" A STUDY ON TEACHERS' PERCEPTION TOWARDS ONLINE TEACHING WITH SPECIAL REFERENCE TO ERNAKULAM DISTRICT "

Dissertation

Submitted by

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Under the guidance of

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In partial fulfillment of the requirement for the Degree of

MASTER OF COMMERCE

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ST.TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM

COLLEGE WITH POTENTIAL FOR EXCELLENCE

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This is to certify that the project titled **" A STUDY ON TEACHERS' PERCEPTION TOWARDS ONLINE TEACHING WITH SPECIAL REFERENCE TO ERNAKULAM DISTRICT "** submitted to Mahatma Gandhi University in partial fulfillment of the requirement for the award of degree of Master of Commerce is a record of the original work done by **MS . SONA JOE** , under my supervision and guidance during the academic year 2021-2023

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I, **SONA JOE** ,final year M.com student , Department of Commerce (SF), St.Teresa's College (Autonomous) do hereby declare that the project report entitled " **A STUDY ON TEACHERS' PERCEPTION TOWARDS ONLINE TEACHING WITH SPECIAL REFERENCE TO ERNAKULAM DISTRICT "**submitted to Mahatma Gandhi university is a bonafide record of the work done under the supervision and guidance of Smt . Lekshmi C , Assistant Professor , Department of Commerce (SF), St.Teresa's College (Autonomous) and this work has not previously formed the basis for the award of any academic qualification , fellowship or other similar title of any other university or board .

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SONA JOE

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INTRODUCTION

1.1 TITLE OF STUDY

“ A study on teachers’ perception towards online teaching with special reference to Ernakulam district ”

1.2 INTRODUCTION

Education is the practise of the mind to reason, not the acquisition of facts. Teaching is the interaction with students to facilitate their comprehension and application of information, ideas, and processes. Design, material selection, delivery, evaluation, and reflection are all included. Teaching involves students in the active building of knowledge because to teach is to engage students in learning at all times. A crucial factor in a nation's growth is education.

A society's destiny can be created by educating its youth. Teachers offer the education that raises standard of living, benefiting both individuals and community at large greatly. Teachers help students become more productive and creative, which will improve their employability in the future. When students are encouraged to be innovative and productive, they are more likely to start their own businesses and develop new technologies, which eventually helps a nation's economy. The foundation for everything that can be achieved in life is knowledge and education. Teachers give today's children the opportunity for a better future by empowering them with knowledge.

A teacher needs to have understanding of both the subject matter and how to make their students into active learners. Therefore, effective teaching calls for a dedication to a systematic knowledge of learning. Teaching's main goal is to change students from being passive consumers of other people's knowledge into active creators of their own and other people's knowledge. Fundamentally, teaching is about establishing the pedagogical, social, and ethical frameworks that encourage students to accept responsibility for their own learning, both separately and collectively. . Learning is a process that brings about change as a consequence of experience, increasing the likelihood of future success and learning. Changes in the learner's attitude, behaviour, or level of understanding are

possible. Students are forced to embrace new perspectives on concepts, ideas, and the world by learning. Instead of being imposed upon students, learning is something that they choose to do for themselves. It results from how pupils respond to and perceive their experiences. Although the topics that students study vary, it's important to keep in mind that learning content or information is only one part of learning.

The deadly corona virus disease outbreak that began in China in December 2019 quickly spread to other areas of the world. The entire world was forced to shut down in order to keep social distance in order to stop this unchecked spread of the coronavirus. Covid-19's severe health problem also had disastrous effects on the education sector. The main factors that determine a nation's economic development are education and cannot be ignored or stopped. Due to the nationwide lockdown, schools, colleges, and institutions were forced to close for an unforeseen amount of time. All academic activities have been halted as a result of the abrupt shutdown, which will eventually result in a loss of human capital, employment opportunities, and economic development.

All educational institutions have been closed during Corona virus pandemic. As a consequence, academic activities have been immediately suspended since the middle of March for an unknown amount of time. In such a dire scenario, educators' only recourse was to switch to an online learning environment, which does not necessitate physical contact and can be carried out in accordance with the regulations for halting the spread of infectious diseases. Although the adoption of online learning into the education sector was not new, doing so as a replacement for the traditional way of learning was very abrupt and challenging. It has been discovered that a sizable portion of student instructors experience stress and loneliness.

Lack of trust in online learning platforms and disagreement over whether or not curriculum can be successfully delivered online. However, the majority of students and teachers agreed that online learning was a superior option for learning during this pandemic era but did not accept it as a substitute for the conventional method of learning, which is face-to-face instruction. The pandemic changed the traditional chalk-talk teaching model in developing nations like India, where online education was not very prevalent. The COVID-19 disaster compelled a shift to online teaching and learning, opening up opportunities for more flexible learning, the exploration of blended learning,

and the blending of synchronous and asynchronous learning. The pandemic has forced staff and faculty to learn and try new tools and systems for online teaching and learning, which has increased their capacity. This increased innovation in instructional strategies and mode of distribution.

The pandemic worked as a wake-up call and demonstrated the importance of technology in teaching, learning, and research, this study tries to focus on the teacher's perception towards online teaching .

1.3 STATEMENT OF THE PROBLEM

Online education is not a novel idea in the field of education; rather, it is a very abrupt replacement for the conventional. Online teaching has its own benefits, but a sudden shift in the educational landscape caused a significant portion of teachers to feel stressed and they do not fully support the idea that curriculum can be successfully taught online. Through this study we are able to comprehend the various difficulties and degree of satisfaction with the online mode of teaching with special reference to Ernakulam district

1.4 SCOPE OF THIS STUDY

The greatest remedy during the Covid pandemic among students was online education. Online classes are just as effective as conventional ones because teachers can instruct from home using virtual classrooms equipped with all the necessary resources. When pandemics strike, students are frequently forced to spend extended periods of time at home, which disrupts the teaching-learning process. This research focuses on the effect of online education during emergencies like pandemics or work absences.. Here are some perceptions and issue areas that instructors had with the online learning system. This is the primary focus of the study's region and has a broad application in this pertinent circumstance.

1.5 SIGNIFICANCE OF STUDY

Online education has become ingrained in the fabric of education. Online learning was the best medium for keeping people informed and carrying on educational activities, especially during COVID-19. It was beneficial for an instructor to offer an interactive distance learning experience. The subject of education has undergone significant changes as a result of changing technology. The entire process of learning and development has been moved online thanks to the internet. It has been propelled forward by the youth, and online education obviously has a promising future.It aids in the advancement of abilities for both teachers and students. Online education will become a part of everyone's existence in the near future. A flexible scholastic environment is accelerated by online learning.

1.6OBJECTIVES OF THE STUDY

1.6.1 GENERAL OBJECTIVES

To study the teachers' perception towards online teaching with special reference to Ernakulam District

1.6.2 SPECIFIC OBJECTIVES

- To study the challenges faced by teachers during online classes
- To measure the satisfaction level of teachers towards online teaching
- To know the attitude towards online teaching .

1.7 RESEARCH DESIGN

The research is descriptive in nature . Descriptive research is one that simply describes something such as demographic characteristics of repondents . Descriptive research includes surveys and fact finding of different kind .The major purpose of this research is to analyse the perception of teachers on online classes and the various problems associated with it .

1.8 COLLECTION OF DATA

1.8.1 PRIMARY DATA

Primary data collection is the process of gathering data through survey, interview or experiments .Primary data were collected from the respondents through questionnaire in google form . The target respondents include teachers of different segments of age , qualification and income level.

1.8.2 SECONDARY DATA

Secondary data refers to data that is collected by someone other than the user. The secondary information is collected from magazines , newspaper , articles and websites

1.9 POPULATION

The target population of study is teachers from Enakulam district. The target population include different segments of age and qualification , income level of teachers.

