conducted a study on **"Online Learning Challenges in Medical Education During the Covid-19 Outbreak**". The corona virus disease 2019 (COVID-19) pandemic had impacted all aspects of our lives, including education and the economy, as we know it. Governments had issued stay-at-home directives, and as a result, colleges and

universities had been shut down across the world. Hence, online classes had become a key component in the continuity of education. The objective of the study was to analyze the impact of the COVID-19 pandemic on online education at the College of Medicine (COM) of Alfaisal University in Riyadh, Saudi Arabia. Between March and April 2020, they emailed a survey to 1,289 students and faculty members of the COM. They obtained 208 responses (16.1 percent), 54.8 percent of the respondents were females, and 66.8 percent were medical students, 14.9 percent were master's students, and 18.3 percent were faculty. Among the respondents, 41.8 percent reported having little or no online teaching/learning experience before the pandemic, and 62.5 percent preferred blending online and face-to-face instruction. The reported challenges to online medical education during the COVID-19 pandemic included issues related to communication (59 percent), student assessment (57.5 percent), use of technology tools (56.5 percent), online experience (55 percent), pandemic-related anxiety or stress (48 percent), time management (35 percent), and technophobia (17 percent). Despite these challenges, most of the respondents (70.7 percent) believed that the COVID-19 pandemic had boosted their confidence in the effectiveness of online medical education. Consequently, 76 percent of participants intended to integrate the online expertise garnered during the pandemic into their practice. In short, the modern study demonstrated a largely positive impact of the COVID-19 pandemic on online medical education.

Simamora, (2020) conducted a study on **"The Challenges of Online Learning During the COVID-19 Pandemic: An Essay Analysis of Performing Arts Education Students".** COVID-19 pandemic had changed the way of learning in higher education. Teaching and learning activities that was usually carried out with face-to-face meetings had turned into virtual meetings in various online learning applications. The objective of the study was to analyze student essays in the form of perspectives or responses about the challenges of online learning during the COVID-19 pandemic. This paper collected fifteen students as samples in the Fundamentals of Education I course who were actively involved in online learning activities. Online learning provides various instructions led by the lecturer. Instructions could be synchronous (communication where participants interact in the same time space as video conferencing, zoom, google meet, and webex) or asynchronous (time-separated communication such as e-mail, google form, streaming video content, posting lecture notes and social media platforms).This study used a qualitative approach. The researcher then collecting, reading and highlights each student's response that is considered relevant for analysis. This paper had shown so many responses about the challenges

experienced by the students while studying online, such as, positive and negative impact of online learning, economic conditions, anxiety during online learning, government should think and planned, the risk of user data security, face-to face class to online learning, ability, finding effective online learning media, and expectations.

Abaid Ullah and Sajjad Ahmed (2021) conducted a study on "**Challenges of Online Learning During the COVID-19 Pandemic Encountered by Students in Pakistan**". The objective of the study was to identify the challenges faced by Pakistani students during online learning environment, to determine whether a difference exist between males and females students regarding challenges faced during online learning, and to evaluate the effectiveness of online learning in Pakistan from students' perspectives. The population of the present study was consisted of students who were taking online classes in Lahore Pakistan. The study design was cross sectional and analytic study. A sample of 550 students was drawn. The technique of simple random sampling was used for this purpose. Google form questionnaire was used as a tool for data collection. Frequency table were used to represent the findings. One Sample t-test applied regarding problem faced by students in online learning, Independent Sample t-test regarding difference between male and female students responses about challenges faced during online education and One way ANOVA for significant difference between qualification level of students responses about challenges faced during online education. Results revealed that all the students were facing same issues either they were school level or university level. Male and female students were facing same challenges in online classes. Online learning cannot produce good results in developing countries like Pakistan, where a huge majority of students are not able to access the good internet facility due to technical as well as financial issues. This study addressed the effectiveness of online and challenges faced by students who are taking online classes. Majority, 88 percent of students had no proper internet facility and they faced lots of internet issues and 65 percent students were not satisfied with online learning 85 percent students complaining about eye sight issue by taking online classes on devices 50 percent students were unable to manage the university affairs. As a result, they found that all the students were facing same issues either they were school level or university level. We also obtained that male and female students were facing same challenges in online classes.

Abdelsalam Maatuk and Hadeel Alharbi, (2021) conducted a study on "The COVID-19 Pandemic and e-Learning: Challenges and Opportunities from the Perspective of Students and Instructors". The spread of COVID-19 poses a threat to humanity, as this pandemic had forced many global activities to close, including educational activities. To reduce the spread of the virus, education institutions have been forced to switch to e-learning using available educational platforms, despite the challenges facing this sudden transformation. In order to further explore the potential challenges facing learning activities, the focus of this study was on e-learning from students and instructors perspectives on using and implementing e-learning systems in a public university during the COVID-19 pandemic. The study targeted the society that includes students and teaching staff in the Information Technology (IT) faculty at the University of Benghazi. The descriptive-analytical approach was applied and the results were analyzed by statistical methods. Two types of questionnaires were designed and distributed, i.e., the student questionnaire and the instructor questionnaire. Four dimensions had been highlighted to reach the expected results, i.e., the extent of using e-learning during the COVID-19 pandemic, advantages, disadvantages and obstacles of implementing e-learning in the IT faculty. By analyzing the results, they achieved encouraging results that thrown light on some of the issues, challenges and advantages of using e-learning systems instead of traditional education in higher education in general and during emergency periods.

Ezinine and Roseline Ujunwa (2021) conducted a study on **"Challenges of e-Learning During Covid-19 Pandemic in Colleges of Education in South East States, Nigeria".** The objective of the study was to determine challenges of e-learning during COVID-19 pandemic in colleges of education in south east states, Nigeria. The decision to move traditional physical classrooms to e-learning in response to COVID-19 appears to be inadequately planned and too sudden as there were many infrastructural and technical challenges in tertiary institutions. This prompted the study which examined the challenges of e-learning during COVID-19 pandemic in colleges of education in south east states, Nigeria. The research design employed for the study was descriptive survey. The population of the study comprised 2,184 lecturers out of which a sample of 437 was drawn for the study using stratified proportionate sampling technique. The instrument for data collection was a questionnaire. The instrument was duly validated by three experts and the reliability of the instrument was ascertained using Cronbach Alpha which yielded coefficient of 0.83. Data collected were analyzed using mean and standard deviation. The result of the study revealed

that the challenges of e-learning during COVID-19 pandemic in colleges of education in south east states include: epileptic power supply, high cost of procurement of electronic devices, high cost of maintenance of ICT equipment for **e-**learning, poor internet connectivity, shortages of relevant software, low level of incentive to lecturers, low level of student accessibility to internet facilities, poor technical support from management and high cost of data bundle to connect e-learning platform. Based on the findings, it was concluded that e-learning cannot produce desired results as the best alternative platform for instruction during COVID-19 pandemic due to these challenges in colleges of education in south-east, Nigeria.

Jessie S. Barrot, (2021) conducted a study on "**Students Online** L**earning Challenges During the Pandemic and How They Cope With Them: The Case of the Philippines".** Recently, the education system had faced an unprecedented health crisis that had shaken up its foundation. Given today's uncertainties, it was vital to gain a nuanced understanding of student's online learning experience in times of the COVID-19 pandemic. Objective of the study was to assess the challenges of online learning among Philippines students. Although many studies had investigated this area, limited information were available regarding the challenges and the specific strategies that students employ to overcome them. Thus, this study attempted to fill in the void. Using a mixed-methods approach, the findings revealed that the online learning challenges of college students varied in terms of type and extent. Their greatest challenge was linked to their learning environment at home, while their least challenge was technological literacy and competency. The findings further revealed that the COVID-19 pandemic had the greatest impact on the quality of the learning experience and student mental health. In terms of strategies employed by students, the most frequently used were resource management and utilization, help-seeking, technical aptitude enhancement, time management, and learning environment control.

Khadija Qamar and Faiza Kiran (2021) conducted a study on **"Challenges of e-Learning Faced by Medical Teachers and Students During Covid-19 Pandemic".** Objective of the study was to explore perceptions of medical students and faculty, regarding challenges of e-learning they faced, during COVID-19 pandemic. Mixed method study (Quantitative and Qualitative-Phenomenological Approach). The study was conducted in Army Medical College Pakistan, from Apr 2020 to Sep 2020. A self-made questionnaire, having both qualitative and quantitative elements, was developed after interviews of

participants. It was pilot tested, finalized and sent via Google forms. Total 318 students and 6 faculty members responded, data was transcribed verbatim, themes were identified, and qualitative inductive content analysis of participants reports was done. Twenty-seven subthemes were identified by analyzing students and faculty perceptions. They were grouped under five major themes, namely, communicational, technological, institutional, and related to educators and students. Despite limiting factors like communication gap, digital refugee faculty teaching digital native Students, limited technical support, digital divide and unplanned curricular delivery, e-learning was found to be beneficial in terms of flexibility in timings, improving learners self- efficacy, faculty transformation and gradual acceptance. Moreover, it provided opportunity for hybrid e-curriculum development.

Khan, (2021) conducted a study on **"Students Perception Towards Online Education During Pandemic".** The main objective of the study was to analyze the students perceptions of e-learning during Covid-19 lockdown period, by using content analysis found that flexibility and convenience of online classes make it an attractive option, whereas 60 percent of the respondents said it is less effective when compared with the face-to-face classes. It had also highlighted the issue of the digital divide and inequalities in obtaining internet connection that creates a problem for several students. Online education had created an enormous shock for both teachers and students as it affected both teacher's productivity and students learning. The biggest challenge faced by teachers was transforming teaching material into digital format at a short notice and it was difficult to keep away students from other social network sites during the online classes. Students were from different socio-economic backgrounds and they faced problems in access to laptops or mobiles and connectivity issues. The MBBS student's survey on online learning conducted by the institution revealed that students preferred online classes to maintain their academic interest during the pandemic. In addition, they faced many challenges such as lack of socialization, technological-related issues and eye-related problems, etc. A total of 79 percent of the students lost their interest in online classes due to internet connectivity issues when the classes went on; the majority of students favored a combined approach of learning post-COVID-19 outbreak.

Mas Anom Abdul Rashid, (2021) conducted a study on **"Online Learning Issues and Challenges During COVID-19 Pandemic"**. In this study the COVID-19 pandemic were affected all aspects of the world's daily activities since it was officially declared as a

pandemic at the beginning of 2020 by WHO. The objective of the study was to determine online learning issues and challenges during COVID-19. As a result, the term new normal had been coined for all daily activities including teaching and learning process. From face to face interaction, the new normal approach had forced all teaching learning process to go online. Even though this approach was not new but it is now being practiced more rigorously as it was deemed the only approach available and most practical to prevent the virus from spreading even more. Since it was now being practiced more rigorously there will definitely be issues and challenges as a result. This study explored those issues and challenges faced by the students in the process. The responses for this study were collected using a questionnaire on Google form shared on WhatsApp application among the students at a private university college and 370 data were analyzed. It was found that the majority of the respondents 36.2 percent stated that they had difficulties in learning online and another 37 percent stressed that the access to the internet was an issue to them. In addition, the speed of the downloading of materials and videos are also a problem. Therefore, efforts had to be made to meet the student's expectation when implementing the online teaching and learning system.

Mohammed Arshed Khan and Mohd Asif (2021) conducted a study on **"School Students Perception and Challenges towards Online Classes During COVID-19 Pandemic in India: An Econometric Analysis".** The main objective of the study was to identify the challenges faced by the students towards online learning. Due to the COVID-19 pandemic, the worldwide education system had been severely affected, following the shutdown of schools and colleges/universities since March 2020 in order to prevent the spread of the virus. Conventional classrooms shifted to online classrooms which profoundly impacted teachers and students closed interaction, making a paradigm shift in the teaching-learning process, inter alia. Against such a backdrop, it was relevant to analyze the perception of students and the challenges of online classes during this ongoing COVID-19 outbreak. The present study was based on a quantitative and sample survey approach. The respondent sample of 385 secondary school students from grades 8 to 12 in Delhi had been collected through a Google Form Questionnaire. The study was conducted in the months of January and February 2021. Statistical techniques, such as Descriptive Statistics, Chi-Square Test, Factor Analysis, Reliability Test and Logistic Regression, were used for analyzing the data. The Logistic Regression result shown that the quality of Internet, prior knowledge of ICT, family income, mother's education and the number of rooms are positively impacting online

classes. The findings of the study revealed that, on average, students had positive perceptions towards online classes during the pandemic to maintain their academic growth. Nonetheless, they experienced several challenges in online classes. Thus, the outcome of this research study were encourage policy makers and educational institutes to handle online classes in a better way, by adopting the latest techniques of online classes and by training teachers and students continuously so that the teaching–learning process becomes more enjoyable and effective during this ongoing pandemic. The government must take certain remedial measures to overcome the challenges in online classes and reduce the digital divide so that no students would be left out.

Yustinus Budi Hermanto, (**2021)** conducted a study on **"The Challenges of Online Learning During the Covid-19 Pandemic".** The Covid-19 pandemic required almost all human activity to shift to digital media, including education services. Now, education services must adapt to online learning methods. This change was a challenge for Indonesian education, which must also prepare students to adapt to face the challenges of the era of society. The objective of the study was to obtain information about online learning from home during the Covid-19 pandemic at the junior, senior, vocational, and university levels in Indonesia. Researchers also analyzed the differences in the mastery of learning technology in students and educators. This study used a questionnaire distributed via Google forms to students and educators using Face book, e-mail, and WhatsApp Group (WAG). The total sample in this study was 108 educators and 386 students. From the independent sample t-test, the results were the mastery ability of MS office software and online learning technology in students was higher than students with significant differences; there was no significant difference between teacher and lecturer perceptions regarding the role of learning technology in the classroom and on the educational process of students. The success of online learning was highly dependent on several integrated components, such as students, educators, learning resources, and the technology used. The researcher also found several disadvantages of online learning, such as student discipline, lack of internet access, and lack of social interaction, common challenges for educational organizations and stakeholders.

3. METHODOLOGY

The methodology pertaining to "**A Study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh**" in the selected areas of Tezu comprises of the following steps:

3.1 Selection of the Area
3.2 Selection of the Sample
3.3 Selection of the Method
3.4 Construction of Tools
3.5 Obtaining Ethical Clearance of the Study
3.6 Collection of the Data
3.7 Analysis and Interpretation of the Data

3.1 Selection of the Area

Arunachal Pradesh is a state located in the extreme Northeastern corner of the country. Arunachal Pradesh, whose name means Land of Dawn-Lit Mountains in Sanskrit, is also known as the Orchid State of India or the Paradise of the Botanists. It was formed from the erstwhile North-East Frontier Agency (NEFA) region, and became a state on 20 February 1987.Covering an area of 83,743 sq km, Arunachal Pradesh is the largest state in the Northeast India. It shares its border with the neighbouring countries of Bhutan in the West, China (Tibet) in the North and Northeast, Myanmar in the East and Southeast and the Indian states of Assam and Nagaland in the South. Itanagar is the state capital. Arunachal Pradesh has 16 administrative districts. The most commonly spoken languages are Assamese, Bengali and Hindi. English is the primary medium of education in the schools.

As per 2011 Census of India, Arunachal Pradesh has a population of 1,382,611 and an area of 83,743 square kilometres. It is an ethnically diverse state, with predominantly Monpa people in the west, Tani people in the center, Mishmi and Tai people in the east, and Naga people in the southeast of the state. About 26 major tribes and 100 sub-tribes live in the state. Arunachal Pradesh comprises two divisions, namely, east and west, each headed by a divisional commissioner and twenty five districts, each administered by a deputy commissioner.

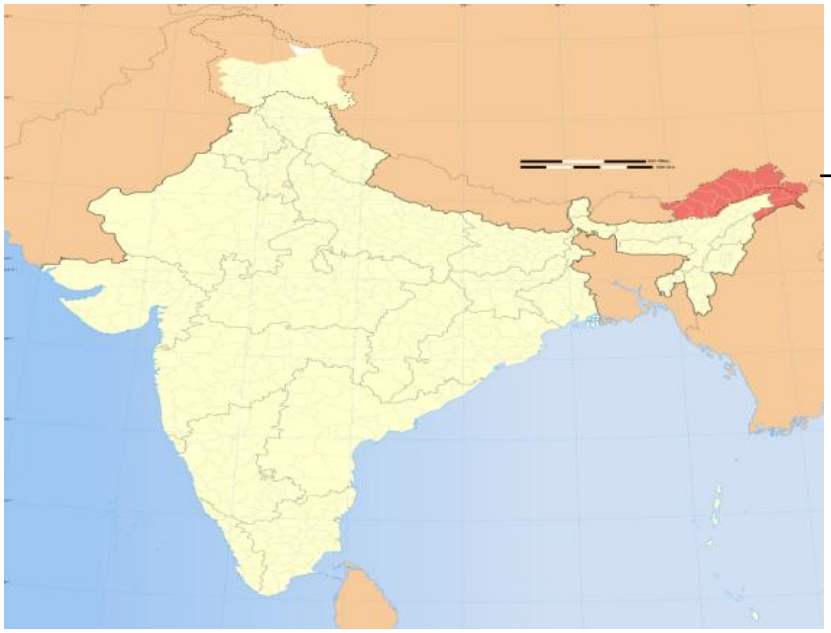


Fig.3.1.1 MAP OF ARUNACHAL PRADESH, INDIA

Fig. 3.1.2 DISTRICT MAP OF ARUNACHAL PRADESH

Lohit is one of the oldest districts of Aruanchal Pradesh. Its name has been derived from one of its principal rivers, the 'Lohit' which rises from the eastern Tibet and enters India in Kibithoo area of the District (then under Lohit, but now under Anjaw District). The Lohit District is situated on the north eastern extremity of Arunachal Pradesh. It lies between the latitudes 27 degree 33'N and 29 degrees 22'N and the longitudes 95 degree 15'E and 97 degrees 24'E. It has a total area of 2,402 sq. km.

According to the 2011 census the erstwhile Lohit district has a population of 145,726, roughly equal to the nation of Saint Lucia. The district has a population density of 28 inhabitants per square kilometre (73/sq mi). Its population growth rate over the decade 2001–2011 was 16.44 percent. Lohit has a sex ratio of 901 females for every 1000 males, and a literacy rate of 69.88 percent. The divided district has a population of 49,776. 15,920 are Scheduled Tribes.