1.10 SAMPLE SIZE

The sample size taken is 100.

1.11 SAMPLING METHOD

Convenience random sampling will be used for conducting the survey. A convenience sampling method is a type of non-probablity sampling method where the sample is taken from a group of people easy to contact or to reach . The advantage of this type of this sampling is availability or quickness with which data can be gathered . Data were collected through google form.

1.12 STATISTICAL TOOLS

Data are shown in the tabular form with percentage method ,diagrammatic form is through bar chart and pie chart

1.13 LIMITATIONS OF STUDY

- Responses of respondents may or may not be biased
- The research study was conducted within a limited duration of time .

1.14 CHAPTERIZATION

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Theoretical Framework

Chapter 4 : Data Analysis and Interpretation

Chapter 5: Findings, suggestions & Conclusion

Bibliography

Annexure

CHAPTER -II

REVIEW OF LITERATURE

For the purpose of this study a lot of literature has been reviewed. Few very related among them have been discussed below:

2.1 Murphy, MPA (Michael P.A) In an effort to follow public health professionals' advise of social isolation and flatten the infection curve, the COVID-19 pandemic swiftly resulted in the closure of universities and colleges all across the world. "Covid-19 and Emergency E-learning Consequences of the Secuiritization of Higher Education for Post-Pandemic Pedagogy" is his covid period-related topic. I contend that in addition to COVID-19 being positioned as a general threat, face-to-face schooling was also presented as a threat through these regulations. I base this argument on an analysis of 25 declarations of emergency e-Learning at American institutions and the Copenhagen school securitization theory. The inquiry is conceptually grounded by a review of securitization theory, paying close attention to the issue of advocacy and the connection between desecuritization and emancipation. I contend that the desecuritization of education when the COVID-19 crisis is over can be promoted by educators using securitization theory as a key instrument for supporting desecuritization of education as well as for watching (and understanding) the phenomenon of emergency eLearning.

2.2 W zhang, Y wang, Y wang, L yang, C wang-2020 mdpi.com In response to the COVID-19 epidemic, the Chinese government established an emergency policy effort called "Suspending Classes Without Stopping Learning" to carry on with teaching tasks while schools all throughout the nation were shuttered to contain the virus. Regarding what to teach, how to teach it, the burden of instructors and students, the classroom atmosphere, and the implications for educational justice, there is, nonetheless, ambiguity and dispute. The policy may encounter challenges due to the insufficient online teaching infrastructure, the inexperience of teachers (including unequal learning outcomes brought on by teachers' varying levels of expertise), the information gap, the complicated home environment, and other factors**.** To address the issues, we recommend that the government continue to support the development of the educational information superhighway, think about providing teachers and students with standardised home-based teaching/learning equipment, conduct online teacher training, incorporate the growth of massive online education into the national strategic

plan, and support academic research into online education, particularly research into helping students with online learning differences.

2.3 Joel Judd, Betty Ann Rember, Tony Pellegrini, Brian Ludlow (2020) To shed light on teachers' experiences as a result of this Spring's school closures brought on by the COVID-19 epidemic, 2020, the project "This is not teaching": The effects of covid-19 on teachers was started. Its main objective was to comprehend how teachers felt about being required to teach online. Information gathering regarding teacher readiness was one of the related objectives. key obstacles encountered, and the degree to which earlier experiences in teacher preparation aided in their ability to teach successfully online. This endeavour is ongoing.

While maintaining an online school presence was well-intentioned, what we have discovered so far is that teachers and students experienced the quality and regularity of online instruction in very different ways. Depending on the student's location, internet connectivity ranged from great to nonexistent, and 25% of teachers who responded to our survey had little to no continuous mentoring and assistance to teach online. Regardless of how long they had been teaching, the majority of educators understood that online learning needed significant adjustments that take time and assistance. Finally, the two parts of online instruction that teachers felt were the most difficult to manage were parental support and domestic circumstances.

2.4 Bao,W(2020) The COVID-19 pandemic compelled Chinese colleges to close their campuses starting in the spring of 2020 and start offering courses online. The paper "covid -19 and online teaching in higher education" focuses on a specific instance of online learning at Peking University. For university instructors who might deliver online education in comparable conditions, six distinct instructional methodologies are presented to summarise existing online teaching experiences.

2.5 Maria Assuncao Flores, Marilia Gago, 2020 This essay focuses on the institutional, educational, and national responses to Portugal's closure of its schools and colleges in March 2020. The actions and solutions to the crisis are briefly described and analysed, along with the problems, obstacles, and chances. The study continues by discussing the consequences for teaching and teacher education in these uncertain times, particularly in relation to the role of practise and challenges of

mentorship within the context of a practicum as a "real practise" vs "an ideal (ised) practise."

2.6 C Fernandez, S Llinares, Y Rojas- ZDM, 2020-springer In recent years, there has been a noticeable increase in the use of the internet in educational settings. We outline how the internet is affecting the mathematics classroom and mathematics teacher education in this survey paper titled "Transformation of the Mathematic Classroom with the Internet". To assess how the sector has changed, we look to a number of recent assessments of the internet's use in mathematics education settings. We pinpoint the three areas—principles of new setting design, social interaction and construction knowledge, and tools and resources—where math educators are developing novel ways. The papers in this issue illustrate various viewpoints that have emerged over the past ten years in these three areas, showing how theoretical frameworks have advanced and how old concepts like "tool," "resources," and "learning setting" have come to mean new things. We first draw attention to the various ways that the use of digital technologies leads to new ways of thinking about mathematics and the contexts in which it is learned, as well as the ways that mathematics teacher educators are framing the new efforts of initial training and professional development. In this survey report, we notice fresh prospects requiring additional engagement and identify trends for future theoretical and methodological research.

2.7 Ni she, O Farrell, J Brunton, E Costello, E Donton-2019 Online instruction is distinct. In this report, we try to clarify the reasons. This study is the result of the National Forum for the Enhancement of Teaching and Learning in Higher Education's #Open teach: Professional Development for Open Online Educators project. We intend to identify and promote the essential elements of good online teaching practise while acknowledging that effective teaching is an art, craft, and science in our project topic, "Teaching Online is Different: Critical Perspectives from the Literature." We want to use this expertise to help online educators advance their careers. In the end, we want to help and motivate online teachers so they can support online students in learning online. This report was created to provide a vital foundation for the project.

2.8 Comas-Quinn, Anna(2011) "Learning to teach online on learning to become an online teacher: an exploration of teachers' experiences in a blended learning course" is the subject of this discussion. Teachers play a crucial role in the implementation of any learning strategy, so the success of blended learning will be greatly influenced by how well teachers transition from their traditional face-to-face classroom roles to the wider, more complex roles that blended learning requires. Some practitioners can find it difficult to pick up the new abilities and create a new professional identity. In this essay, the effect of blended learning on teachers in a remote learning language course is assessed..

2.9C Hodges, S Moore, B Lockee, T Trust, A Bond-Educase review,2020 . The Difference Between Emergency Remote Teaching and Online Learning" is the title of this essay.Courses that are delivered online in reaction to a catastrophe or tragedy are significantly different from well-planned online learning experiences. When assessing this emergency remote teaching, colleges and universities attempting to preserve education during the COVID-19 epidemic should be aware of these distinctions.Colleges and universities must make judgements on how to carry on with teaching and learning while protecting their faculty, staff, and students from a public health emergency that is spreading quickly and is little understood due to the threat of COVID-19. To assist stop the spread of the virus, many universities have decided to cancel all in-person classes, including labs and other learning opportunities, and have ordered teachers to transfer their courses online.

2.10 HY Hong-The Asia-Pacific Education Research,2014. Studying college students' views of learning and online performance in a learning environment, or "Exploring college students' perceptions of learning online performance in a knowledge building environment", looked at how students perceived learning and online performance. 93 college students who were enrolled in a university's teacher preparation programme made up the participants. To encourage student collaboration and knowledge work, the online learning environment was developed based on the philosophy of knowledge building. Students' opinions of their online learning were evaluated using a questionnaire on learning perspectives. The results showed that students who participated in knowledge-building environments regarded their online

learning as being relatively more student-centered than students who participated in non-knowledge-building environments.

2.11Dr. Babita Dubey, Dr. Shivendra Singh 2020 Here, the data reveals why teachers in both public and private institutions have favourable perceptions of online learning during the COVID19 lockdown. "Perception of teachers on online teaching in higher education during COVID-19 lockdown" is the topic's official title.Every age group of teachers views it as a wise move during lockdown. We only noticed a difference between perception and designation. Teachers contend that despite the fact that online instruction boosts their technical proficiency and aids in knowledge diversification, it nevertheless extends their working hours because there is no time constraint like in traditional classroom instruction. Academicians are dealing with what it means to teach subjects online as institutions move to online instruction in response to COVID-19.

2.12Harandi (2015) has also looked at the effectiveness of the connection between e-learning and students' inspiration at Tehran Alzahra University. "Effects of e-learning on students' motivation" is the topic's official title.They discovered that one factor influencing students' inspiration is e-learning. Their research is expected to be helpful in underdeveloped countries for academics studying education who seek to understand how e-learning affects students' motivation. Their research is limited, though, because it isn't possible to extrapolate the findings across different countries.

2.13Lumadi et al (2013)discusses the impact of e-learning on the academic performance of students & teachers.They ordered an experiment to see whether teacher shows using e-learning techniques outperformed teacher shows using the conventional approach to teaching and learning.Their findings suggest that e-learning has an impact on students' presentations since student teachers who are taught using e-learning regularly outperform those who are taught using the traditional method. E-learning was found to have a big impact on how student-teachers made their decision. In order to meet the educational challenges, they supported an underlying professional improvement of student-teachers based on e-learning advancements, shift in preparation approaches, systems, and exercises..

2.14Thaket et al (2012) The focus of the essay is on the usefulness and viability of using e-learning to teach level 5 maths in Yemen. The performance of 30 students in a similar course who used a traditional learning package was assessed and compared to the presentation of an experimental group of 30 students thinking about using e-learning technique. When compared to a group using a traditional learning strategy, it was concluded that the experimental group using e-learning had a significantly higher rate of delayed achievement. The results indicate that e-learning has achieved greater productivity than traditional methods.

2.15Pradeep Sahu(2020) Universities should put a number of strategies into place in the context of the developing and ever-changing COVID-19 to slow the spread of the virus. "Impact on education and mental health of students and academic staff" is the study's theme. Regular updates should be sent to staff and students via intranets and emails from the universities. The pupils' and the staff's health and safety ought to come first. Students' mental health and wellbeing should be supported by appropriate counselling services. International students should be provided with food and housing, which should be the responsibility of the authorities. For learning to be rich and effective, faculty members should use technology and pay close attention to student experiences..

2.16International Marmara Social sciences Congress(2020) Universities must put many measures in place to improve the quality of online teaching, including educating their teaching staff and providing the necessary teaching resources. Online learning is continuing, and this is a way to break the chain of transmission for the corona virus COVID-19. To make learning rich and effective, students and faculty must establish supportive communication and online platforms for greater interaction with course-related content. It would also help to reduce tension and promote attraction, attention, freedom, and more usable time during online lectures if the environment, noise, and equipment were improved. at the future, blended learning will be used at universities to teach students in epidemic circumstances while still utilising face-to-face assessment in everyday situations.

2.17Miguel Ardid, Jose A.Gomez- Tejedor, Jose M.Meseguer-Duenas,Jaime Riera, Ana Vidaurre(2015) The topic "online exams for blended assessment, study of different application methodologies" is covered in this essay. The usage of online tests as a component of the evaluation procedure within the framework of blended assessment has been researched in this paper. The use of the online tests has been done in three different contexts: training homework, evaluation-proctored exams, and evaluation-unproctored exams. The data demonstrates that the manner the online exam was administered clearly affected the students' marks. Additionally, it has been demonstrated that the final grade's weight for the online tests has no bearing on their findings and that the scores produced in an unprotected setting tend to favour higher ratings and a greater degree of bias.

2.18H llgaz, GA Adanir- Education and Information technologies(2020) Online education has become more and more popular, which has increased the use of online exams. Here, a study on the subject of "Providing Online Exams for Online Learners; Does it Really Matter for Them?" is being undertaken. Both traditional and online learning environments are starting to favour online tests as a preferred mode of evaluation. When implemented properly inside online learning programmes, they offer a number of advantages to learners and the learning process. The current study intends to examine online learners' academic performance on online examinations in comparison to traditional exams and to examine their attitudes towards online exams. The research was carried out in Turkey during the spring semester of 2018. 163 online learners at the vocational college level are study participants. This study is a mixed-methods research project. In this context, academic accomplishment and views of learners have been treated as quantitative data, and opinions of learners have been treated as qualitative data. It can be seen using quantitative analysis techniques that students have good attitudes towards online tests, and there is no statistically significant difference between their academic performance on online and traditional exams. The majority of the learners pointed out that online exams are efficient, usable, and reliable while others indicated a level of insufficiency related to exam duration, as well as concerns about potential technical problems that may occur during the implementation of online exams. Understanding the benefits and challenges of online exams will help the institutions inplanning their institutional road map.

CHAPTER -III

THEORETICAL FRAMEWORK

3. 1TEACHING

In the context of an educational institution, teaching is the practise used by a teacher with the goal of passing on skills (knowledge, know-how, and interpersonal skills) to a learner, a student, or any other audience.

3. 2THEOREIES RELATED TO TEACHING

For many years, theoretical analysis has been a common topic when it comes to the learning process. While some of those theories will always remain in the realm of abstraction, many of them are used every day in classrooms. In order to improve the learning results for their pupils, teachers combine several theories, some of which are decades old. Some of the most well-liked and well-known teaching theories are represented in the list below.

3.2.1Multiple Intelligences

According to Howard Gardner's theory of multiple intelligences, humans can be intelligent in eight different ways: musical-rhythmic, visual-spatial, verbal-linguistic, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic. The various ways that people process information are represented by these eight categories of intelligence.

The learning and pedagogy fields were revolutionised by the hypothesis of multiple intelligences. These days, a lot of teachers use curricula based on the eight categories of intelligence. Every student's learning style is taken into consideration when creating lessons.

3.2.2 Bloom’s Taxonomy

Bloom's Taxonomy is a hierarchical model of learning objectives that was created in 1956 by Benjamin Bloom. The approach classifies many educational tasks, including concept comparison and word definition, into six different educational categories: knowledge, understanding, application, analysis, synthesis, and evaluation. The six groups are arranged in increasing complexity.

Bloom's Taxonomy lets teachers set specific learning objectives for pupils and provides educators with a shared language to discuss learning. However, some detractors claim

that the taxonomy forces learning into an artificial sequence and ignores other important classroom ideas.