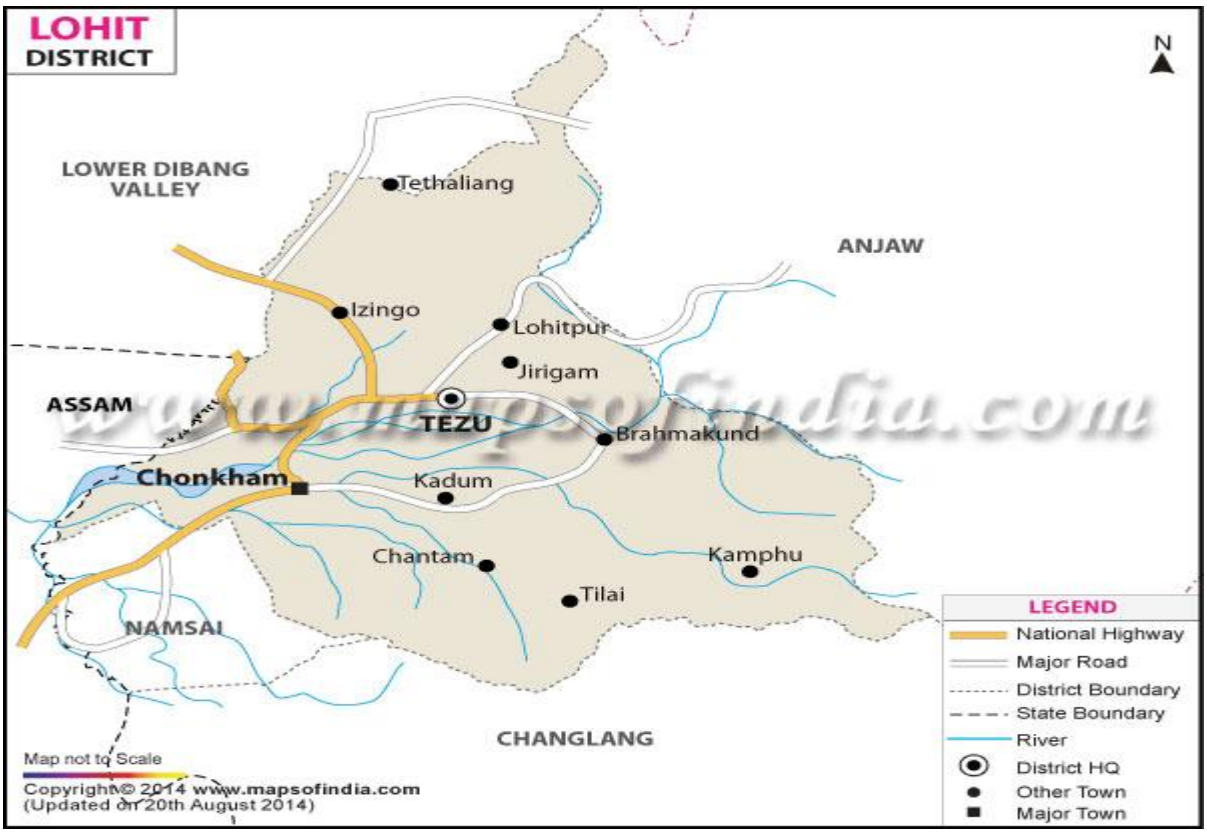


Fig.3.1.3 MAP OF LOHIT DISTRICT

Tezu is a census town and the headquarters of Lohit District in the Indian state of Arunachal Pradesh. It is the fifth largest town in Arunachal Pradesh and one of its most developed. Tezu is one of the 60 constituencies of Legislative Assembly of Arunachal Pradesh. Tezu is located at 27.92°N 96.17°E. It has an average elevation of 185 metres (606 feet). It is situated on the bank of River Lohit. The major agricultural products are mustard, ginger and oranges. And there are 50 villages in Tezu.

The students of Indira Gandhi Government College were selected for the study area from Tezu city, Lohit district of Arunachal Pradesh.

TABLE 3.1

STUDENTS POPULATION

Female population	Male population	Total population
381	450	831

Fig. 3.1.4 LOCATION OF TEZU IN ARUNACHAL PRADESH MAP

Indira Gandhi Government College, Tezu located in a semi-urban area of Lohit District of Arunachal Pradesh was established by the Government of Arunachal Pradesh in 1986. The College is affiliated to the Rajiv Gandhi University (formerly known as Arunachal University). The objective of the college is to disseminate knowledge and skills among a conglomerate of tribes inhibiting in four districts of the eastern most part of the State, popularly known as the 'Land of Dawn Lit Mountains'. The College is recognized under 2(f) and 12(b) of the UGC Act, 1956 in the year 1995. The College offers Degree programmes in Arts and Commerce faculty.

At the time of establishment, it started with 42 students and 8 faculty members through 5 departments namely, Economics, Hindi, English, Political Science and History. Today, 831 students have taken admission in the college. Number of faculty members grew from 8 to 23 in the last 19 years.

Fig. 3.1.5 INDIRA GANDHI GOVERNMENT COLLEGE IN TEZU

3.2 Selection of Sample

A sample refers to a smaller, manageable version of a larger group. It is a subset containing the characteristics of a larger population. Samples are used in statistical testing when population sizes are too large for the test to include all possible members or observations. A sample should represent the population as a whole and not reflect any bias toward a specific attribute (Will Kenton, 2021).

Convenience sampling is a sampling method where the researcher selects the research sample based on ease and proximity to the researcher (Cathryn Jackson, 2021).A sample of 100 students both male and female from of Indira Gandhi Government College of Arunachal Pradesh were selected conveniently for the study. The investigator have chosen the convenience sampling method because it is home town of the investigator and it was easy to contact and collect the data.

3.3 Selection of the Method

Both primary and secondary method was adopted. Primary data are those which are collected afresh and for the first time and thus happen to be original in character (K.Muralidhran, 2015). Primary data were collected by well structured Mailed Questionnaire Schedule (Google forms). Secondary data is the data which are not originally collected but rather obtained from published or unpublished sources (Hema Thangavel, 2019). Secondary data were collected from books, journals, periodicals and website sources.

3.4. Construction of the Tool

Questionnaire schedule is defined as a document containing questions and other types of items designed to solicit information appropriate for analysis (Sagar Aryal, 2021). A questionnaire schedule was used to elicit the information from the respondent and the respondents were contacted through mailed questionnaire the required information regarding socio- economic background, performance expectancy of e-learning, usage of tools and devices, perception about online classes, students perception, negative perception of e-learning, challenges of self regulation, effectiveness and satisfaction of e-learning, challenges of student isolation, challenges of technological complexity, challenges of learning environment, solutions of e-learning were obtained by using the questionnaire schedule.

3.5 Obtaining Ethical Clearance of the study

The application form explaining the design and the protocols used in the research study was subjected to the Institutional Human Ethics Committee and Ethical Clearance was obtained in (Annexure-II).

3.6 Collection of the Data

After developing good rapport with the sample, the tools developed for the study were administered personally on the selected 100 students (50 male and 50 female) and data were collected online mode.

3.7 Analysis and Interpretation of the Data

The data collected were consolidated, analyzed and interpreted based on the findings of the study. The data thus collected were analysed through percentage analysis and SWOC analysis.

SWOC analysis is a strategic planning and strategic management technique used to help a person or organization identify strengths, weaknesses, opportunities, and challenges related to business competition or project planning (Will Kenton, 2021). SWOC analysis has been done in order to assess strengths, weaknesses, opportunities and challenges of students faced during e-learning.

METHODOLOGY

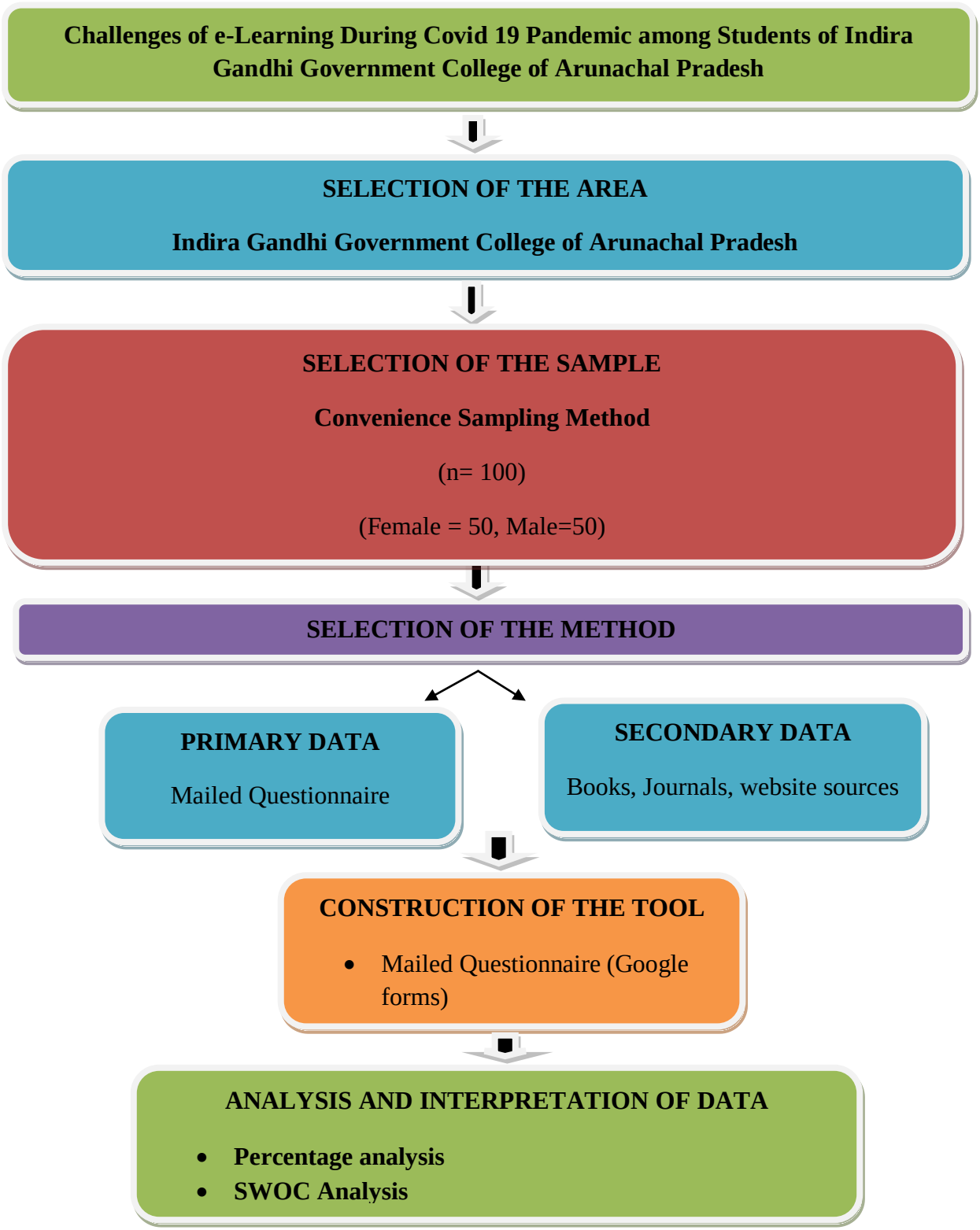


Fig. 3.1.6 FLOW CHART

4. RESULTS AND DISCUSSION

The findings of the research entitled **"A Study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh"** are discussed under the following heads:

4.1 Socio Economic Profile of the Respondents

4.2 Performance Expectancy of e-Learning

4.3 Usage of tools and devices

4.4 Perception about online classes

4.5 Challenges and Solutions of e-Learning

4.6 SWOC analysis of e-Learning

4.1 SOCIO - ECONOMIC PROFILE OF THE RESPONDENTS

Socio- Economic profile of the respondents are given in Table 4.1.1

TABLE 4.1.1

SOCIO - ECONOMIC PROFILE OF THE RESPONDENTS

SOCIO- ECONOMIC FACTORS	CATEGORY	PERCENTAGE OF RESPONDENTS (n=100)
Age (in years)	20-25	90
	25-30	8
	30-35	2
Gender	Male	50
	Female	50
Discipline	Arts and Humanities	73
	Science	19
	Commerce	8
Level of study	1st year	13
	2nd year	33
	3rd year	54
Religion	Hindu	35
	Christian	24
	Others	41
Caste	OBC	4
	SC	2
	ST	92
	Others	2
Parents occupation	Business	13
	Govt. job	26
	Private job	4
	Others	57
Educational level of parents	Illiterate	33
	10th passed	20
	12th passed	11
	Graduation	20
	Post Graduation	5
	Others	11
Monthly income of parents(Rs)	10000-15000	57
	15000-20000	17
	20000-30000	10
	Above 30000	16
Types of family	Nuclear	69
	Joint	31

Age

Age is the amount of time during which someone or something has lived or existed. The age profile of the respondents revealed that the majority of 90 percent of the respondents were between the age group of 20-25 years, 8 percent of the respondents were between the age group of 25-30 years of age and minority 2 percent of the respondents belonged to a age group of 30-35 years.

Gender

Gender is the state of being male or female in relation to the social and cultural roles that are considered appropriate for men and women. Among the selected respondents 50 percent were male and rest 50 percent were female.

Discipline

Discipline is defined as a field of study or a training to fix incorrect behavior or create better skills. Majority, 73 percent of the selected respondents were from Arts and Humanities, 19 percent of the respondents belonged from Science and 8 percent were from Commerce.

Level of study

It is the academic qualification that we belong from. The educational profile of the respondents showed that 54 percent of the respondents belonged from 3rd year, 33 percent of the respondents were from 2nd year and rest 13 percent were from 1st year.

Religion

A religion is a set of beliefs that is passionately held by a group of people that is reflected in a world view and in expected beliefs and actions. Among the selected respondents majority of 41 percent of the respondents belonged to others, 35 percent of the respondents were Hindu and another 24 percent of the respondents were Christian.

Caste

Caste is the system of dividing people in a society into different social classes. Regarding the caste of the selected respondents, majority 92 percent of them belonged to Scheduled Tribe (ST) only 4 percent of the respondents belonged to Other Backward Class

(OBC), and only 2 percent of them belonged to Scheduled Caste (SC) and others respectively.

Parent's occupation

Parental Occupation is defined as the main work undertaken by the parent/guardian. Majority, 57 percent of the respondent's parents belonged to others, 26 percent of the respondents parents belonged to government job, 13 percent of their parents running business as occupation and only 4 percent of the respondents parents were doing private job.

Educational level of parents

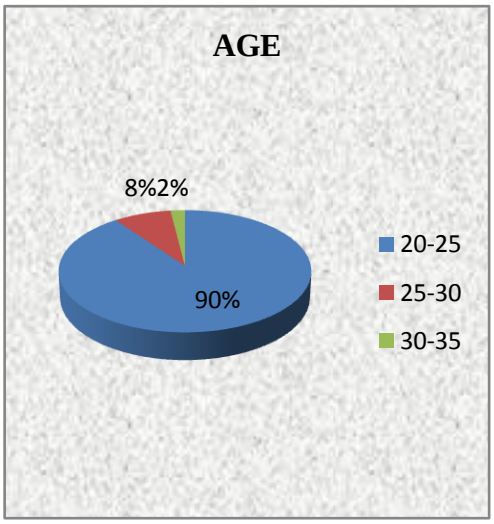
Educational level of parents refers to the level of education that parents have completed such as high school level, graduate, and advanced degrees. Among the selected respondents, 33 percent of the respondent's parents were illiterate, only 20 percent of them studied upto 10^{th} standard and Graduation and 11 percent of them were from 12^{th} standard and others respectively.

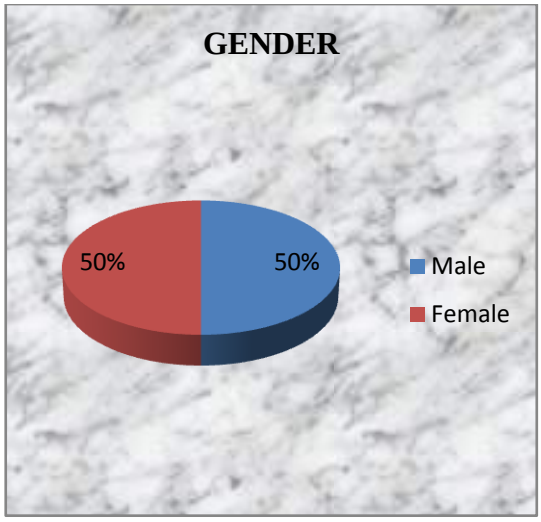
Monthly income of parents (Rs)

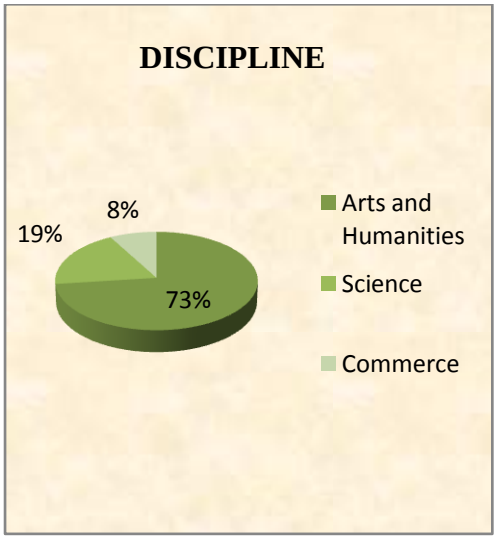
Parent's income means the annual income of the parent. Among the selected respondents 57 percent of the respondent's parents were earning Rs 10000-15000, 17 percent of their parents were earning Rs 15000-20000, 16 percent of their parents were earning above 30000 and only 10 percent were earning Rs 20000-30000.

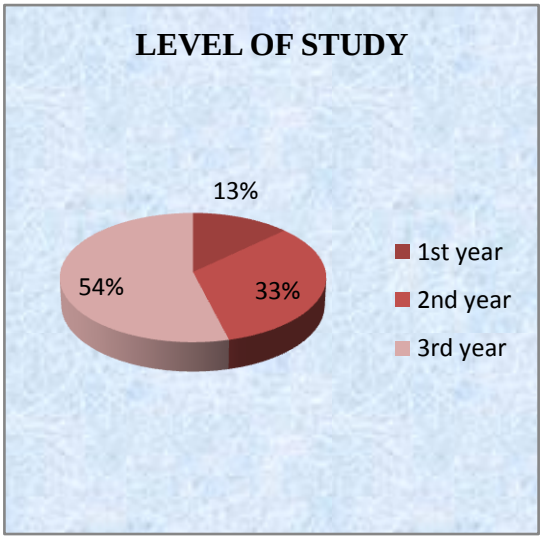
Types of family

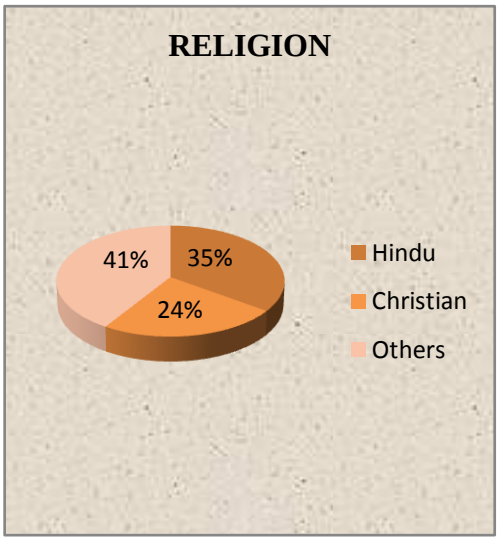
The family is an intimate domestic group made up of people related to one another by bonds of blood, sexual mating or legal ties. It is the smallest and most basic social unit, which is also the most important primary group found in any society. Among the selected respondents majority 69 percent of the respondents belonged to nuclear family and another 31 percent belonged to joint family system.