3.2.3Zone of proximal Development (ZPD) and Scaffolding

The Zone of Proximal Development and scaffolding are two of Lev Vygotsky's most significant classroom ideas. He created numerous other significant pedagogical theories as well.The Zone of Proximal Development (ZPD), according to Vygotsky, is the conceptual space between what a pupil can and cannot do on their own. Identifying the Zone of Proximal Development and collaborating with students to complete activities that are slightly outside of it, according to Vygotsky, is the greatest approach for teachers to support their pupils. For an in-class reading assignment, a teacher might decide to assign a tough short tale that is just outside of what the pupils would find simple to understand. The teacher would next give the students support and motivation to improve their reading comprehension .

The second hypothesis, scaffolding, advocates varying the level of assistance given to each child in order to best match their individual needs. For instance, a teacher might initially lead the student through each step of a task when teaching a new maths idea. The teacher would progressively decrease the assistance as the student started to grasp the concept, switching from step-by-step instructions to prompts and reminders until the student was able to do the assignment totally on her own.

3.2.4 Schema and Constructivism

Jean Piaget's schema theory suggests new knowledge with students' previous knowledge, the students will develop a greater comprehension of the new issue. Before beginning a class, this approach encourages teachers to take into account what their students already know. When teachers start lessons by asking their pupils what they already know about a particular concept, this principle is put into practise every day in many classrooms.

Today's schools heavily rely on Piaget's constructivism theory, which holds that people create meaning via their actions and experiences. Students learn via doing in a constructivist classroom as opposed to through passively absorbing information. Many

early childhood education programs, where kids spend their days doing practical activities, use constructivism.

3.2.5 Behaviourism

According to the theories of behaviourism, developed by B.F. Skinner, every behaviour is a reaction to an outside stimulus. The notion of behaviourism in the classroom holds that prizes, praise, and other forms of positive reinforcement will cause students' learning and behaviour to improve. Negative reinforcement, or punishment, according to the behaviourist hypothesis, will make a youngster quit engaging in undesirable behaviour. According to Skinner, these strategies of constant reinforcement can modify behaviour and enhance educational results. The behaviourism approach is widely criticised for neglecting to take into account pupils' internal mental states and for perhaps giving the impression of bribery or force.

3.2.6 Spiral Curriculum :

According to Jerome Bruner's theory of the spiral curriculum, kids can understand unexpectedly difficult concepts and concerns if they are given in an age-appropriate way. Bruner advises educators to revisit subjects annually (thus the spiral illustration), gradually introducing depth and complexity. In order to implement a spiral curriculum, a school's teachers must coordinate their curricula and establish long-term, multi-year learning objectives for the people .

3.3 PERCEPTION

According to psychology professor Yolanda Williams, perception is our ability to recognise and make sense of information that we have learned through our senses. This also entails how we react to a certain circumstance using the facts at hand (Williams). According to Milnes, psychology is the study of behaviour and mental processes. Psychology and perception are related since psychology is the study of behaviour and mental processes, whereas perception is how we respond to situations, as was said in the notes. In other words, how we acted in response to it.

3.3.1Bottom up theory of perception :

- **Theory of direct perception (Ecological view)**
  Top-down and bottom-up theories of perception

Psychologists frequently make a distinction between bottom-up and top-down methods of information processing. In top-down techniques, processing is directed by knowledge or expectations. However, bottom-up methods are more like structuralist methods in that they piece together facts to create a larger picture. J.J. Gibson, who developed a theory of direct perception and was born in 1904 but died in 1980, was one of the most ardent supporters of a bottom-up strategy. According to this, the context offered by the outside world is adequate for our visual systems to immediately see what is there without the help of higher cognitive processes.

Gibson coined the term "affordances," which describes the features of objects or surroundings that let a person to carry out a task. Gibson referred to his method as ecological because he placed so much stress on the compatibility of the human and the environment. The majority of psychologists nowadays would contend that perception involves both bottom-up and top-down processes.

Bottom-Up Theories : Direct perception, template theories, feature theories, and the recognition-by-components theory are the four basic bottom-up theories of form and pattern perception.

According to bottom-up theories, perception begins with the stimuli whose appearance you take in with your eyes. When light information travels to your brain, perception takes place while you gaze out upon the cityscape. Thus, they are datadriven theories (also known as stimulus-driven theories).

3.3.1.1Gibson's Theory of Direct Perception

This issue was known as the Hoffding function by Gestalt psychologists (Köhler, 1940). Harald Hoffding, a Danish psychologist from the 19th century, was honoured with its name. He questioned if associating what is seen with what is remembered

(associationism) is really all that is required for perception to take place. James J. Gibson (1904–1988) was a well-known and contentious theorist who questioned associationism. The information in our sensory receptors, including the sensory context, is all we need to perceive anything, according to Gibson's theory of direct perception. This perspective is also known as ecological perception since the environment provides us with all the information we require for perception. To put it another way, we do not require anything else or higher cognitive processes to mediate between our sensory experiences and our perceptions. Perception does not require pre-existing beliefs or higher-level inferential thinking processes.

Gibson thought that in the real world, there is typically enough contextual knowledge to make perceptual judgements. He asserted that we don't need to use more complex intelligent systems to explain perception. Gibson (1979) thought that we should make direct use of this contextual information. In essence, our biology is set up to react to it. Gibson claims that we employ texture gradients as indicators for distance and depth. These cues help us directly perceive the relative closeness or distance of things and object pieces.

As a result, and as was said above, Gibson's model is sometimes called an ecological model (Turvey, 2003). Gibson's focus on perception in the real world (the ecological environment) as opposed to laboratory settings, where less contextual information is available, led to the use of this example. When we strive to understand the feelings and intentions of others in interpersonal situations, direct perception may also be at play (Gallagher, 2008). We don't see facial expressions that we then attempt to put together to produce the experience of an emotion; rather, we see faces and can recognise emotion in them as such (Wittgenstein, 1980).

Direct perception may also have a role in how we see other people, according to neuroscience. When a person performs an action and witnesses that identical action being performed by another person, mirror neurons become active. Furthermore, research suggests that the lateral occipital area contains distinct brain pathways (what pathways?) for processing form, colour, and texture in things.

3.3.1.2 Template Theories

According to beliefs about templates, human minds contain a vast array of sets of templates. Templates are extremely detailed representations of patterns that we might eventually recognise. By contrasting a pattern with our collection of templates, we can identify it. The exact pattern that most closely resembles what we observe is then selected (Selfridge & Neisser, 1960). In our everyday lives, we encounter instances of template matching. In this method, fingerprints can be matched. Checks with imprinted numerals are quickly processed by machines by comparison to templates. Universal product codes (UPCs or "bar codes") are being used more frequently to identify items of various kinds. At the point of purchase, computers may scan and identify them.

Chess players who have played a lot of games can recall prior games by using a matching approach that is in line with the template theory (Gobet & Jackson, 2002). Template matching theories are a subset of the chunk-based theories, which suggest that gaining expertise involves storing knowledge in long-term memory chunks that can then be quickly accessed. The temporal lobe is really stimulated when chess players access the stored chunks in their long-term memory, according to studies with chess players (Campitelli, Gobet, Head, Buckley, & Parker, 2007).
Some features of the perception of letters are not adequately explained by template-matching theories.

3.3.1.3 The Prototype Theory

Rosch (1973) and Rosch (1975) claimed that we categorise perceptions by referring to prototypes rather than having a set of predefined templates within our minds. Similar to templates in that they represent the general shapes or ideas of how an object should seem, prototypes rely on educated assumptions when diverse features are present as opposed to templates, which demand a precise match.

3.3.1.4 Feature-Matching Theories

The feature-matching theories offer yet another possible explanation for how people perceive patterns and forms. According to these theories, rather than trying to match an entire pattern to a template or prototype, we try to match the features of a pattern to features that are held in memory (Stankiewicz, 2003).