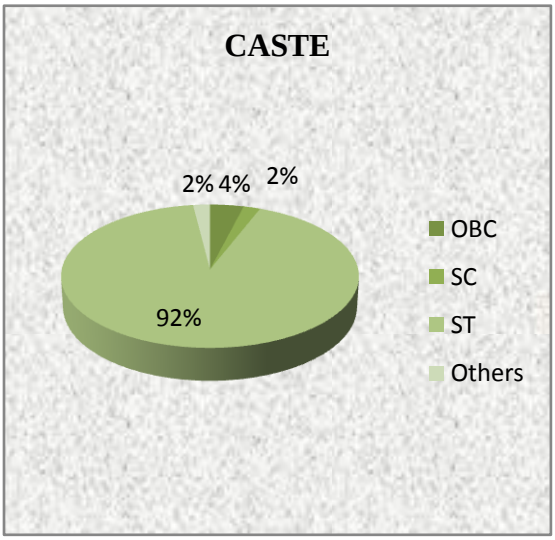

AGE
8%2%
90%
20-25
25-30
30-35

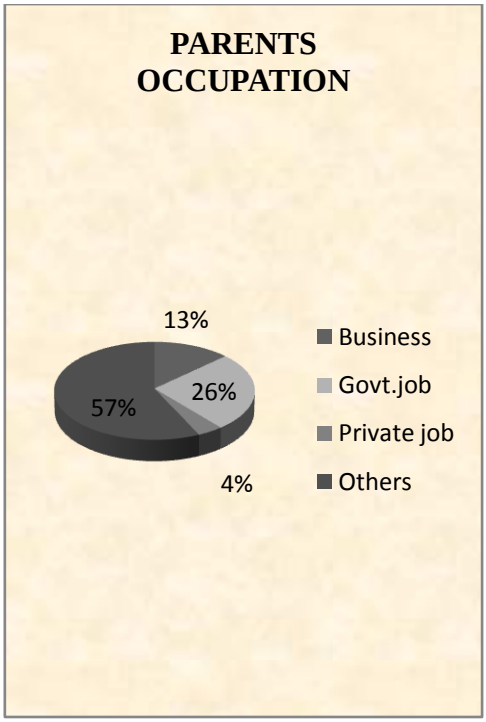

GENDER
50%
50%
Male
Female

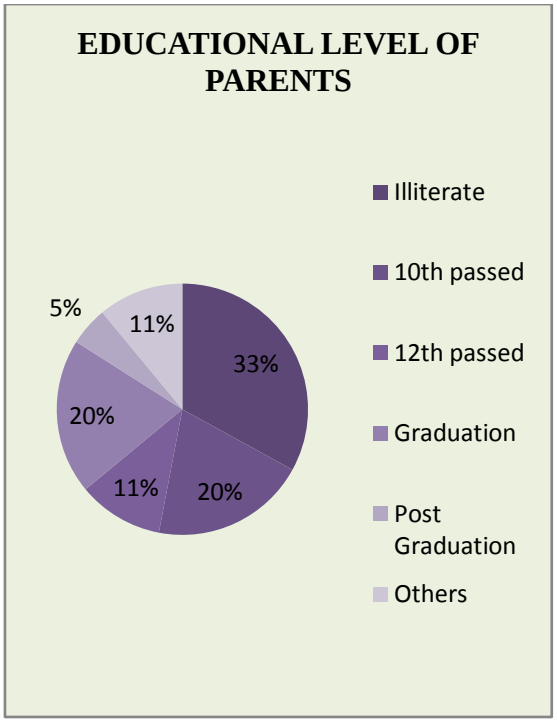

DISCIPLINE
8%
19%
73%
Arts and Humanities
Science
Commerce

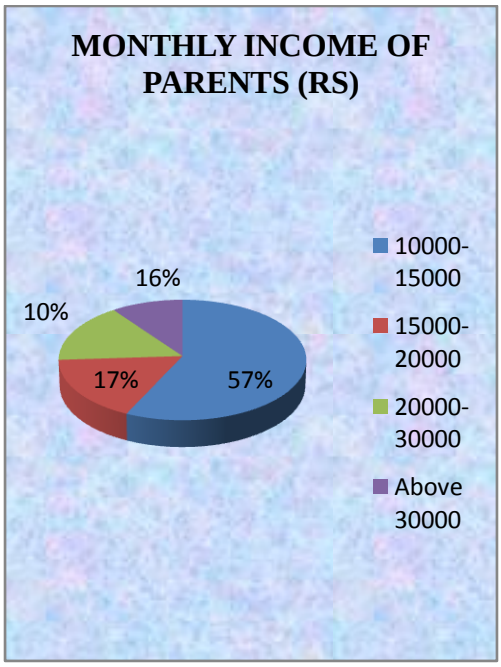

LEVEL OF STUDY
13%
54%
33%
1st year
2nd year
3rd year


RELIGION
41%
35%
24%
Hindu
Christian
Others


CASTE
2%
4%
2%
92%
OBC
SC
ST
Others







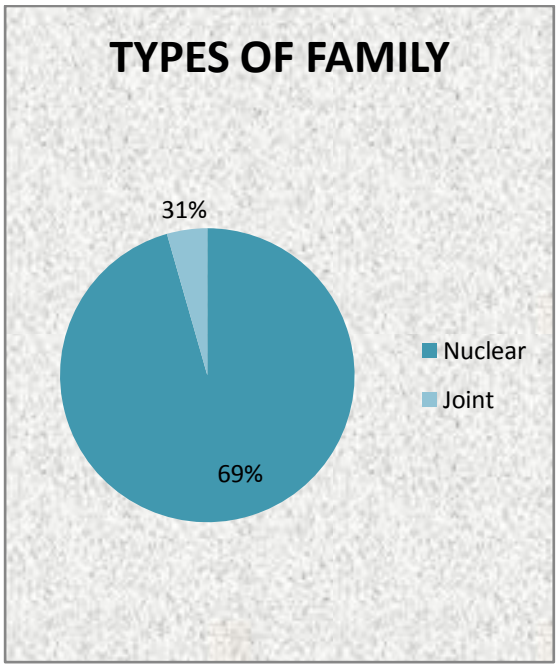


Fig. 4.1.1 SOCIO - ECONOMIC PROFILE OF THE RESPONDENTS

4.2 PERFORMANCE EXPECTANCY OF e-LEARNING

Performance expectancy of e- learning are depicted in Table 4.2.1

TABLE 4.2.1

PERFORMANCE EXPECTANCY OF e-LEARNING

ASPECTS		PERCENTAGE OF THE RESPONDENTS (n=100)
Participation in e-learning before the pandemic	Yes	52
	No	48
Type of participation in e-learning	Computer managed learning	16
	Interactive online learning	23
	Collaborative online learning	6
	Adaptive e-learning	5
	Others	50
Type of network connection use to join online classes	Mobile network	93
	Broadband connection	7
From whom you learn to operate devices	Friends	41
	Family members	12
	Internet forums	26
	Others	21
Confident of using e learning system	Highly confident	8
	Confident	20
	Neutral	59
	Unconfident	9
	Highly unconfident	4
Time spend in a day for online classes (hrs)	1-2	30
	2-3	27
	3-4	21
	More than 4	22
Use internet prior to learning for collecting information	Yes	93
	No	7
Frequency of usage	Very often	43
	Sometimes	46
	Rarely	6
	Not applicable	5
Monthly expenditure for e-	500-1000	68

learning(Rs)	1000-1500	20
	1500-2000	3
	Above 2000	9
Open to learn about new things regarding e- learning	Highly agree	23
	Agree	35
	Neutral	36
	Disagree	2
	Highly disagree	4

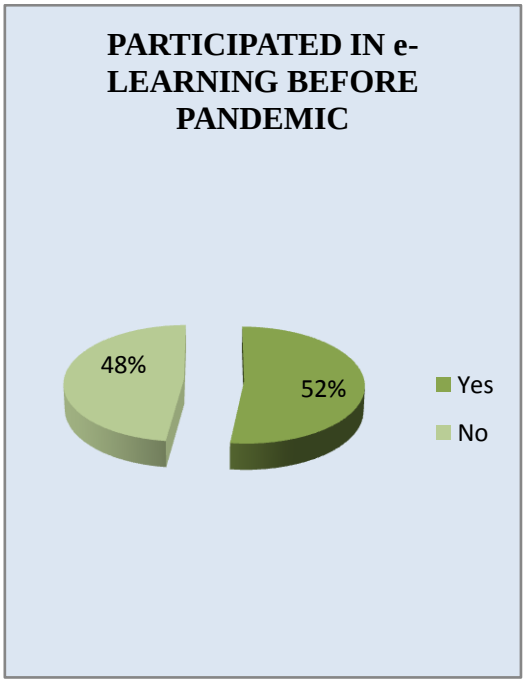
Majority 52 percent of the respondents stated that they had participated in e- learning before the pandemic, whereas 48 percent had not participated in any e- learning before the pandemic. Regarding the participation of e-learning before pandemic about 50 percent of respondents stated that they had participated in other type of e-leaning that is individual online learning, 23 percent of respondents participated in interactive online learning, and only 5 percent of respondents participated in adaptive e-learning. Majority 93 percent of the respondents used mobile network to join the classes, whereas only 7 percent of the respondents used Broadband connection.

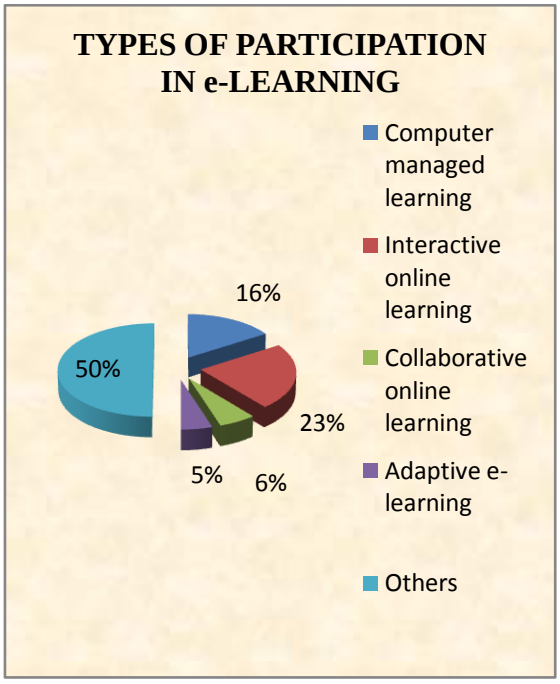
Learning is the process or experience of gaining knowledge or skill. About 41 percent of respondents were learned to operate devices from friends, 26 percent of the respondents from internet forums, and only 12 percent of the respondents learned from their family members. Out of 100 respondents, majority 59 percent of the respondents stated that their confident level is neutral while using e-learning system, 20 percent of the respondents stated that they are so confident, and only 4 percent of respondents were highly unconfident while using e-learning system. The present study also highlighted the fact that 30 percent of the respondents spent 1-2 hours daily for online classes, 27 percent of the respondents spent 2-3 hours, and only 22 percent of the respondents spent more than 4 hours for online classes.

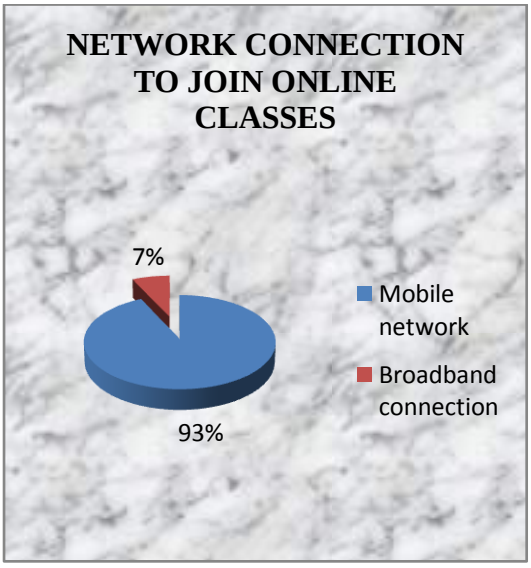
Majority 93 percent of the respondents stated that they used internet prior to learning for collecting information, and only 7 percent stated that they did not used internet prior to learning for collecting information. About 46 percent of the respondents stated that they used internet sometimes prior to learning for collecting information, 43 percent of the respondents used internet very often prior to learning for collecting information, and only 5 percent of the respondents stated not applicable.

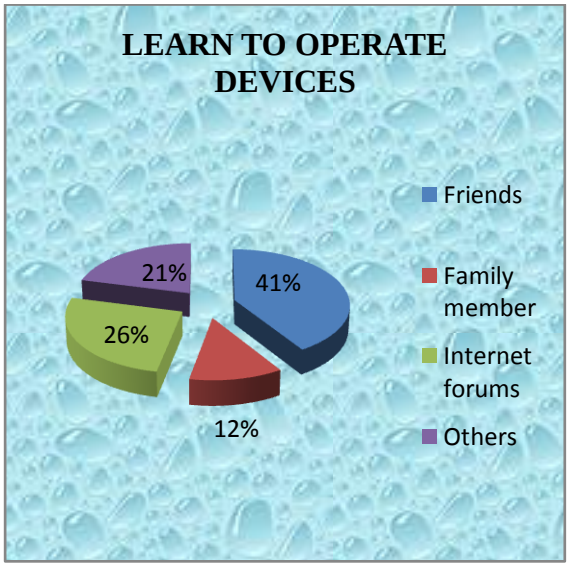
Majority 68 percent of the respondents stated that Rs 500-1000 was their monthly expenditure for e-learning, 20 percent of the respondents stated that it was Rs 1000-1500 and only 3 percent stated that Rs 1500-2000 was their monthly expenditure for e-learning.

Among the selected respondents 36 percent of the respondents stated neutral to learn about new things regarding e- learning, 35 percent of the respondents agreed, and only 2 percent disagreed.









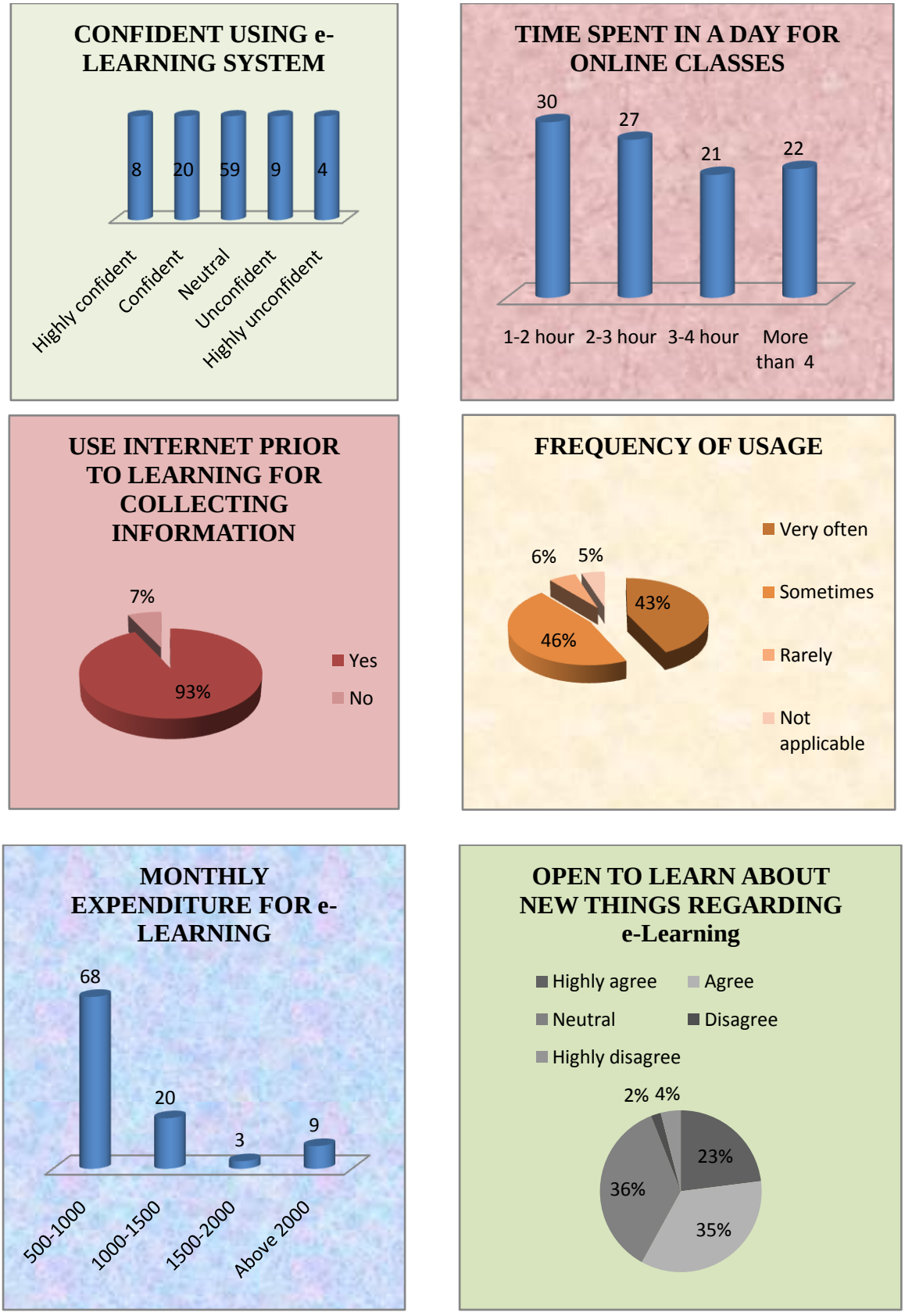


Fig. 4.2.1 PERFORMANCE EXPECTANCY OF e-LEARNING

4.3 USAGE OF TOOLS AND DEVICES

Usage of tools and devices are stated in Table 4.3.1

TABLE 4.3.1

USAGE OF TOOLS AND DEVICES

ASPECTS		PERCENTAGE OF THE RESPONDENTS (n=100)
Electronic device used to attend online classes	Mobile	80
	Laptop	10
	Computer	4
	Both mobile phone and laptop	6
Communication tools used by college teachers	Chat room	21
	Discussion forum	13
	Email	19
	Instant messaging (Google talk, Skype)	19
	Others	28
Alternative tool used for e-learning platform	Emails	11
	Google and microsoft platform	20
	Whatsapp	35
	Zoom platform	26
	Others	8

Majority 80 percent of the respondents used mobile to attend online classes, 10 percent of the respondents used laptop, and only 4 percent of the respondents used computer. About 28 percent of the college teachers used other communication tools such as video and web conferencing, 21 percent of the college teachers used chat room, and 13 percent used Discussion forum.

Among the selected respondents, 35 percent of the respondents used whatsapp as alternative tool for e-learning platform, 26 percent of the respondents used zoom platform as alternative tool for e-learning platform, and only 8 percent of the respondents used other alternative tool for e-learning platform such as google drive.

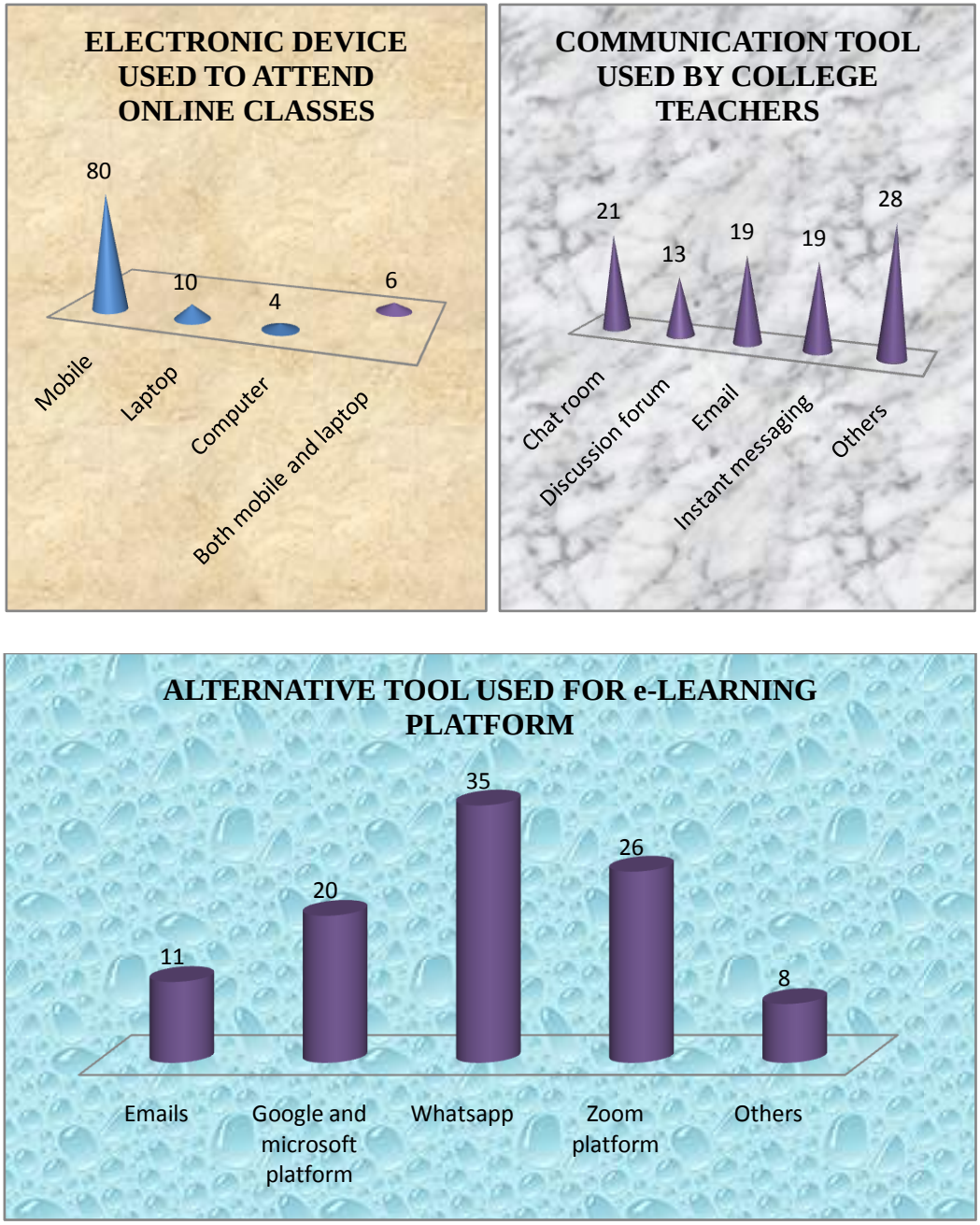


Fig. 4.3.1 USAGE OF TOOLS AND DEVICES

4.4 PERCEPTION ABOUT ONLINE CLASSES

Perception about online classes are depicted in Table 4.4.1

TABLE 4.4.1

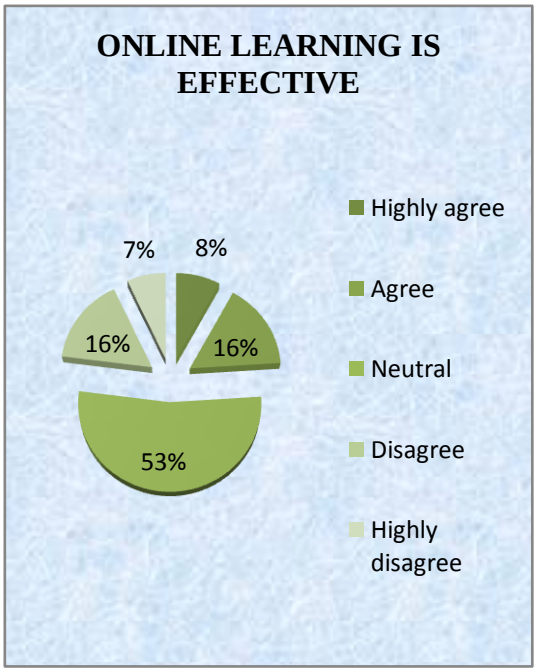
PARENTS PERCEPTION ABOUT ONLINE CLASSES

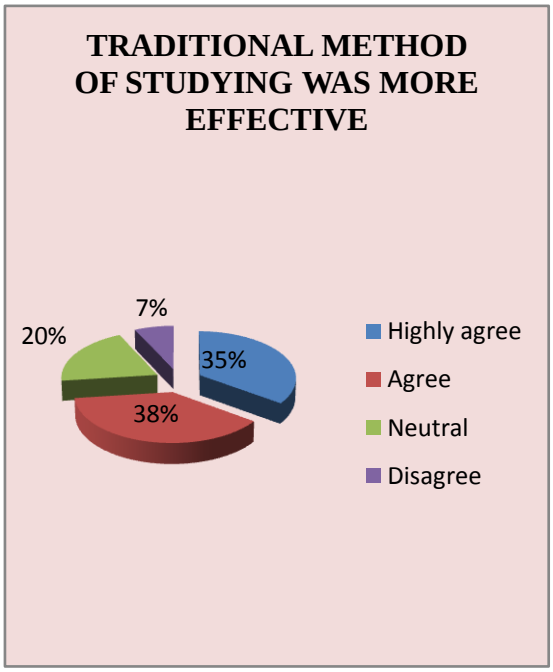
ASPECTS	PERCENTAGE OF THE RESPONDENTS (n=100)				
	Highly agree	Agree	Neutral	Disagree	Highly disagree
Online learning is very effective	8	16	53	16	7
Traditional method of studying was more effective	35	38	20	7	-
Students felt connected with the teachers	8	24	44	20	4
Students face difficulty in understanding and solving numericals	31	43	20	6	-
Practical subjects like science and mathematics needs face to face method of teaching	50	36	11	3	-
Creativity is lost in online classes	35	38	17	7	3

Regarding effectiveness of online learning 53 percent of the respondents stated that neutral, 16 percent of the respondents stated agree, and only 7 percent of the respondents stated highly disagree. Among the selected respondents 38 percent of the respondents agreed that traditional method of studying was more effective than online learning, 35 percent of the respondents highly agreed the statement, and only 7 percent of the respondents disagree on traditional method of studying.

The above table showed that 44 percent of the respondents stated neutral on the statement that the students felt connected with the teacher during online classes, 24 percent of the respondents stated agreed, and only 4 percent of the respondents stated highly disagree on the statement that the students felt connected with the teacher during online classes. In terms of difficulty in understanding and solving numericals, about 43 percent of the respondents agreed and another 31 percent highly agreed and only 6 percent of the respondents disagreed the statement.

Among the selected respondents 50 percent of the respondents were highly agreed that practical subjects like science and mathematics needs face to face method of teaching, whereas 36 percent of the respondents agreed, and only 3 percent of the respondents disagreed. About 38 percent of the respondents agreed and 35 percent highly agree that creativity is lost in online classes, and only 3 percent highly disagreed.





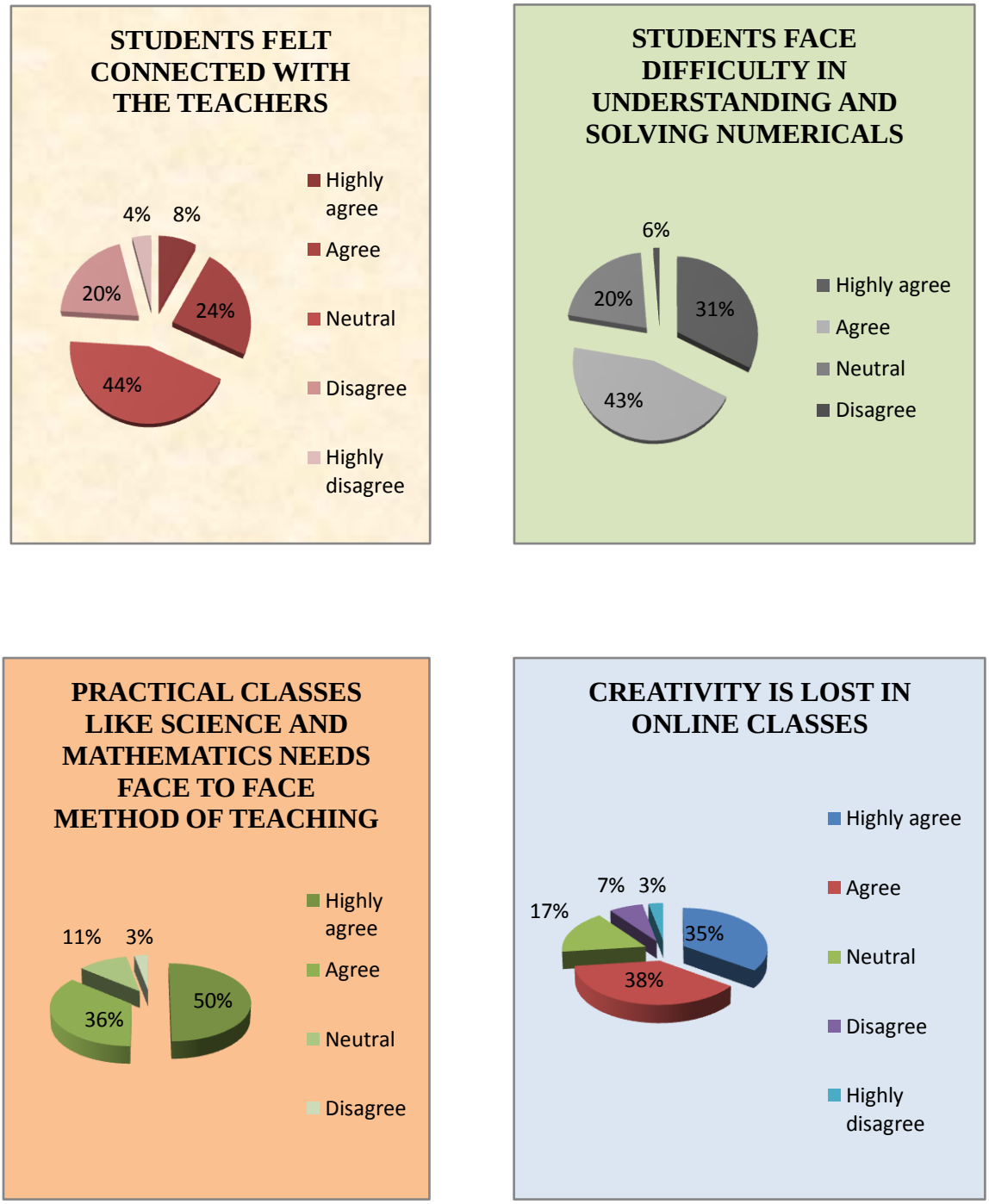


Fig. 4.4.1 PARENTS PERCEPTION ABOUT ONLINE CLASSES

4.4.2 STUDENTS PERCEPTION

Students perception are stated in Table 4.4.2

TABLE 4.4.2

STUDENTS PERCEPTION ABOUT ONLINE CLASSES

ASPECTS	PERCENTAGE OF THE RESPONDENTS (n=100)				
	Highly agree	Agree	Neutral	Disagree	Highly disagree
e-learning improves written communication and analytical thinking skills	8	16	53	16	7
e-learning improves learning process	5	28	44	18	5
e-learning enables people to study irrespective of where they are located in the world	10	34	39	9	8
e-learning is more comfortable than offline classes	6	14	31	29	20

Regarding the student's perception about online classes majority 53 percent of the respondents felt neutral with the statement that e-learning improves written communication and analytical thinking skills, another 16 percent of the respondents agreed and only 8 percent of the respondents highly agreed. The data preview about the perception on e-learning, 44 percent of the respondents felt neutral that e-learning improves their learning

process, 28 percent of the respondents only agreed, and only 5 percent of the respondents highly agreed the statement.

About 39 percent of the respondents felt that e-learning enabled people to study irrespective of where they are located in the world, 34 percent of the respondents only agreed, and 8 percent of the respondents highly disagreed it. Among the selected respondents 31 percent of the respondents felt neutral that the e-learning is more comfortable than offline classes, whereas 29 percent of the respondents disagreed, and only 6 percent of the respondents highly agreed to it.

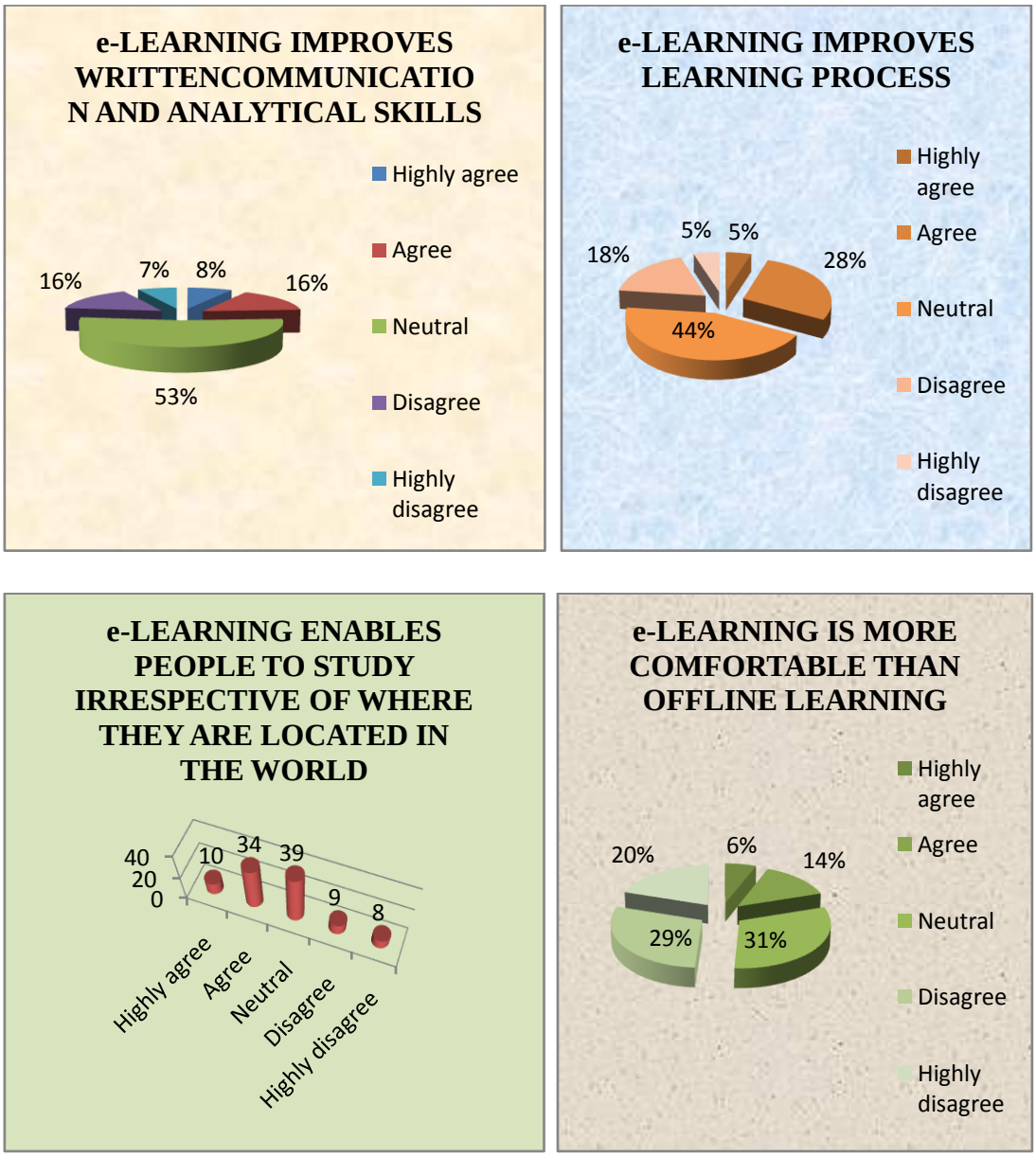


Fig. 4.4.2 STUDENTS PERCEPTION ABOUT ONLINE CLASSES

4.4.3 NEGATIVE PERCEPTION OF e-LEARNING

Negative perception of e-learning are presented in Table 4.4.3

TABLE 4.4.3

NEGATIVE PERCEPTION OF e-LEARNING

ASPECTS	PERCENTAGE OF THE RESPONDENTS (n=100)
Low motivation for study in e-learning	27
Lack of interaction with teacher	28
Lack of internet	19
It hard to stick to a study schedule of online classes	17
Lack of equipments like microphone, head phones	4
Others	5

Regarding negative perception of e-learning 28 percent of the respondents were having negative perception on e- learning that is lack of interaction with teacher, 27 percent of the respondents stated low motivation for study in e-learning, and only 4 percent stated lack of equipments like microphone and head phones.