Pandemonium is the name of one such feature-matching model (the word "pandemonium" is a synonym for a particularly chaotic, loud place and hell). In it, metaphorical "demons" with certain responsibilities take in and assess the characteristics of a stimulus.

3.3.2 Top Down theory of perception

Top-down A crucial perceptual theory in cognitive psychology is processing. The theory develops the paradigm that our expectations, expectations from the past, and relevant context organise and shape how we receive sensory information in human cognition, including perception, recognition, memory, and understanding (Solso, 1998).

According to the theory of top-down processing, we first create our perceptions of a bigger object, concept, or idea before moving on to more specific information. To put it another way, top-down processing occurs when we go from the broad to the specific; from the overall picture to the smallest of details. Your abstract impressions during top-down processing may affect the sensory information you collect.

Since your perceptions are influenced by expectations, preexisting beliefs, and cognitions, top-down processing is also referred to as conceptually-driven processing. You may be aware of these affects in some situations, but sometimes this process happens without your conscious knowledge.

The perceiver creates (constructs) a cognitive understanding (perception) of a stimuli in constructive perception. In addition to employing other sources of information to construct the perception, he or she bases it on sensory input. This perspective, which emphasises the importance of learning in perception, is also known as intelligent perception since it contends that higher-order thinking plays a significant role in perception (Fahle, 2003). According to some researchers, our perception not only shapes how we experience the world, but it also shapes how we perceive the world (Goldstone,

2003). These concepts have roots in Immanuel Kant's philosophy. In other words, perception and the world we experience are mutually dependent. both influences and is influenced by perception.

3.3.2.1 Theory of perception based on computation

Marr referred to this component of his theory of visual perception as "computational theory." The phrase categorically excludes theories that have "just something to do with computers." Instead, it reflects the precise and potent idea that identifying the information that a perceiver requires from the outside world and the common characteristics of the outside world that may be incorporated into methods for receiving that information is the first step in comprehending perception. To put it another way, we must be aware of the computations a visual system must carry out before attempting to comprehend how it does so.

By evaluating the information that an animal needs from light in order to guide its activities, computational theories of perception can be applied not just to human vision but also to that of other species.

3.4 Educating and learning

New concepts for teaching and learning have always abound in the field of education. Reform recommendations are frequently thrown at administrators and teachers. New curricula, new instructional techniques, and new assessments are required of them. They are instructed to either help pupils get ready for the new state exam or to record and evaluate students' progress using portfolios and performance reviews. Effective teachers deliberately distribute (or share) work with pupils, focus on tough topics, and play a variety of roles, including information provider and team coach. Teaching involves intellectual work.

We are all aware of how complicated the connection between teaching and learning is. Additionally, research on learning has frequently been carried out independently of research on teaching, which has resulted in a gulf in understanding between the two groups of researchers who comprehend and work on learning and those who comprehend

and work on teaching. Scholars have attempted to close the gap between these intellectual groups in recent years with varying degrees of success (Romberg and Carpenter 1986).The inability of teachers to mandate learning or ensure that a certain student would learn is one reason the relationship is still elusive (Jackson, 1986).

Although a teacher will always make an effort, there are several internal and external factors that can affect whether a student learns mathematics: The pupil is motivated, right? Did the teacher employ the proper teaching methods? .The pupil appears interested. Are there favourable learning environments in the classroom and at the school? Are the parents of the student encouraging? Is there enough time to process the concepts and put new skills into practise? Exists any form of peer pressure? The list continues. However, these four concepts—learning, learners, knowledge—have significant significance for instructors' work. We suggest a few.

3.4.1The intellectual work of teaching

These concepts of learning and knowledge suggest that wise teachers are intellectuals who think about both subject matter and pupils, building connections between the two. This is perhaps the most important implication of these concepts of learning and knowledge. For example, Clark and Peterson in 1986; Cohen, Raudenbush, and Ball in 2003; Shulman in 1983. Reformers have known for a long time that curricula cannot be teacher-proof since teachers invariably adapt the materials they utilise based on their own knowledge, attitudes, and assumptions. However, the widespread misconception that teaching is an easy profession still exists. Teachers use textbooks and follow each page, instructing students on what to read and do. According to this idea, students will learn if the course materials are good and everyone acts properly.

Simply said, that is untrue. Teachers and students act as intermediaries for resources,

Additionally, they are located within significant contexts .Good teachers must carefully consider the lessons they want their students to acquire,What aspects of this subject are fascinating to my students? What thoughts and ideas are the most challenging? Why?How can I build a group of learners who can encourage both individual and group knowledge construction?

Take note that each and every one of these questions need theories and knowledge about learners and learning in order to be answered. Teachers must consider the season, school, classroom, and community (the social surroundings of learning) because these factors are important. Teachers must develop strategies to emphasise concepts, facts, and modes of inquiry (the kind of knowledge pupils need to acquire) while deciding what to teach. Teachers must develop communities among their students (learners as active architects of knowledge) and find ways to access students' thoughts while deciding what would be entertaining or challenging for their classes. As a result, a lot of the concepts we addressed before regarding learners and learning inform teachers' thinking.

We now think about, observe, and assess teachers and their teaching very differently because of the present focus on teacher thinking and decision-making. Asking teachers why they act the way they do and what they have learned from their experiences is now a part of teaching research. Administrators are no longer squatting in the back of the room filling out behaviour checklists. Instead, teachers are required to discuss why they taught the way they did by responding to inquiries about their justifications, justifications for their decisions, and reflections. For example: Why did you teach this lesson?

What did you want to achieve? How would you alter this?

New performance-based assessments assume that in order to understand teaching, we must observe both thought and action, watching what teachers do and asking them to defend their decisions. Examples include the assessment system of the Beginning Teacher Assessment Program in Connecticut, teacher portfolios gathered through INTASC, and the processes and products required by National Board for Professional Teaching Standards. Along with more conventional standardised exams and observations, such assessments now include include portfolios and interviews.

3.4.2 Educating as Diverse Work

Another error made frequently in this period of reform is assuming that there is an isomorphic relationship between instructional strategies and modalities of learning. Some "radical constructivists" contend that teachers should never impart knowledge to their pupils and that all knowledge should be created independently from the teacher's close supervision. However, a teacher may choose from a variety of instructional tactics, such

as drill and practice, recitation, cooperative groups, and simulations, even when they think that pupils actively develop their own knowledge.

Teachers employ manipulatives, historical artifacts, scientific questions, and mathematical problems to generate these instructional experiences for their students. Due to the fact that teachers play different roles in these various instructional settings, much of the current discourse on teaching explores the use of alternative metaphors to describe teaching; rather than being thought of as tellers, teachers are now described as coaches, guides, and collaborators. One metaphor, however, will not suffice because there are moments when teachers must and should inform, and there are other occasions when instructors should enquire, using their classrooms as learning labs for both their own and their students' learning. Natural learning environments fundamentally mould the situational and semantic limits of reasoning. Everyday reasoning in circumstances that require people to work in teams and rely on guided learning in mixed-age groups is marked by recognising and addressing difficulties, moving from the known to the unknown, and constructing meaning through analogy.

Coaches must go above and beyond simply encouraging students to learn via doing and directing class discussion. A coach must be aware of the unique skillsets of each player in order to develop team tactics that make use of those skills.

Helping everyone appreciate the value of unique variations is essential to the mission. A team cannot expect to have all of its members at the same degree of proficiency in the same complicated abilities, as Heath stated. Similar to how students and teachers may learn more together than they can apart, teachers who believe that knowledge is created must discover ways to create a community of learners that fully utilises the diversity of information and experience that each member brings.