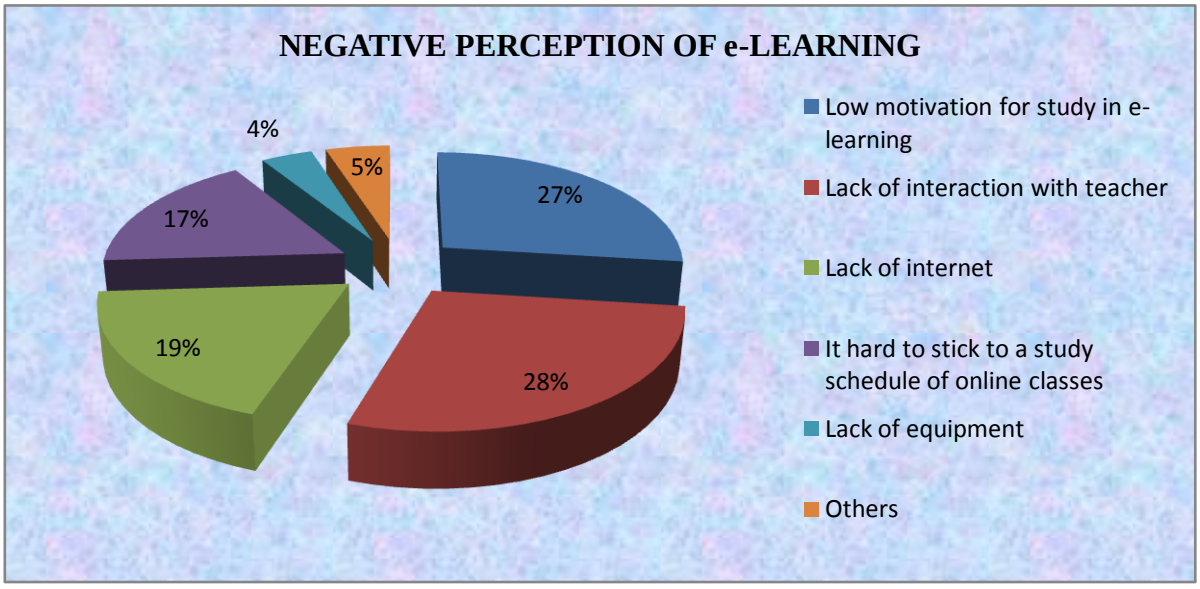


Fig.4.4.3 NEGATIVE PERCEPTION OF e-LEARNING

4.5 CHALLENGES AND SOLUTIONS OF e-LEARNING

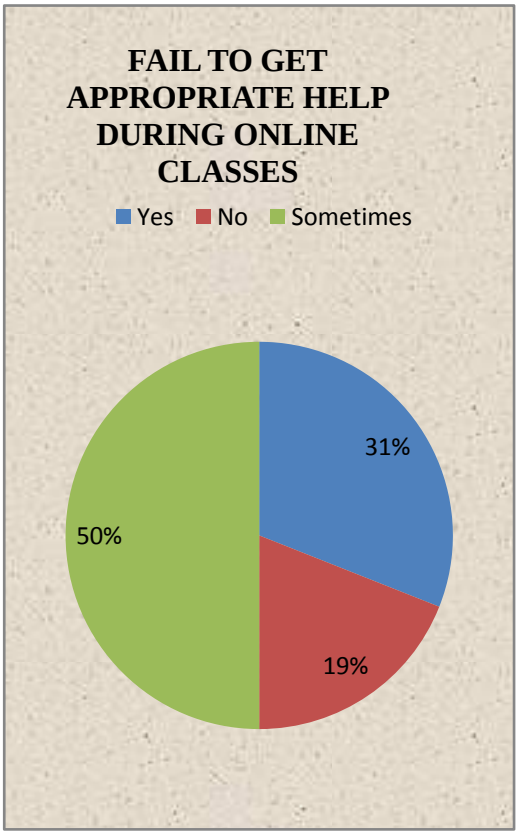
Challenges of self regulation are depicted in Table 4.5.1

TABLE 4.5.1

CHALLENGES OF SELF REGULATION

ASPECTS		PERCENTAGE OF THE RESPONDENTS (n=100)
Fail to get appropriate help during online classes	Yes	31
	No	19
	Sometimes	50
Reason	Boredom	11
	Technical issues	33
	No practical knowledge	33
	Gadgets shortage	4
	Others	19

Among the selected respondents 50 percent of the respondents stated that sometimes they failed to get appropriate help during online classes, 31 percent of the respondents stated that they failed to get appropriate help during online classes, and 19 percent of the respondents stated that they don't failed to get appropriate help during online classes. About 33 percent of the respondents stated that due to technical issues they failed to get appropriate help during online classes, another 33 percent due to no practical knowledge, and only 4 percent of the respondents stated due to gadgets shortage.



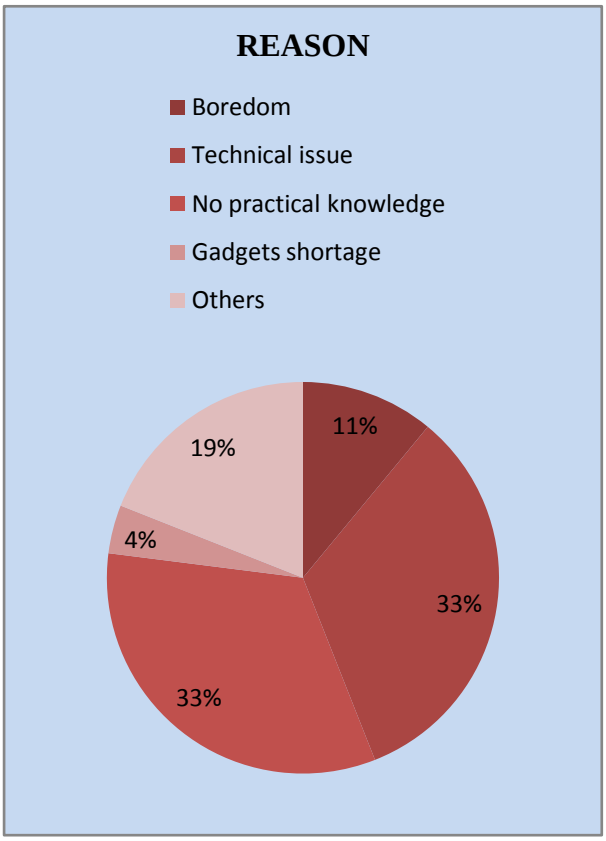


Fig. 4.5.1 CHALLENGES OF SELF REGULATION

4.5.2 EFFECTIVENESS AND SATISFACTION OF e-LEARNING

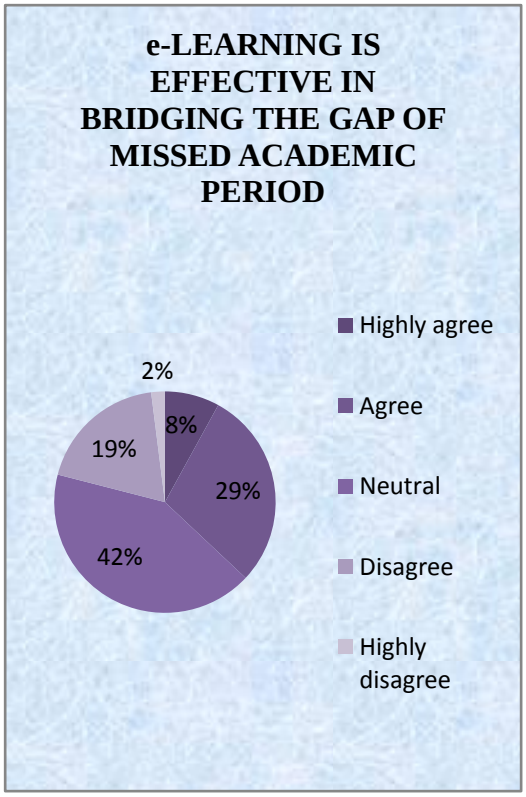
Effectiveness and satisfaction of e-learning are stated in Table 4.5.2

TABLE 4.5.2

EFFECTIVENESS AND SATISFACTION OF e-LEARNING

ASPECTS	PERCENTAGE OF THE RESPONDENTS (n=100)				
	Highly agree	Agree	Neutral	Disagree	Highly disagree
e-learning is effective in bridging the gap of missed academic period	8	29	42	19	2
Satisfied with the content of topic covered during the online classes	2	16	47	25	10

About 42 percent of the respondents were felt neutral with the statement that the e-learning is effective in bridging the gap of missed academic period, 29 percent of the respondents agreed and only 2 percent highly disagreed to the statement. Among the selected respondents 47 percent of the respondents stated neutral with the content of topic covered during the online classes, 25 percent of the respondents disagreed, and only 2 percent of the respondents highly agreed to it.



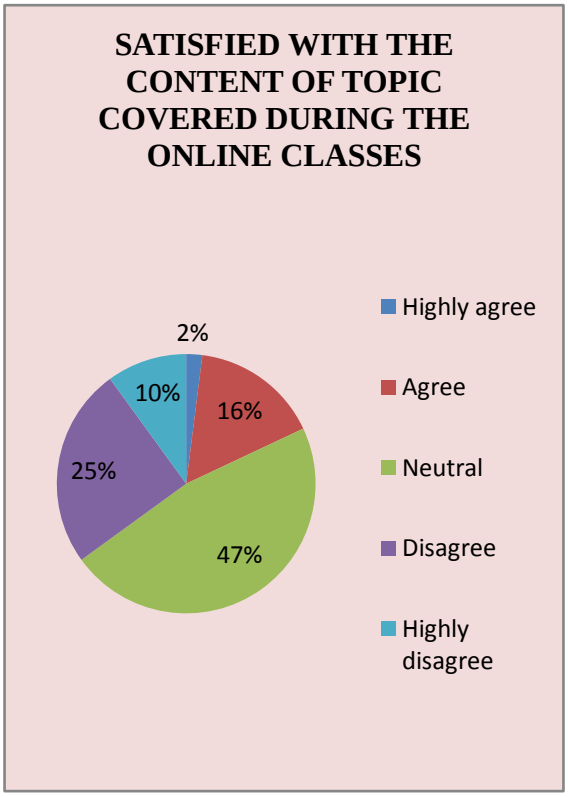


Fig.4.5.2 EFFECTIVENESS AND SATISFACTION OF e-LEARNING

4.5.3 CHALLENGES OF STUDENT ISLOATION

Challenges of student isolation are stated in Table 4.5.3

TABLE 4.5.3

CHALLENGES OF STUDENT ISOLATION

ASPECTS		PERCENTAGE OF THE RESPONDENTS (n=100)
Disinterested during online learning	Yes	82
	No	18
Reason for disinterest	Adaptation difficulties	23
	Poor time management	13
	Technical issues	31
	Lack of contact	16
	Others	17
Issue encounter during e-learning	Lack of internet speed	47
	Lack of lab session	13
	Technical issues	23
	Others	17

Majority 82 percent of the respondents stated that they felt disinterested during online learning, whereas 18 percent of the respondents stated that they had not felt disinterested during online learning. Among the selected respondents 31 percent of the respondents felt disinterested during online learning due to technical issues, 23 percent of the respondents stated that due to adaptation difficulties, and 13 percent of the respondents stated due to poor time management. About 47 percent of the respondents faced lack of internet speed issue during e-learning, 23 percent of the respondents faced technical issues, and 13 percent of the respondents faced lack of lab session.

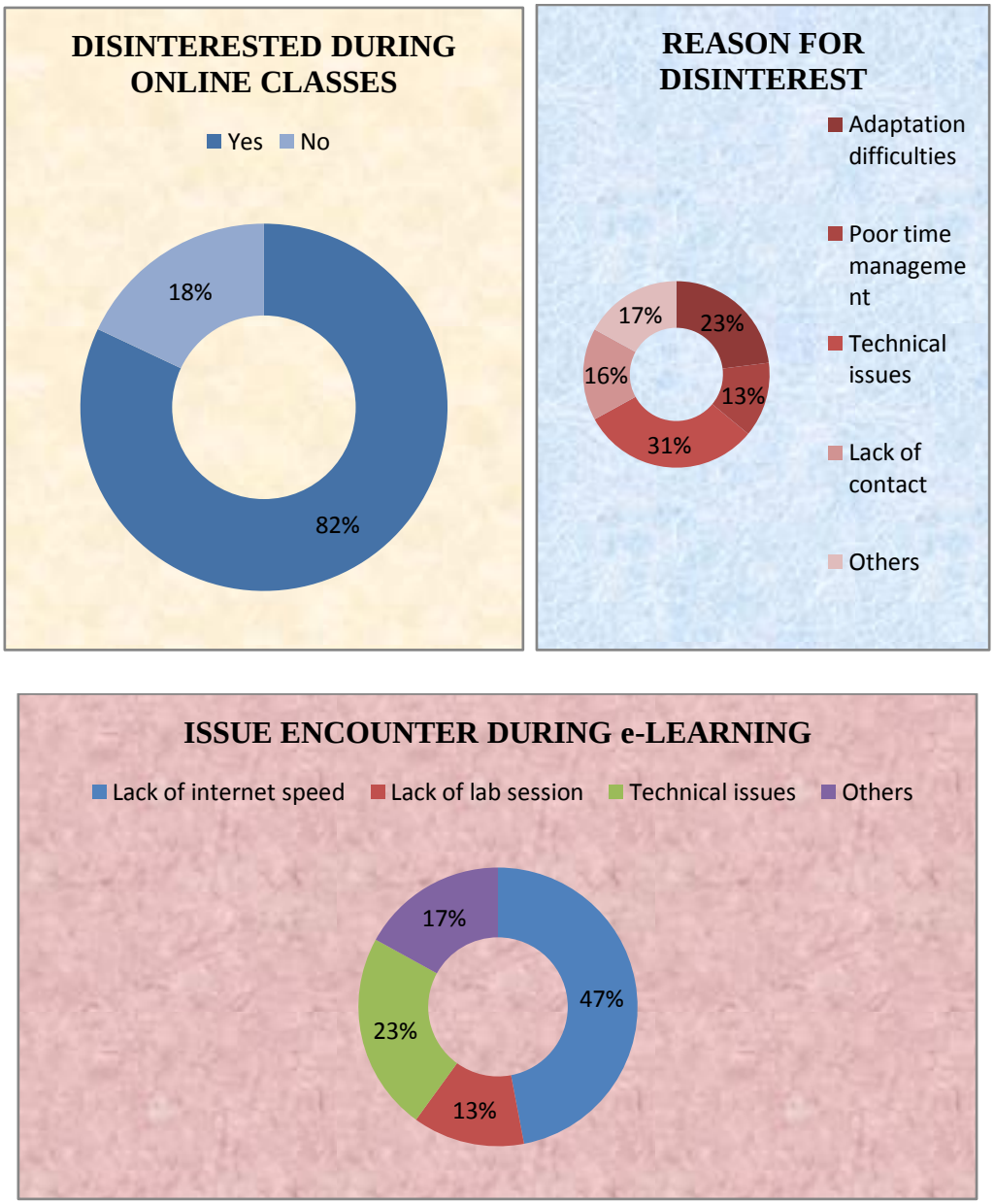


Fig. 4.5.3 CHALLENGES OF STUDENT ISOLATION

4.5.4 CHALLENGES OF TECHNOLOGICAL COMPLEXITY

Challenges of technological complexity are depicted in Table 4.5.4

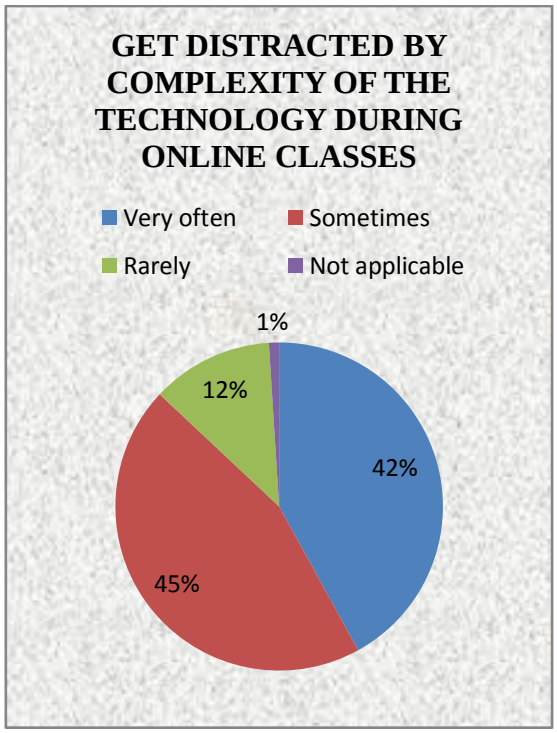
TABLE 4.5.4

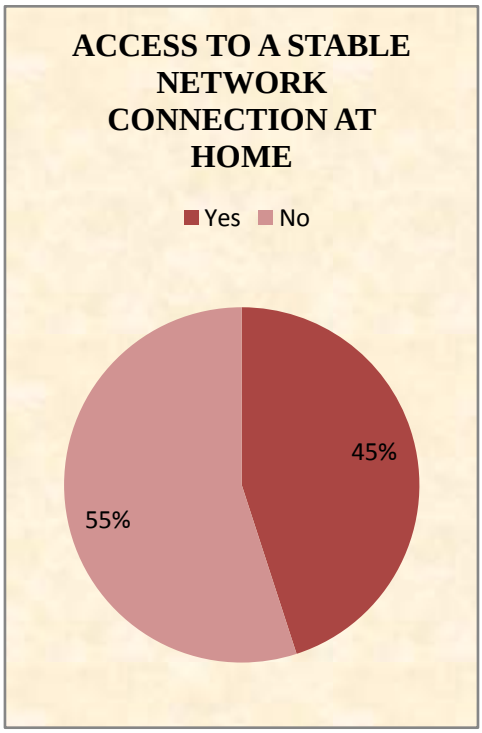
CHALLENGES OF TECHNOLOGICAL COMPLEXITY

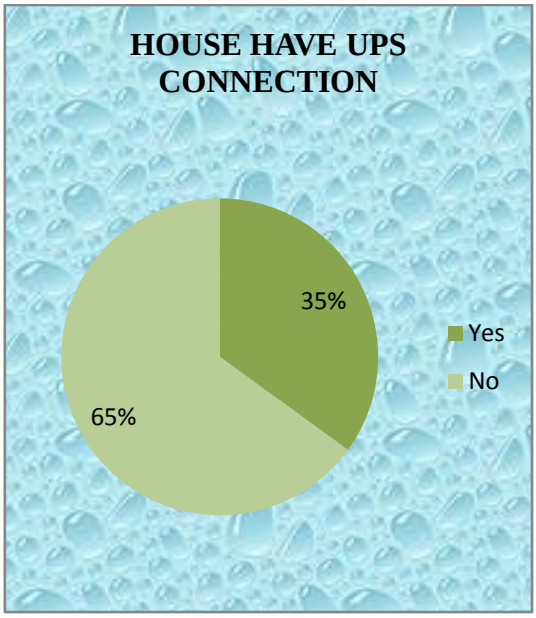
ASPECTS		PERCENTAGE OF THE RESPONDENTS (n=100)
Get distracted by complexity of the technology during online classes	Very often	42
	Sometimes	45
	Rarely	12
	Not applicable	1
Access to a stable network connection at home	Yes	45
	No	55
House have ups connectivity	Yes	35
	No	65
Ever faced connection disconnected during e-learning in a day	Once	15
	Twice	18
	Thrice	11
	More than thrice	56
Electricity problem during e-learning	Yes	52
	No	12
	Sometimes	36
Alternate source for electricity problem	Installing solar panels	13
	Use LED lights	18
	Use power strips for multiple gadgets	19
	Others	50

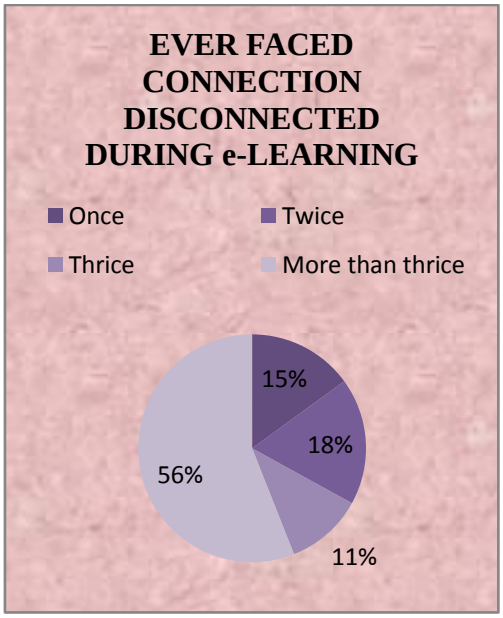
The above table showed that out of the selected respondents 45 percent of the respondents stated that sometimes only they got distracted by the complexity of the technology during online classes, 42 percent of the respondents stated very often, 12 percent of the respondents stated rarely. Among the selected respondents 55 percent of the respondents did not have access to a stable network connection at their home, whereas remaining 45 percent of the respondents had access to a stable network connection at their home.