3.4.3 Using shared work to teach

Education professionals have long been interested in how children learn both from teachers and from other pupils. Schwab (1976) promoted a "community of learners" about 30 years ago. Many models of teaching and learning make the assumption that teaching is a collaborative effort between students and teachers (teachers are still in charge of ensuring that students learn). There are numerous strategies to distribute classroom labour, including cooperative learning, team learning, and reciprocal teaching.

3.4.4Teaching Challenging Content

Every teacher has to have a variety of teaching techniques in their toolkit, including direct instruction techniques, cooperative learning activities, small group work, and one-on-one work. A given teacher will not be able to educate all of the students in each topic every day using a single method. Whatever the method, teachers must have a solid understanding of the material they are teaching in order to make it intelligible to students and to allow for the complete and cogent development of ideas. For each unit of instruction, teachers must carefully consider their alternatives before deciding which strategies and subject matter would best serve their objectives and the requirements of their students.

3.4.5Teaching as Inquiry

Teachers must take on the role of scientists in many respects, probing students' thought processes and looking for clues as to how specific students are creating their own understanding. Teachers must question their pupils' comprehension, occasionally even interrogating them about their ideas and reasoning. Teachers will need to develop into inquirers rather than merely sources of information, formulating questions and testing theories about what their students already know and don't know.

3.5 Learning Theories

No two pupils are alike, and each learns differently depending on a variety of factors,circumstances. We all have distinct brains, and our experiences have an impact on how we learn in various ways. Psychologists have invested numerous hours conducting tests to comprehend the educational process. To be ready to teach pupils every day, both current and aspiring teachers must be educated. Understanding various forms of learning is also a crucial component of teacher training. Teachers can gain knowledge from a variety of proven learning theories as they are ready to assist kids in the classroom. Teachers who are knowledgeable about learning theories can adapt their teaching methods to suit various learning styles in the classroom. All pupils can benefit from this and succeed in their academic endeavours.

Educators can use the following five educational theories to improve their classroom and create a better learning environment for all students.

3.5.1 Theory of cognitive learning

The cognitive learning hypothesis investigates human thought processes. grasp how we learn requires a grasp of mental processes. The cognitive hypothesis recognises that students is susceptible to both internal and external influences. Two of the earliest philosophers to concentrate on cognition and the way that humans think were Plato and Descartes. More research was inspired as a result of many other scholars delving deeper into the concept of how we think. In the subject of cognitive psychology, Jean Piaget is a key thinker whose research focuses on how environments and internal structures affect learning.The cognitive theory has developed over time, breaking off into sub-theories that focus on unique elements of learning and understanding. At the most basic level, the cognitive theory suggests that internal thoughts and external forces are both an important part of the cognitive process. And as students understand how their thinking impacts their learning and behaviour, they are able to have more control over it. Students are affected by the cognitive learning hypothesis because being aware of how they think might aid in learning. Teachers can provide opportunity for their pupils to fail, ask questions, and think aloud. These techniques can assist students in comprehending how their thought processes function and using that understanding to create better learning chances.

3.5.2 Behaviourist theory of learning

According to the behaviourism learning theory, a student's behaviour is influenced by their interactions with their surroundings. It implies that external influences, as opposed to internal ones, are what affect and teach behaviours. Since the 19th century, psychologists have been experimenting with the behaviourist theory. The foundation for psychology that can be observed and measured is behavioural learning theory. A well-liked component of behaviourism is positive reinforcement; classical conditioning, as seen in Pavlov's research with dogs, argues that actions are directly motivated by the potential rewards. Positive reinforcement is a tool that instructors in the classroom can

use to aid pupils in understanding an idea. As a direct result of the positive reinforcement, students are more likely to retain material in the future.

3.5.3 Constructivism in education

According to the constructivism learning theory, pupils really design their own lessons using prior knowledge. Students contribute to what they are taught after taking it in it to their prior information and experiences to produce a special world that is only for them.

This learning paradigm emphasises that each student's learning is a personal, engaged process. Constructivism can be used by teachers to assist students comprehend that each one will bring their unique history to class every day. In constructivist classrooms, teachers serve more as a guide to assist students in developing their own knowledge and understanding. They assist people in developing their own methodology and reality based on their own experience.

3.5.4 Humanist educational theory

Constructivism and humanism have a very strong relationship. The concept is the main emphasis of humanism. Everybody operates according to a hierarchy of needs. Self-actualization comes first on the list of needs, the fleeting times when you believe all of your demands are being met ,your needs are being satisfied and that you are your ideal self. Everyone is working towards this, and your learning environment may change to match your requirements or diverge from them. Teachers can design learning settings that support students' progress towards self-actualization.

Educators can help fulfill students’ emotional and physical needs, giving them a safe and comfortable place to learn, plenty of food, and the support they need to succeed. This kind of environment is the most conducive to helping students learn.

3.5.5 Theory of Connectivism in Learning

One of the most recent ideas of educational learning is connectivism. It emphasises on the notion that connections help people grow and learn. This may be links to one another or to their roles and responsibilities in their lives. People, objectives, and hobbies can all be connections that have an impact on learning. Teachers can use connectivism in the

classroom to assist students connect the dots between the things that interest them and the things they are learning.

Digital media can be used by educators to create strong, beneficial links to learning. To help pupils feel driven to learn, they can assist in establishing connections and relationships with both their students and their peer groups.

CHAPTER IV

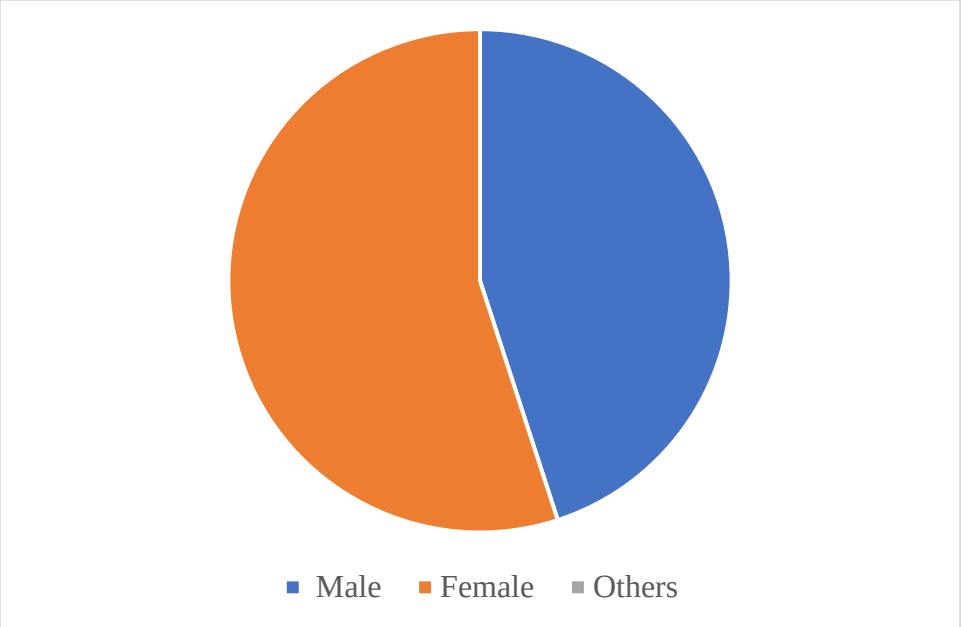
DATA ANALYSIS AND INTERPRETATION

Table 4.1 Gender

Variables	Number of respondents	Percentage of respondents
Male	45	45
Female	55	55
Others	0	0
Total	100	100

(Source : Primary Data)

Figure 4.1 Gender



Interpretation:

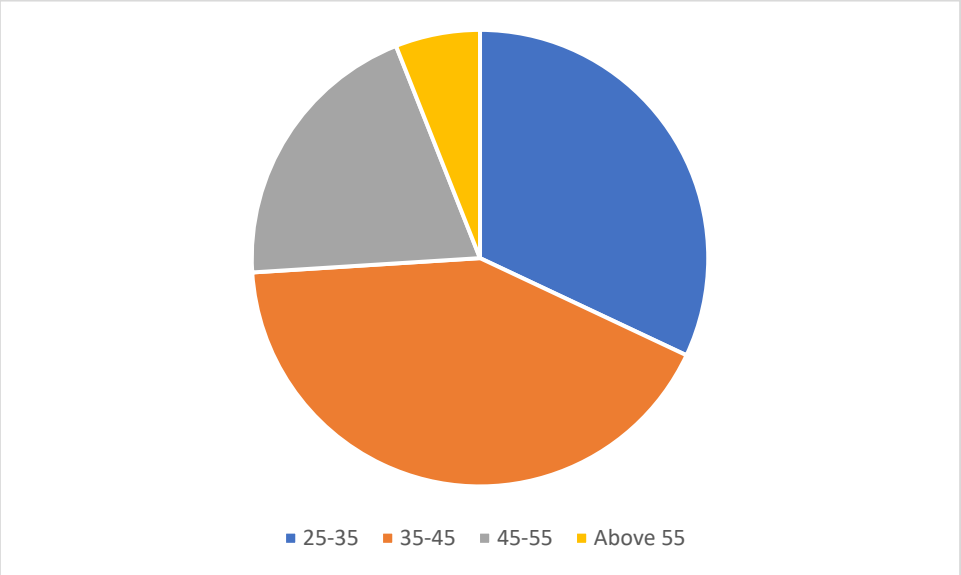
55% of the respondents are female and only 45% are from male category .

Table 4.2 : Age

Variables	Number of respondents	Percentage of respondents
25-35	32	32
35-45	42	42
45-55	20	20
Above 55	6	6
Total	100	100

(Source : Primary Data)

Figure 4.2Age of the respondents



Interpretation :

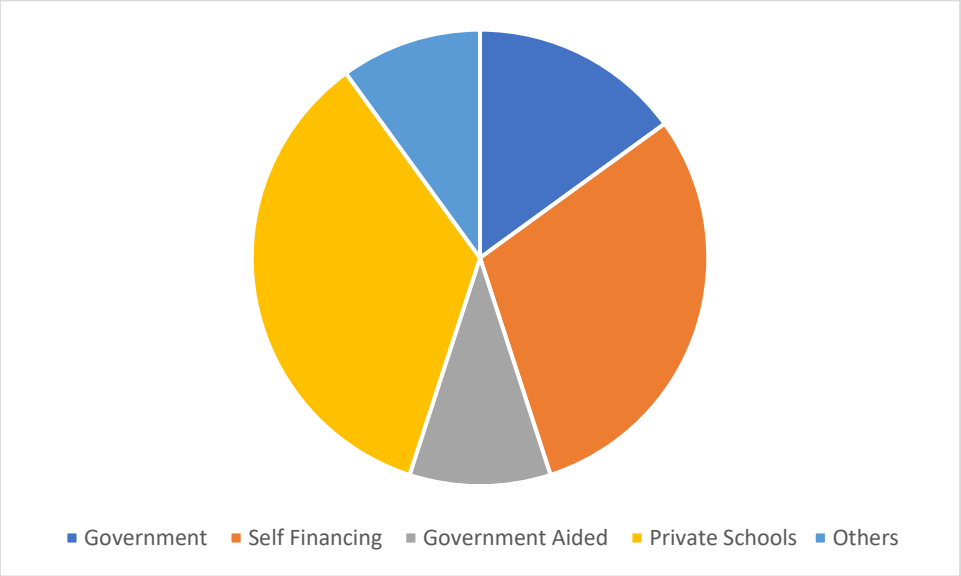
42% of the respondents come between the age of 35-45. About 32% of respondents lies between 25-35 . About 20% of the respondents lies between 45-55. 6% of the respondents lies above the age of 55.

Table 4.3 Type of School/College

Variables	Number of respondents	Percentage of respondents
Government	15	15
Self Financing	30	30
Government Aided	10	10
Private Schools	35	35
Others	10	10
Total	100	100

(Source : Primary data)

Figure 4.3 Type of school/College



Interpretation :

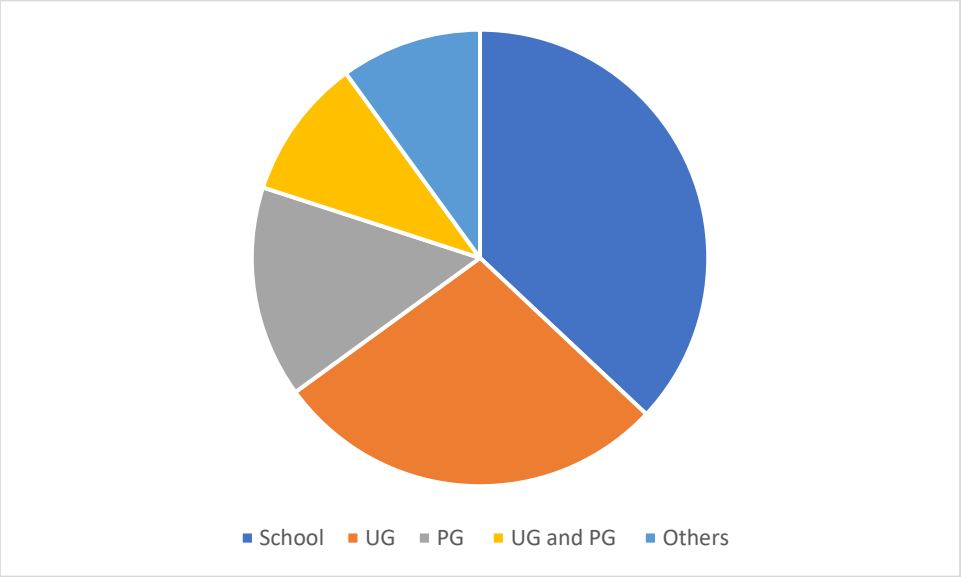
35% of respondents works under private schools. 30% of respondents works under self financing institution . 15% of respondents works under government institution. 10% of respondents works under government aided institution and other 10% of respondents belongs to other category .

Table 4.4 Section in which teachers conduct online classes

Variables	Number of respondents	Percentage of respondents
School	37	37
UG	28	28
PG	15	15
UG and PG	10	10
Others	10	10
Total	100	100

(Source primary data)

Figure 4.4 Section in which section teachers conduct online classes



Interpretation :

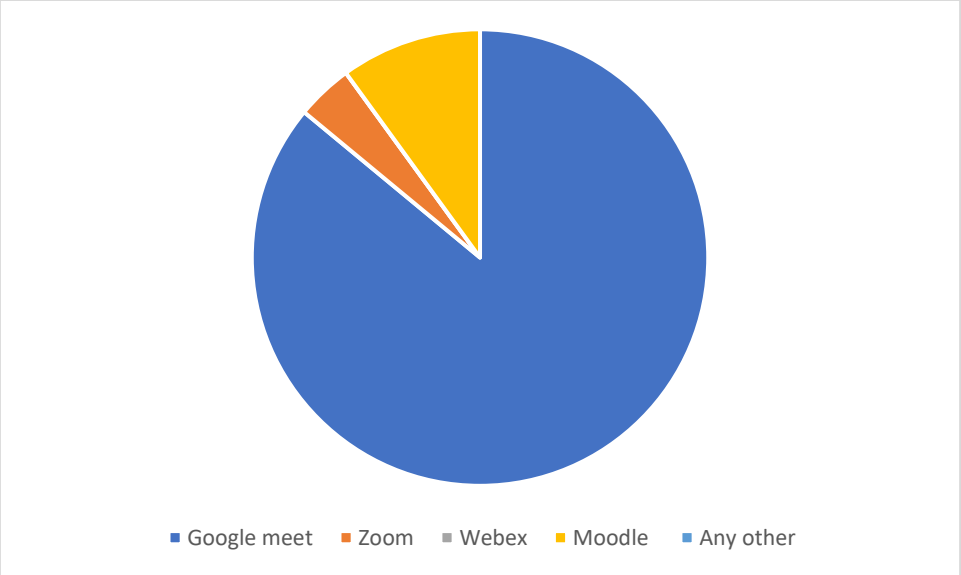
37% of the respondents are from school category . 28% of respondents are from UG . 15 % of respondents are from PG . 10% of respondents are from UGand PG category and other 10% respondents are from other category .