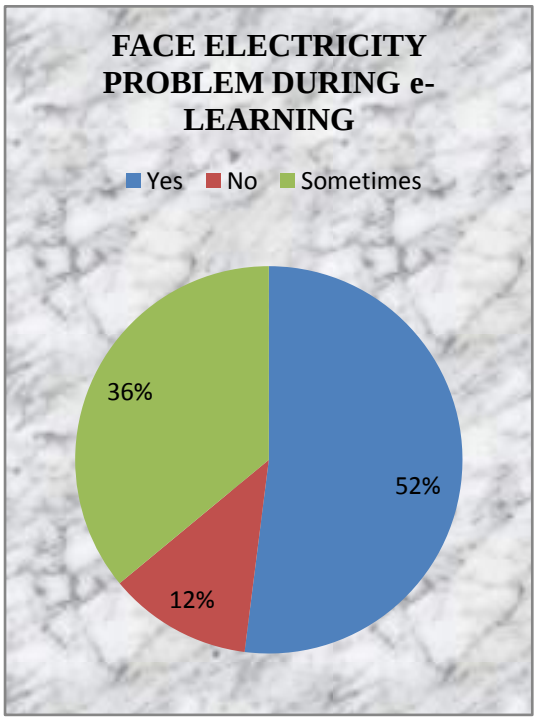
Among the selected respondents 56 percent of the respondents stated that they had faced connection disconnected during e-learning more than thrice, 18 percent of the respondents faced twice, 15 percent of the respondents faced once and 11 percent of the respondents faced thrice. About 52 percent of the respondents were facing electricity problem during e-learning, 36 percent of the respondents faced it sometimes, whereas remaining 12 percent of the respondents did not faced electricity problem during e-learning. Among the selected respondents 19 percent of the respondents used power strips for multiple gadgets, 18 percent of the respondents used LED lights and remaining 13 percent of the respondents installed solar panels.











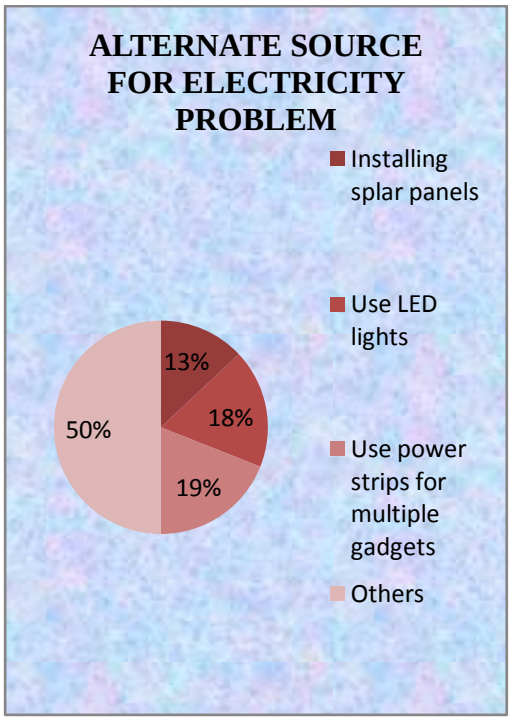


Fig. 4.5.4 CHALLENGES OF TECHNOLOGICAL COMPLEXITY

4.5.5 CHALLENGES OF LEARNING ENVIRONMENT

Challenges of learning environment are stated in Table 4.5.5

TABLE 4.5.5

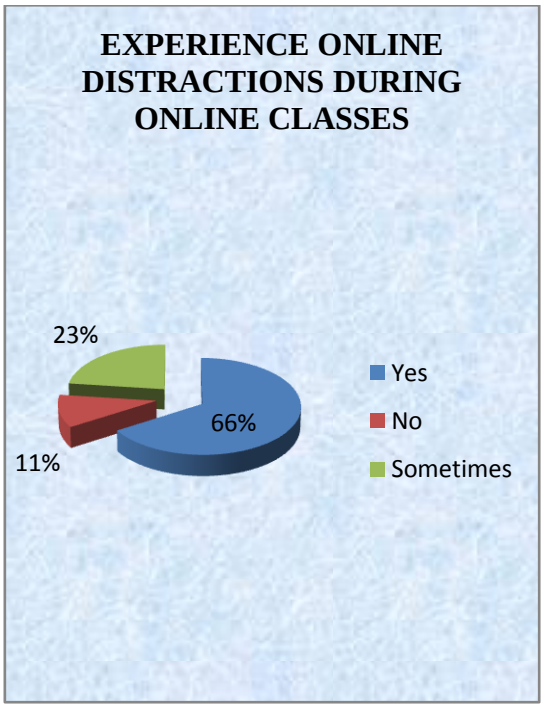
CHALLENGES OF LEARNING ENVIRONMENT

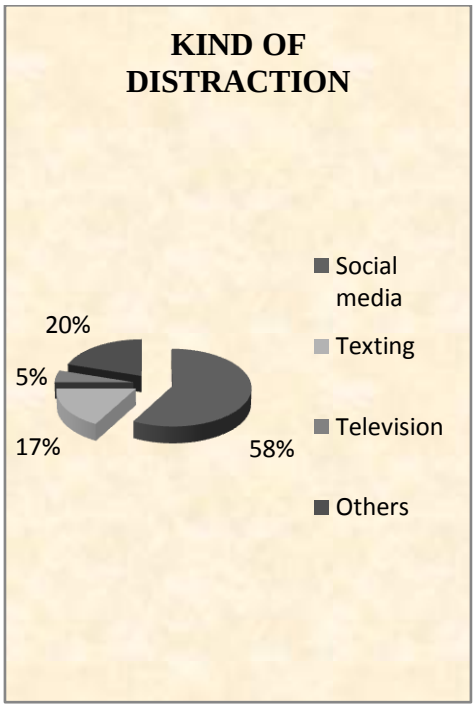
ASPECTS		PERCENTAGE OF THE RESPNDENTS (n=100)
Experience online distractions during online classes	Yes	66
	No	11
	Sometimes	23
Kind of distraction	Social media	58
	Texting	17
	Television	5
	Others	20
Experience distraction at home as a learning environment	Yes	51
	No	13
	Sometimes	36
Kind of distraction at home in a learning environment	Family members	15
	Cell phone	19
	Noise	28
	Household duties	28
	Others	10
Satisfaction in e-learning	Highly satisfied	6
	Satisfied	18
	Neutral	52
	Dissatisfied	15
	Highly dissatisfied	9

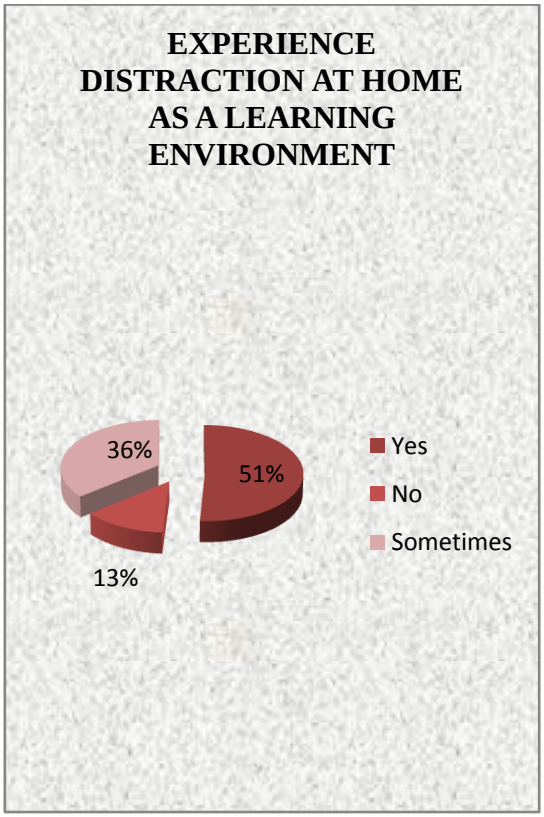
Majority 66 percent of the respondents experienced online distractions during online classes, whereas 11 percent of the respondents stated that they did not experienced online distractions during online classes. Among the selected respondents 58 percent of the

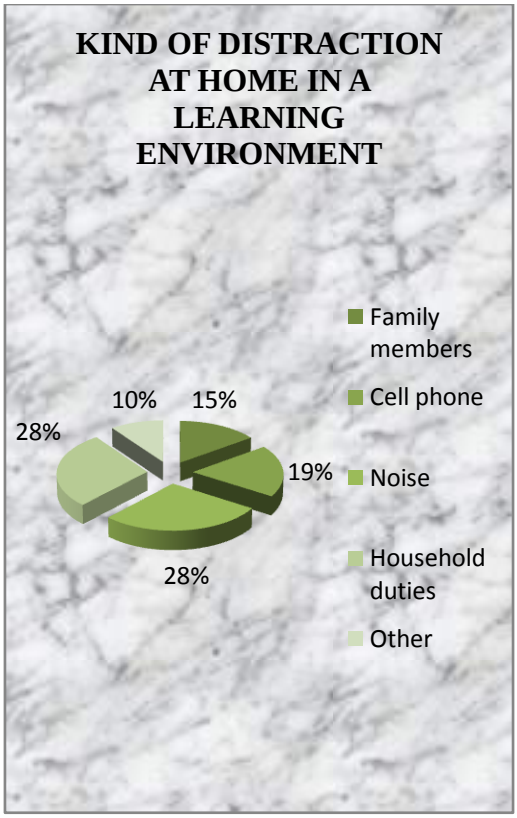
respondents experienced online distractions due to social media, 17 percent of the respondents were experiencing online distractions due to texting and only 5 percent of the respondents experienced distraction due to television.

About 51 percent of the respondents stated that they experienced distraction at home as a learning environment, 36 percent of the respondents stated that they faced this constraint sometimes and remaining 13 percent of the respondents stated that they had not experienced distraction at home. Among the selected respondents 28 percent of the respondents experienced distraction at home as a learning environment due to noise and another 28 percent due to household duties, 15 percent of the respondents had experienced distraction due to family members such as family member will talk to them, ask questions during the classes. About 52 percent of the respondents stated neutral that they were satisfied with e-learning, 18 percent of the respondents stated satisfied and only 6 percent were highly satisfied with e-learning.









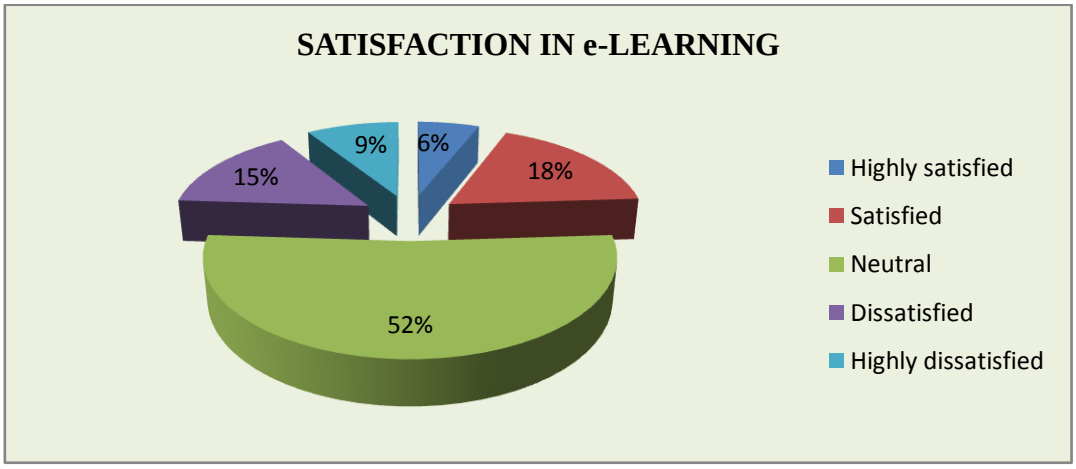


Fig. 4.5.5 CHALLENGES OF LEARNING ENVIRONMENT

4.5.6 SOLUTIONS OF e-LEARNING

Solution of e-learning are presented in Table 4.5.6

TABLE 4.5.6

SOLUTIONS TO OVERCOME THE PROBLEM FACED DURING ONLINE CLASSES

ASPECTS	PERCENTAGE OF THE RESPONDENTS (n=100)
Create a training curriculum with courses and material that can be delivered without a teacher present.	40
Comprehensive training of teaching staff.	25
Training to students in the field of e-learning skills.	20
Adopt a blended learning approach (different learning methods) at the beginning for implementation of e-learning.	17
Introduce any one paper in each year. So, that students can be equip with e-learning skills as well as improve accessibility to e-learning.	18

*Multiple responses

Table 4.5.6 shows multiple responses in terms of solutions to overcome the problem faced during online classes 40 percent of the respondents stated the solution that create a training curriculum with courses and materials that can be delivered without a teacher present, 25 percent of the respondents stated the solution that conduct a comprehensive training of teaching staff, 20 percent of the respondents stated that training the students in the field of e-learning skills, 18 percent of the respondents stated that introducing any one paper every year, so that student can be equip with e-learning skills as well as improve accessibility

to e-learning, and 17 percent of the respondents stated that to adopt a blended learning approach (different learning methods) at the beginning for implementation of e- learning.

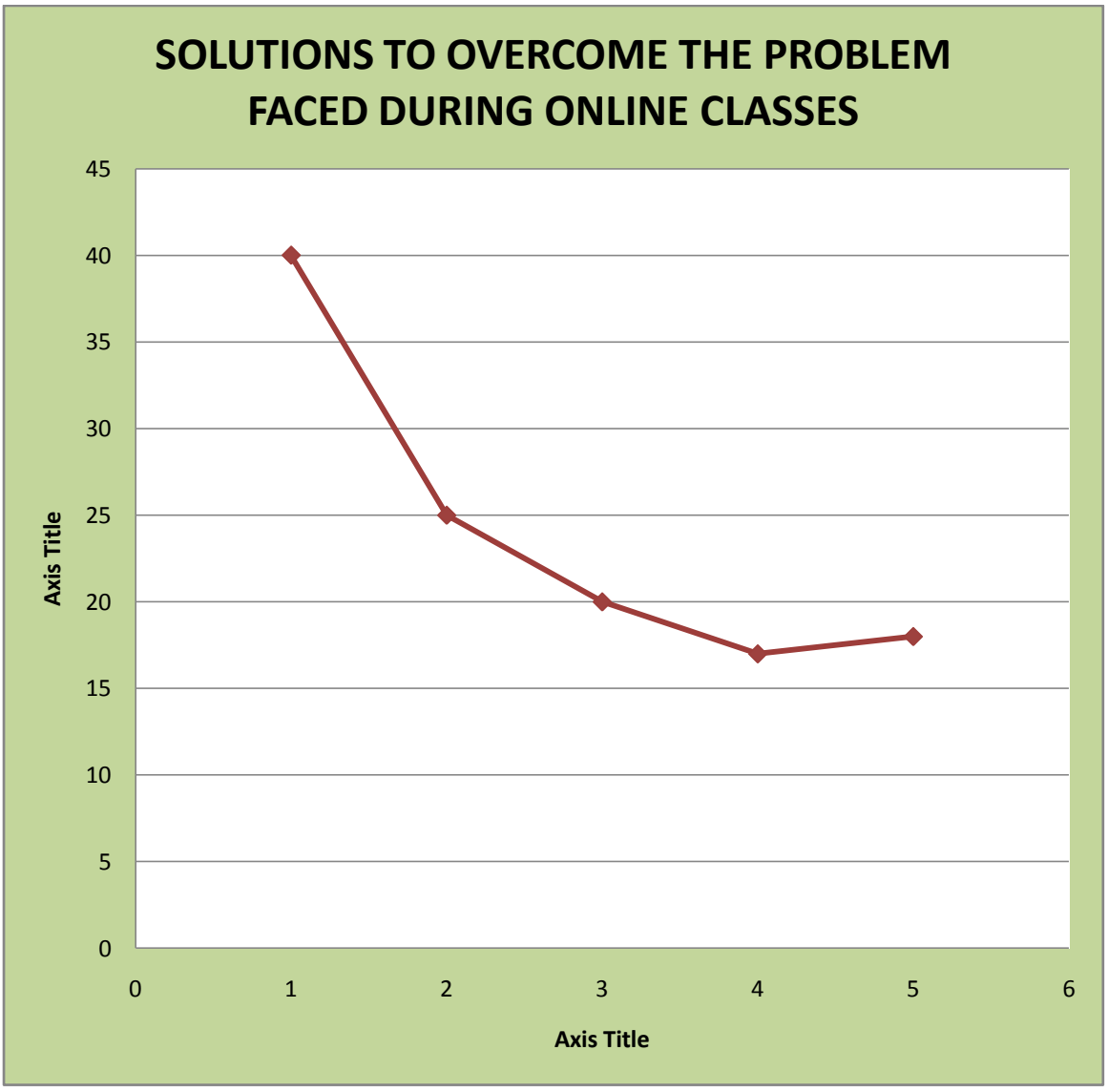


Fig. 4.5.6 SOLUTIONS TO OVERCOME THE PROBLEM FACED DURING ONLINE CLASSES

4.6 SWOC ANALYSIS OF e-LEARNING

SWOC analysis is a strategic planning and strategic management technique used to help a person or organization identify strengths, weaknesses, opportunities, and Challenges related to business competition or project planning.

Strength of e-learning

Weakness of e-learning

Opportunity got by e-learning

Challenges or threats faced during e-learning

STRENGTHS OF e-LEARNING

Strength of e-learning are presented in table 4.6.1

TABLE 4.6.1

STRENGTHS OF e-LEARNING

STRENGTHS	PERCENTAGE OF THE RESPONDENTS (n=100)
Better communication and analytical thinking skills	53
Save time	44
Increase knowledge	57
More comfortable	31

*Multiple responses

Table 4.6.1 shows multiple responses in terms of strengths of e-learning where 57 percent of the students had increase their knowledge by participating in various computer managed learning, interactive online learning and collaborative online learning, 53 percent of the students had better communication by means of Emails, Whatsapp, Zoom platform and Google and Microsoft platform, 44 percent of the students stated that e-learning saves time, it enable people to study irrespective of where they are located in the world, and 31 percent of the students felt that e-learning was more comfortable.

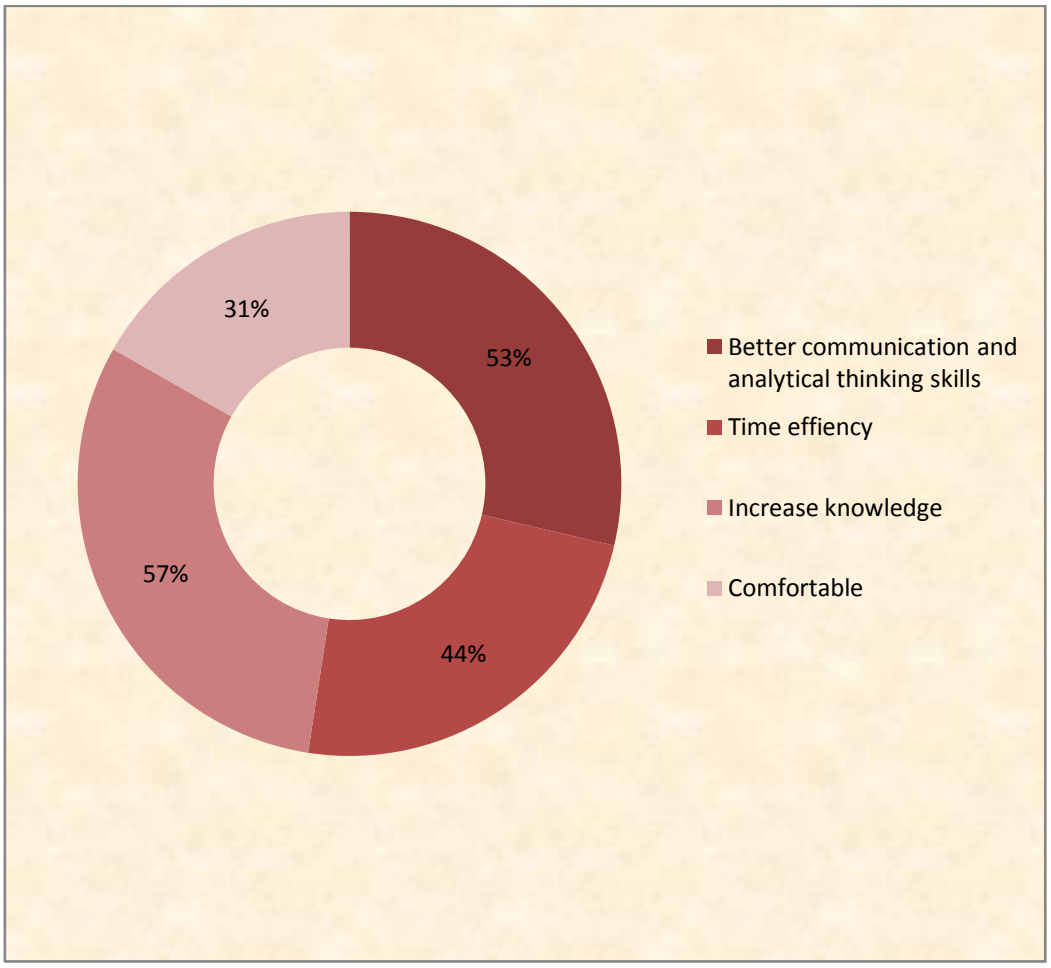


Fig.4.6.1 STRENGTHS OF e-LEARNING

WEAKNESS OF e-LEARNING

Weakness of e-learning are stated in table 4.6.2

TABLE 4.6.2

WEAKNESS OF e-LEARNING

WEAKNESSES	PERCENTAGE OF THE RESPONDENTS (n=100)
Disinterested	82
Technology complexity	42
Fail to get appropriate help	31
Absence of teachers	74

*Multiple responses

Table 4.6.2 shows multiple responses in terms of weaknesses of e-learning, majority 82 percent of the students get disinterested in e-learning because of adaptation difficulties, poor time management, technical issues and lack of contact, 74 percent of the students felt absence of teachers in e-learning because students did not feel connected with the teachers and lack of face to face interaction with the teachers, 42 percent of the students faced technological complexity in e-learning and 31 percent of the students stated that because of boredom, technical issues, no practical knowledge and gadget they failed to get appropriate help in e-learning.

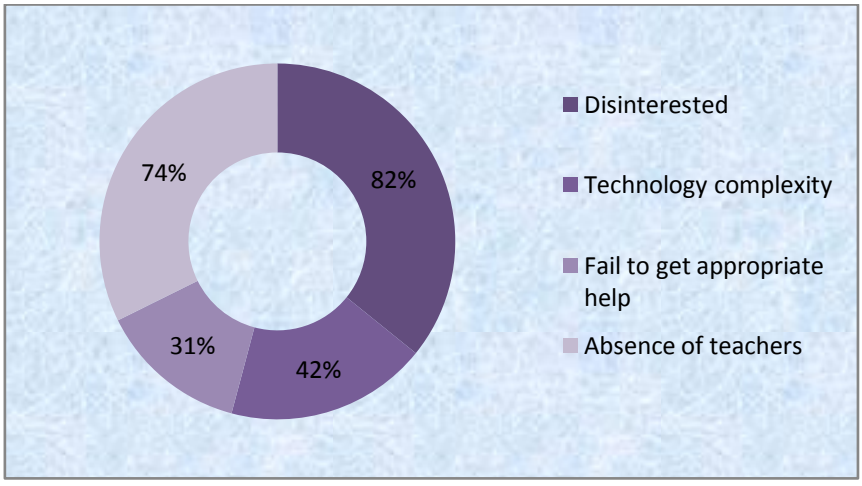


Fig. 4.6.2 WEAKNESS OF e-LEARNING

OPPORTUNITES OF e-LEARNING

Opportunities of e-learning are depicted in table 4.6.3

TABLE 4.6.3

OPPORTUNITES OF e-LEARNING

OPPORTUNITIES	PERCENTAGE OF THE RESPONDENTS (n=100)
Bridged gap of academic period	42
Time saving and cost efficient for learners	45
Development of learning	44
Faculty development	32

*Multiple responses

Table 4.6.3 shows multiple responses in terms of opportunities of e-learning, 45 percent of the respondents stated that e-learning is time saving and cost efficient for learner, 44 percent of the respondents stated that because of e-learning there had been development of learning such as Chat room, Google meet, Skype and Zoom platform, 42 percent of the respondents stated that e-learning had bridged the gap of academic period, and 32 percent of the respondents stated that there had been development of faculty because of e-learning.

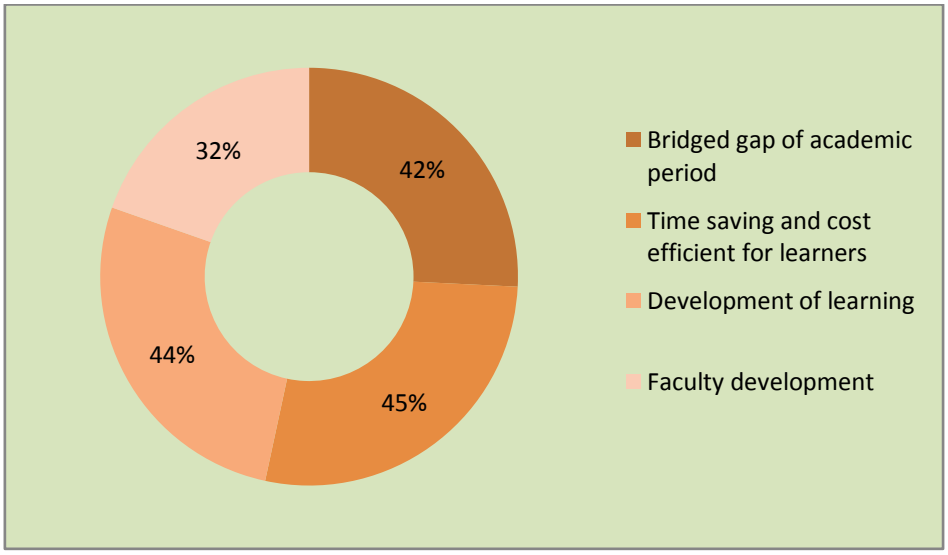


Fig. 4.6.3 OPPORTUNITES OF e-LEARNING

CHALLENGES OF e-LEARNING

Challenges of e-learning are presented in table 4.6.4

TABLE 4.6.4

CHALLENGES OF e-LEARNING

CHALLENGES	PERCENTAGE OF THE RESPONDENTS (n=100)
Distraction	66
Lack of internet connection	45
Electricity problem	52
Lack of practical sessions	50

*Multiple responses

Table 4.6.4 shows multiple responses in terms of challenges of e-learning, majority 66 percent of the respondents stated that they faced distraction during online classes because of social media, texting, television, family members and household duties, 52 percent of the respondents stated that they faced electricity problem, 50 percent of the respondents stated that there was lack of practical sessions in e-learning, and 45 percent of the respondents stated that there was lack of internet connection in e-learning.

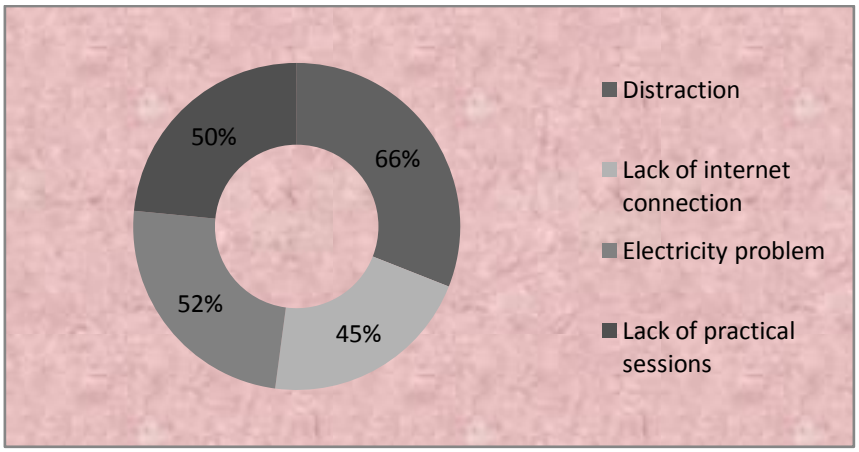


Fig. 4.6.4 CHALLENGES OF e-LEARNING

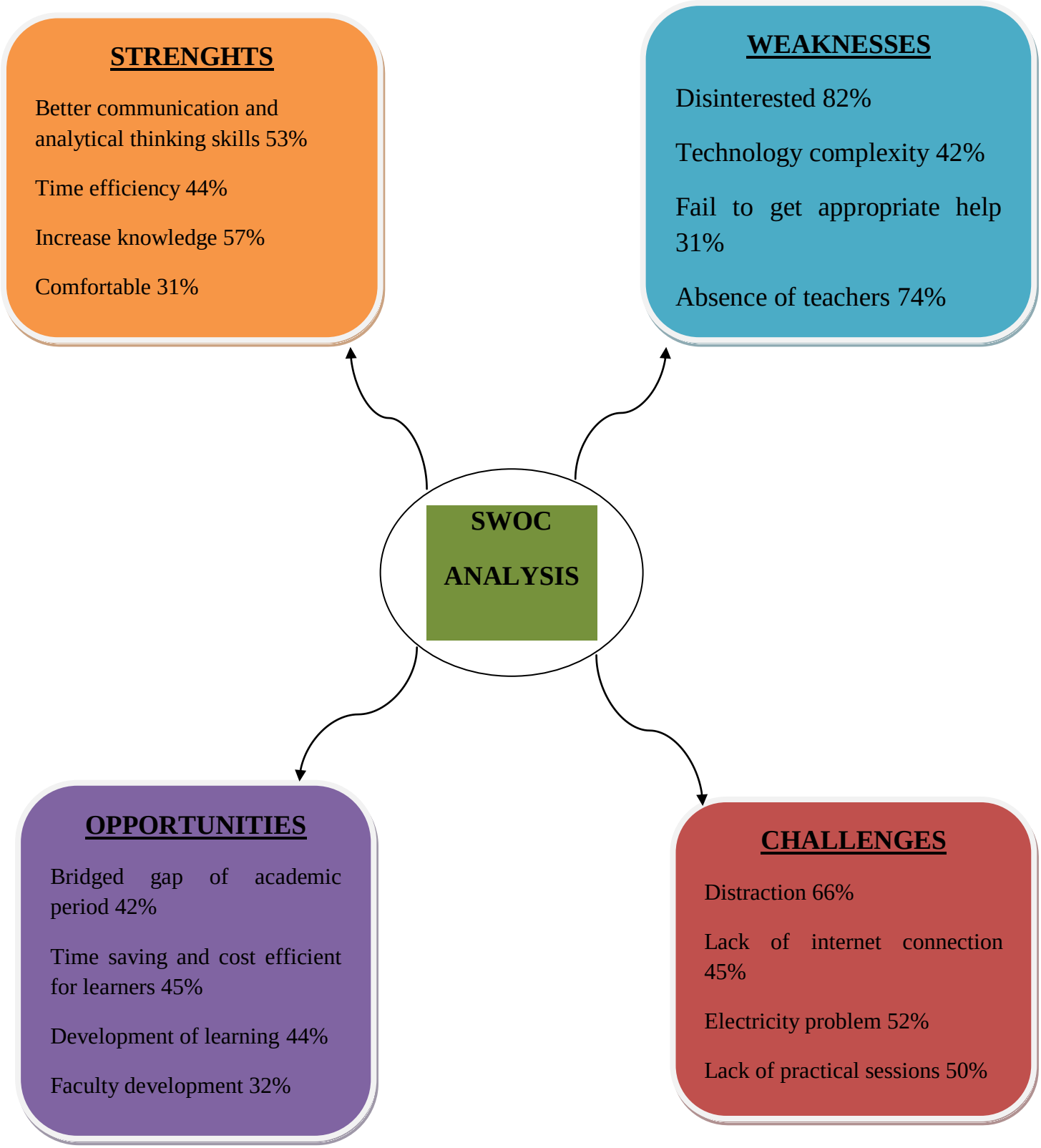


Fig. 4.6.5 SWOC ANALYSIS OF e-LEARNING

5. SUMMARY & CONCLUSION

The term e-learning is a new concept of education which is different from traditional learning. It provides a new brand arrangement for learning. The main feature of e- learning is that the presentation and communication of learning contents is finished through internet system. And e-learning connotes electronic method of learning which is related to computerized learning in an interactive interface at the convenience of both the learners and lecturers. It is an innovative means of instruction without physical contact with the learners and the lecturers. The advantages of the e-learning include better content delivery, interactivity, quality content delivery and confidence of both learners and lecturers within the educational sector. The e-learning tools are utilized by most of the academic institutions either to interchange or improve training models and traditional learning models.

Keeping in the view, the present study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh was taken by the investigator with the following objectives: To

1. Study the socio-economic background of the respondents
2. Know the students perception of e-learning during covid-19 pandemic
3. Identify the different responses about the challenges faced during e-learning from the respondents
4. Analyse the challenges and obstacles faced by the respondents

The area selected for the study was Indira Gandhi Government College of Arunachal Pradesh. Out of 831 students, a sample of 100 students both male and female from Indira Gandhi Government College of Arunachal Pradesh was selected conveniently for the study. The mailed questionnaire method was followed to elicit the information from the selected respondents.

4.1 SOCIO - ECONOMIC PROFILE OF THE RESPONDENTS

- Age is the amount of time during which someone or something has lived or existed. The age profile of the respondents revealed that the majority of 90 percent of the respondents were between the age group of 20-25 years, 8 percent of the respondents were between the age group of 25-30 years of age and minority 2 percent of the respondents belonged to age a group of 30-35.

- Gender is the state of being male or female in relation to the social and cultural roles that are considered appropriate for men and women. Among the selected respondents 50 percent were male and rest 50 percent were female.
- Discipline is defined as a field of study or training to fix incorrect behavior or create better skills. Majority, 73 percent of the selected respondents were from Arts and Humanities, 19 percent of the respondents were from Science and 8 percent were from Commerce.
- It is the academic qualification that we belong from. The education profile of the respondents shows that 54 percent of the respondents were from 3rd year, 33 percent of the respondents were from 2nd year and rest 13 percent were from 1st year.
- A religion is a set of beliefs that is passionately held by a group of people that is reflected in a world view and in expected beliefs and actions. Among the selected respondents majority of 41 percent of the respondents were belonging to others, 35 percent were Hindu and 24 percent were Christian.
- Caste is the system of dividing people of a society into different social classes. Regarding the caste of the selected respondents, majority that is 92 percent of them belonged to Scheduled Tribe (ST), only 4 percent of the respondents belonged to Other Backward Class (OBC), and only 2 percent of them were belonging to Scheduled Caste (SC) and others respectively.
- Parental Occupation is defined as the main work undertaken by the parent/guardian. Majority, 57 percent of the respondent's parents were belonging to others, 26 percent of the respondents parents had government job, 13 percent of their parents had running business as occupation and only 4 percent of the respondents parents had private job.
- Educational level of parents refers to the level of education that parents have completed such as high school level, graduate, and advanced degrees. Among the selected respondents 33 percent of the respondent's parents were illiterate, only 20 percent of them studied upto 10th standard and Graduation and 11 percent of them were from 12th standard and others respectively.
- Parent's income means the annual income of the parent. Among the selected respondents 57 percent of the respondent's parents were earning Rs 10000-15000, 17 percent of their parents were earning Rs 15000-20000, 16 percent of their parents were earning Rs 20000-30000 and only 10 percent were earning above 30000.

- The family is an intimate domestic group made up of people related to one another by bonds of blood, sexual mating or legal ties. It is the smallest and most basic social unit, which is also the most important primary group found in any society. Among the selected respondents majority 69 percent of the respondents were belonging to nuclear family and 31 percent belongs to joint family system.

4.2 PERFORMANCE EXPECTANCY OF e-LEARNING

- Majority 52 percent of the respondents stated that they had participated in e- learning before the pandemic, whereas 48 percent have not participated in any e- learning before the pandemic.
- Regarding the participation of e-learning before pandemic about 50 percent of respondents stated that they had participated in other type of e-leaning that is individual online learning, 23 percent of respondents participated in interactive online learning, and only 5 percent of respondents participated in adaptive e-learning.
- Majority 93 percent of the respondents used mobile network to join the classes, whereas only 7 percent of the respondents used Broadband connection.
- Learning is the process or experience of gaining knowledge or skill. About 41 percent of respondents learned to operate devices from friends, 26 percent of the respondents from internet forums, and only 12 percent of the respondents learned from their family members.
- Out of 100 respondents, majority that is 59 percent of the respondents stated that their confident level is neutral while using e-learning system, 20 percents of the respondents stated that they were so confident, and only 4 percent of respondents stated that they were highly unconfident while using e-learning system.
- The present study also highlights the fact that 30 percent of the respondents were spending 1-2 hours daily for online classes, 27 percent of the respondents were spending 2-3 hours, and only 22 percents of the respondents were spending more than 4 hours for online classes.
- Majority 93 percent of the respondents stated that they used internet prior to learning for collecting information, and only 7 percent stated that they were not used to internet prior to learning for collecting information.
- About 46 percent of the respondents stated that they used internet sometimes prior to learning for collecting information, 43 percent of the respondents were using internet

very often prior to learning for collecting information, and only 5 percent of the respondents stated not applicable.

- Majority 68 percent of the respondents stated that Rs 500-1000 was their monthly expenditure for e-learning, 20 percent of the respondents stated that Rs 1000-1500 and only 3 percent stated that Rs 1500-2000 was their monthly expenditure for e-learning.
- Among the selected respondents 36 percent of the respondents stated neutral to learn about new things regarding e- learning, 35 percent of the respondents agreed, and only 2 percent stated disagree.

4.2 USAGE OF TOOLS AND DEVICES

- Majority, 80 percent of the respondents used mobile to attend online classes, 10 percent of the respondents used laptop, and only 4 percent of the respondents used computer.
- About 28 percent of the college teachers used other communication tools such as video and web conferencing, 21 percent of the college teachers used chat room, and 13 percent used Discussion forum.
- Among the selected respondents 35 percent of the respondents were using whatsapp as alternative tool for e-learning platform, 26 percent of the respondents were using zoom platform as alternative tool for e-learning platform, and only 8 percent of the respondents used other alternative tool for e-learning platform such as google drive.

4.3 PERCEPTION ABOUT ONLINE CLASSES

4.4.1 PARENTS PERCEPTION ABOUT ONLINE CLASSES

- Regarding effectiveness of online learning 53 percent of the respondents stated neutral, 16 percent of the respondents agreed, and only 7 percent of the respondents highly disagreed.
- Among the selected respondents, 38 percent of the respondents agreed that traditional method of studying was more effective than online learning, 35 percent of the respondents highly agreed, and only 7 percent of the respondents highly disagreed on traditional method of studying.

- About 47 percent of the respondents stated neutral on the statement that the students felt connected with the teacher during online classes, 24 percent of the respondents agreed, and only 4 percent of the respondents highly disagreed on the statement that the students felt connected with the teacher during online classes.
- About 43 percent of the respondents agreed and 31 percent highly agreed that they faced difficulty in understanding and solving numericals, and only 6 percent of the respondents disagreed.
- Among the selected respondents 50 percent of the respondents highly agreed that practical subjects like science and mathematics needs face to face method of teaching, whereas 36 percent of the respondents agreed, and only 3 percent disagreed.
- About 38 percent of the respondents agreed and 35 percent highly agree that creativity is lost in online classes, and only 3 percent highly disagreed.
- Among the selected respondents 37 percent of the respondents stated neutral that online classes are value for money, 24 percent of the respondents disagreed, and 8 percent of the respondents highly agreed.

4.4.2 STUDENTS PERCEPTION

- Regarding the student's perception, among the selected respondents majority 53 percent of the respondents felt neutral with the statement that the e-learning improves written communication and analytical thinking skills, 16 percent of the respondents agreed and 8 percent of the respondents highly agreed.
- The data preview about the perception on e-learning, 44 percent of the respondents were felt neutral that e-learning improves their learning process, 28 percent of the respondents agreed, and only 5 percent of the respondents highly agreed.
- About 39 percent of the respondents felt that e-learning enabled people to study irrespective of where they are located in the world, 34 percent of the respondents agreed, and 8 percent of the respondents highly disagreed.
- Among the selected respondents 31 percent of the respondents were felt neutral that the e-learning is more comfortable than offline classes, whereas 29 percent of the respondents disagreed, and only 6 percent of the respondents highly agreed.

4.4.3 NEGATIVE PERCEPTION OF e-LEARNING

- Regarding negative perception of e-learning 28 percent of the respondents were having negative perception on e- learning because there was lack of interaction with teacher, 27 percent of the respondents stated that there was low motivation for study in e-learning, and only 4 percent stated lack of equipments like microphone and head phones.

4.5 CHALLENGES AND SOLUTIONS OF e-LEARNING

4.5.1 CHALLENGES OF SELF REGULATION

- Among the selected respondents 50 percent of the respondents stated that sometimes they failed to get appropriate help during online classes, 31 percent of the respondents stated that they failed to get appropriate help during online classes, and 19 percent of the respondents stated that they don't failed to get appropriate help during online classes.
- About 33 percent of the respondents stated that due to technical issues they failed to get appropriate help during online classes, another 33 percent was due to no practical knowledge, and only 4 percent of the respondents stated that it was due to gadgets shortage.

4.5.2 EFFECTIVENESS AND SATISFACTION OF e-LEARNING

- About 42 percent of the respondents were neutral with the statement that the e-learning is effective in bridging the gap of missed academic period, 29 percent of the respondents agreed and only 2 percent highly disagreed.
- Among the selected respondents 47 percent of the respondents stated neutral with the content of topic covered during the classes through online, 25 percent of the respondents disagreed, and only 2 percent of the respondents stated highly agreed.

4.5.3 CHALLENGES OF STUDENT ISOLATION

- Majority 82 percent of the respondents stated that they felt disinterested during online learning, whereas 18 percent of the respondents stated that they had not felt disinterested during online learning.

- Among the selected respondents 31 percent of the respondents felt disinterested during online learning due to technical issues, 23percent of the respondents stated due to adaptation difficulties, and 13 percent of the respondents stated due to poor time management.
- About 47 percent of the respondents faced lack of internet speed issue during e-learning, 23 percent of the respondents faced technical issues, and 13 percent of the respondents faced lack of lab session.

4.5.4 CHALLENGES OF TECHNOLOGICAL COMPLEXITY

- About 45 percent of the respondents stated that sometimes only they got distracted by the complexity of the technology during online classes, 42 percent of the respondents stated very often, 12 percent of the respondents stated rarely.
- Among the selected respondents 55 percent of the respondents did not have access to a stable network connection at their home, whereas remaining 45 percent of the respondents had access to a stable network connection at their home.
- Among the selected respondents 56 percent of the respondents stated that they had faced connection problems during e-learning more than thrice, 18 percent of the respondents faced twice, and only 11 percent of the respondents faced thrice.
- About 52 percent of the respondents faced electricity problem during e-learning, 36 percent of the respondents faced sometimes, whereas remaining 12 percent of the respondents did not faced electricity problem during e-learning.
- Among the selected respondents 19 percent of the respondents used power strips for multiple gadgets, 18 percent of the respondents used LED lights and remaining 13 percent of the respondents installed solar panels.

4.5.5 CHALLENGES OF LEARNING ENVIRONMENT

- Majority 66 percent of the respondents experienced online distractions during online classes, whereas 11 percent of the respondents stated that they did not experienced online distractions during online classes.
- Among the selected respondents 58 percent of the respondents were experiencing online distractions due to social media, 17 percent of the respondents were experiencing online distractions due to texting and only 5 percent of the respondents experienced distraction due to television.

- About 51 percent of the respondents stated that they experienced distraction at home as a learning environment, 36 percent of the respondents stated that they faced this constraint sometimes and remaining 13 percent of the respondents stated that they had not experienced distraction at home.
- Among the selected respondents 28 percent of the respondents experienced distraction at home as a learning environment due to noise and another 28 percent due to household duties, 15 percent of the respondents had experienced distraction due to family members such as family member will talk to them, ask questions during the classes.
- About 52 percent of the respondents stated neutral that they were satisfied with e-learning, 18 percent of the respondents satisfied and only 6 percent were highly satisfied with e-learning.

4.5.6 SOLUTIONS OF e-LEARNING

- Regarding the solutions to overcome the problem faced during online classes 40 percent of the respondents stated the solution is to create a training curriculum with courses and materials that can be delivered without a teacher present, 25 percent of the respondents stated the solution is to conduct a comprehensive training of teaching staff, 20 percent of the respondents stated training the students in the field of e-learning skills, and only 17 percent of the respondents stated that adopting a blended learning approach (different learning methods) at the beginning for implementation of e- learning would be helpful.

4.6 SWOC ANALYSIS OF e-LEARNING

- Strengths of e-learning where 57 percent of the students had increase their knowledge by participating in various computer managed learning, interactive online learning and collaborative online learning, 53 percent of the students had better communication by means of Emails, Whatsapp, Zoom platform and Google and Microsoft platform, and 31 percent of the students felt that e-learning was more comfortable.
- Majority, 82 percent of the students get disinterested in e-learning because of adaptation difficulties, poor time management, technical issues and lack of contact, 74

percent of the students felt absence of teachers in e-learning because students did not feel connected with the teachers and lack of face to face interaction with the teachers, and 31 percent of the students stated that because of boredom, technical issues, no practical knowledge and gadget they failed to get appropriate help in e-learning.

- In terms of opportunities of e-learning, 45 percent of the respondents stated that e-learning is time saving and cost efficient for learners, 44 percent of the respondents stated that because of e-learning there had been development of learning such as Chat room, Google talk, Skype and Zoom platform, and 32 percent of the respondents stated that there had been development of faculty because of e-learning.
- Regarding the challenges of e-learning, majority 66 percent of the respondents stated that they faced distraction during online classes because of social media, texting, television, family members and household duties, 52 percent of the respondents stated that they faced electricity problem, and 45 percent of the respondents stated that there was lack of internet connection in e-learning.

Recommendations

- Comprehensive training of teaching staff.
- Training for students within the field of e-learning skills.
- Adopt a blended learning approach (different learning methods) at the start for implementation of e- learning.
- Introduce any one paper annually. So, that students can be equip with e-learning skills as well as improve accessibility to e-learning.
- Create a training curriculum with courses and material which will be delivered without an educator present.
- Inform students sooner before time about the net format, including what proportion content they will need to understand, the learning strategy, and how long an average session will last.
- Educational institutions should offer the essential materials and resources for teachers and students to enhance their computer literacy. An acceptable collection of video courses, as an example, may be produced. This level of literacy should be available at all times, not just within the event of COVID-19.

- Teachers should build a blog or a group chat to enable students to ask questions, support one other, and debate issues so as to assist them overcome feelings of isolation.
- Create a separate chat room, forum, social networking group, or website with basic, detailed background information and commonly asked questions section for students to go to if they have technical issues.
- Teachers should provide distinct and attainable goals for students so that they do not feel lost. As a motivator, use praise and awards.

Conclusion

The term e-learning is not just a change of technology. It is part of a redefinition of how we as a human transmit knowledge, skills, and values to each other. It has given education a new dimension, taking classroom learning to the next level through the creation of virtual communication of learners and teachers who interact online. It is more than distance education where resources are simply put online. It is a virtual campus that involves rich, instructional and social interaction. Its aim is to create augmented learning environment where technology is used to deliver a combine range of teaching and learning techniques aimed at maximizing the individual's participation and achieving the goals within the learning and teaching process as a greener world. It has shown to be an effective approach in the support of educational development.

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ANNEXURE I

Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-641043

Department of Home Science Extension Education

Questionnaire to assess the "A Study on Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh"

SOCIO - ECONOMIC PROFILE OF THE RESPONDENTS

1. Name of the respondent – (Ammang)

2. Address: (Glat)

3. Mobile Number:

4. Email ID:

5. Age (in years) (Lau)

- 20-25
- 25-30
- 30-35

6. Gender- (Shan –sa)

- Male
- Female

7. Disciplines

- Arts and humanities
- Science
- Commerce

8. Level of study- (Shawmo-purimo)

- 1^{st} year
- 2^{nd} year
- 3^{rd} year

9. Religion (Kasha-lam)

- Hindu

- Muslim
- Christian
- Other

10. Caste- (Brong)

- SC
- ST
- OBC
- Others

11. Parents occupation (Naw-paishan-kant)

- Business
- Govt. job
- Private job
- Others

12. Educational level of parents (Naw-paishawmo-purinai taw)

- Illiterate
- 10^{th} passed
- 12^{th} passed
- Graduation
- Post Graduation
- Others

13. Monthly income of parents (Lai-motamcho)

- 10000-15000
- 15000-20000
- 20000-30000
- Above 30000

14. Types of family (Jang-thal)

- Nuclear
- Joint

PERFORMANCE EXPECTANCY OF e-LEARNING

15. Have you ever participated in any type of e-learning before the pandemic? (Pandemic pangwai e-learning hee ling chaka la?)

- Yes
- No

16. If yes, then mention the type? (Ling chakara,shautawahee?)

- Computer managed Learning

- Interactive online Learning
- Collaborative Online learning
- Adaptive E-learning
- Others

17. What type of network connection do you use to join online classes? (Ninin Yanwan network use kath mai class kan?)

- Mobile network
- Broadband connection

18. From whom did you learn to operate devices? (Shan network ka online class lap-yee?)

- Friends
- Family members
- Internet forums
- Others

19. Are you confident while using e-learning system? (Nya-waingitchaka cha-ungshantafho?)

- Highly confident
- Confident
- Neutral
- Unconfident
- Highly Unconfident

20. How much time do you spend in a day for online classes? (Ya-rant ha lap-yee online class ngitmoraat?)

- 1-2 hour
- 2-3 hour
- 3-4 hour
- Above 4

21. Do you use internet prior to a learning for collecting information? (Pangwainai internet thong-yee wo?)

- Yes
- No

22. If yes, how often? (Am-rah buee show mo?)

- Very often
- Sometimes
- Rarely
- Not applicable

23. Monthly expenditure for e-learning (Rs) (e-learning heelai-mo rat shaw ha tem?)

- 500-1000
- 1000-1500
- 1500-2000
- Above 2000

24. Are you open to learn about new things regarding e- learning? (e-learning heekatan-katantwa ta-ngitchambuee man la?)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

USAGE OF TOOLS AND DEVICES

25. Which electronic device you mostly use to attend online classes? (Shankarentwa cha-ungnyobyo pong-yee man online class kang?)

- Mobile
- Laptop
- Computer
- Both mobile phone and laptop

26. Which communication tools are used by your college teachers? (Nyoning college kablnnshan cha-ungkabyoblnnmantao?)

- Chat room
- Discussion forum
- Email
- Instant messaging (Google talk, Skype)
- Others

27. Which alternative tool is used by you for e-learning platform? (Tamblailangyawannyo kai mo e-learning kang?)

- Emails
- Google and Microsoft platform
- Whatsapp
- Zoom platform
- Others

PARENTS PERCEPTION ABOUT ONLINE CLASSES

28. Online learning is very effective (Online haekasit ta-ling kang)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

29. Traditional method of studying was more effective (Rangwai ta-ling soro wan kasit la)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

30. Students still feel connected with the teachers (kamblnnnakkalingtumantao la)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

31. Students face difficulty in understanding and solving numerical (kaling san tah-achchittatraheekarungchhamtao la)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

32. Practical subjects like science and mathematics needs face to face method of teaching (Maths,science wan gae ha blnn-naichanngitm)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

33. Creativity is lost in online classes (Poon mangit online class hae)

- Highly agree

- Agree
- Neutral
- Disagree
- Highly disagree

STUDENTS PERCEPTION ABOUT ONLINE CLASSES

35. What is view on; e-learning improves written communication and analytical thinking skills (Shawchham-yeemo e-learning haelai-chunak poon nakngit man)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

36. Do you feel e-learning improves your learning process **(e**-learning haewawngitmansorokatla)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

37. Do you think e-learning can enable people to study irrespective of where they are located in the world? (e-learning nya-glathaechongwinai ta-purika-ngitkatsorokatmanla?)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

38. In your view, is e-learning more comfortable than offline classes (e-learning kasit la offline class pang hee)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

NEGATIVE PERCEPTION OF e-LEARNING

39. What is your negative perception of e-learning? (E-learning waishanmafansorokatman ?)

- Low motivation for study in e-learning
- Lack of interaction with teacher
- Lack of internet
- It hard to stick to a study schedule of online classes
- Lack of equipment like microphone, headphones**.**
- Others

CHALLENGES OF SELF REGULATION

40. Do you fail to get appropriate help during online classes? (Online class haeshanmodot la mathan la?)

- Yes
- No
- Sometimes

41. If yes, then list the reason (Am-rah, shan da mathan)

- Boredom
- Technical issues
- No practical knowledge
- Gadgets shortage
- Others

EFFECTIVENESS AND SATISFACTION OF e- LEARNING

42. Do you think e-learning is effective in bridging the gap of missed academic period? (E-learning haekamablnnnai wan-san ta-ling nalat ma la?)

- Highly agree
- Agree
- Neutral
- Disagree
- Highly disagree

43. Are you satisfied with the content of topic covered during the classes through online? (Online class rat blnntaw wan kaproh-man ngit-man la?)

- Highly agree
- Agree
- Neutral

- Disagree
- Highly disagree

CHALLENGES OF STUDENTS ISOLATION

44. Do you feel disinterested during online learning? (Online class rat manjaikatman la?)

- Yes
- No

45. If yes, then reason for disinterest (Am-rah,shandamanjaikant)

- Adaptation difficulties
- Poor time management
- Technical issues
- Lack of contact
- Others

46. Which issue is encounter by you during e- learning? (Yawantafee e-learning karungkatman?)

- Lack of internet speed
- Lack of lab session
- Technical issues
- Others

CHALLENGES OF TECHNOLOGICAL COMPLEXITY

47. Do you get distracted by the complexity of the technology during online classes? (Online class wan technology kakarungsorokat la?)

- Very often
- Sometimes
- Rarely
- Not applicable

48. Are you having access to a stable network connection at home? (Bui-glathae network kasitkamla?)

- Yes
- No

49. Do your house have ups connectivity? (Bui-glathae connectivity rae man la?)

- Yes
- No

50. Have you ever faced connection disconnected during e-learning? (e-learning kat-yee rat karenmatae la?)

- Once
- Twice
- Thrice
- More than thrice

51. Do you face electricity problem during e-learning (Taimankrowrashanhae la nae)

- Yes
- No
- Sometimes

52. If yes, then how do you manage? (Sammankrowra, shawkaemang?)

- Installing solar panels
- Use LED lights
- Use power strips for multiple gadgets
- Other

CHALLENGES OF LEARNING ENVIRONMENT

53. Do you experience online distractions during online classes? (Online class rat loma man la?)

- Yes
- No
- Sometimes

54. If yes, then what kind of distraction (Loma man krowrashautwaloma man)

- Social media
- Texting
- Television
- Other

55. Do you experience distraction at home as a learning environment (Bui-hae e-learning rat loma man la)

- Yes
- No
- Sometimes

56. If yes, then what of distraction. (Am-rah,shandawaka)

- Family members

- Cell phone
- Noise
- Household duties
- Other

57. Are you satisfied with e-learning? (e-learning kaproh-man la?)

- Highly satisfied
- Satisfied
- Neutral
- Dissatisfied
- Highly dissatisfied

SOLUTIONS TO OVERCOME THE PROBLEM FACED DURING ONLINE CLASSES

58. Which solution would you suggest to overcome the problem faced during online classes? (Online class rat karungsamlak-rayawantaa-in doimang?)

- Create a training curriculum with courses and material that can be delivered without a teacher present.
- Comprehensive training of teaching staff.
- Training of students in the field of e-learning skills.
- Adopt a blended learning approach (different learning methods) at the beginning of the implementation of full-scale e- learning.
- Introduce any one paper in each year. So, that students can be equip with e-learning skills as well as improve accessibility to e-learning.

ANNEXURE II

Certificate of Ethical Clearance

INSTITUTIONAL HUMAN ETHICS COMMITTEE

Avinashilingam

Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956) Re-accredited with 'A++' Grade by NAAC.
Recognised by UGC Under Section 12 B
Coimbatore-641 043, Tamil Nadu, India

26th Febraury 2022

To
Ms. Anjangmai Mam
Department of Home Science Extension Education
Avinashilingam Institute for Home Science and
Higher Education for Women
Coimbatore – 641 043

Dear Anjangmai Mam,

Ref: Your proposal No. IHEC/21-22/EXT-03 entitled "Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh" submitted for approval of IHEC on 23.11.2021.

The Institutional Human Ethics Committee of our University hereby grants approval to your research proposal No. IHEC/21-22/ EXT-03 entitled "Challenges of e-Learning During Covid-19 Pandemic among Students of Indira Gandhi Government College of Arunachal Pradesh" submitted by you. The Approval number for the same is AUW/IHEC/EXT -21-22/XPD-03.

We wish you all the best in your research endeavours.

Regards,

V. Uma Mageshwari

Dr.S.Uma Mageshwari
Member Secretary

Institutional Human Ethics Committee

DR. KANGKI MEGU
PRINCIPAL

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To

Anjangmai Mam
Avinashilingam Institute of Home Science &
Higher Education for women
Coimbatore, Tamil Nadu

Sub: **Permission for Data Collection for thesis writing-regd.**

With reference to your letter, dated 04th November 2021, it is to inform you that the college has no objection regarding collection of data from students and faculty members for any kind of research work. Regarding email ID of faculty members, you can obtain the same from our college website.

With best wishes

05.11.2021

Principal
I.G.G. College
Tezu

Principal
Indira Gandhi Govt. College
Tezu, Lohit Dist. (A.P.)