Table 4.5 app primarily favoured

Variables	Number of respondents	Percentage of respondents
Google meet	86	86
Zoom	4	4
Webex	0	0
Moodle	10	10
Any other	0	0
Total	100	100

(Source : primary data)

Figure 4.5 App primarily favoured



Interpretation :

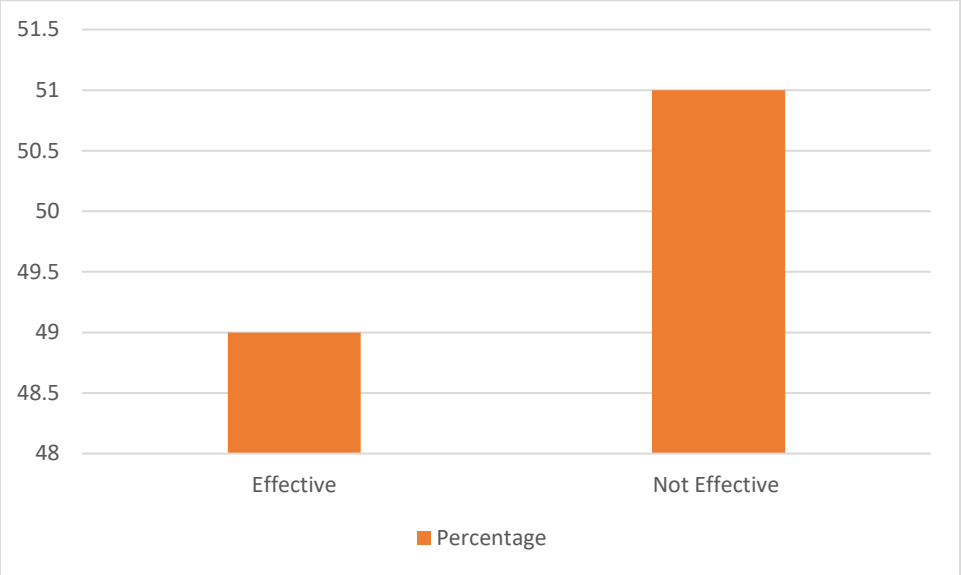
86% of the respondents favours google meet . 10% respondents favour Moodle platform. 4% of respondents favour Zoom.

Table 4.6 Experience

Variables	Number of respondents	Percentage of respondents
Effective	49	49
Not Effective	51	51
Total	100	100

(Source : Primary Data)

Figure 4.6 Experience



Interpretation:

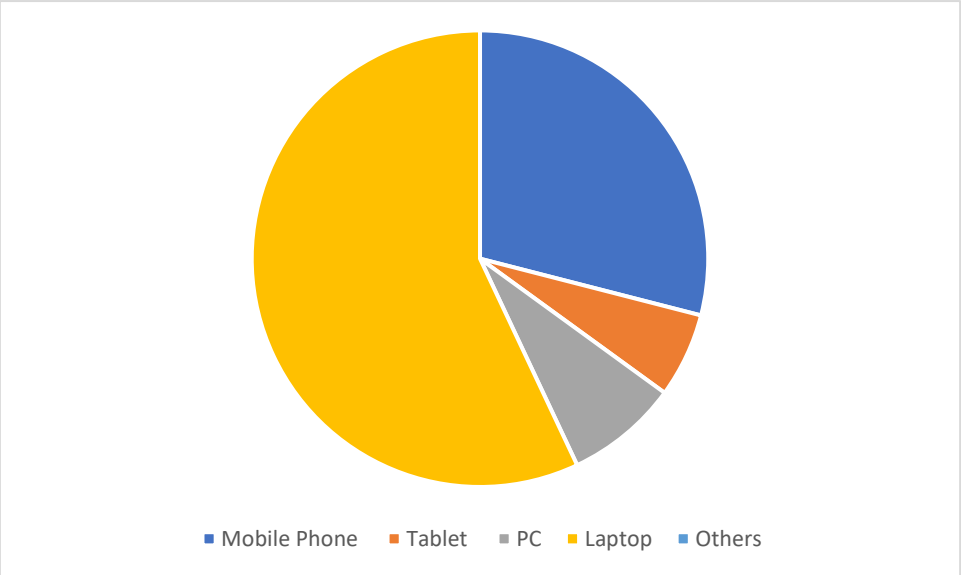
51% of respondents feel online class is not effective and 49% of respondents feel online classes are effective .

Table 4.7 : Most preferred device

Variables	Number of respondents	Percentage of respondents
Mobile Phone	29	29
Tablet	6	6
PC	8	8
Laptop	57	57
Others	0	0
Total	100	100

(Source : Primary Data)

Figure 4.7 Most preferred device



Interpretation :

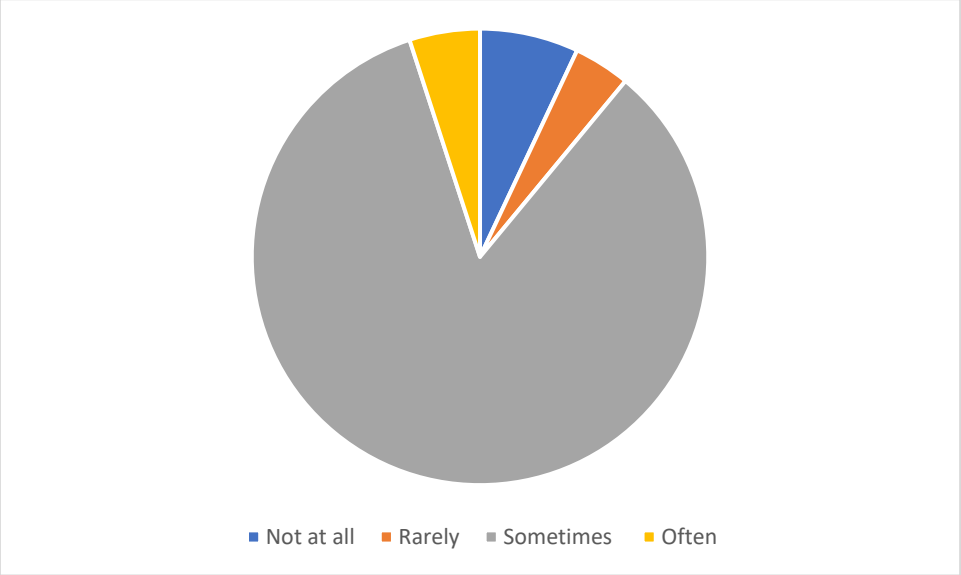
57% of the respondents prefer laptop. 29% of the respondents prefer Mobile phone. 8% of the respondents prefer PC . 6% of the respondents prefer Tablet .

Table 4.8 Teachers' difficulty in operating apps

Variables	Number of respondents	Percentage of respondents
Not at all	7	7
Rarely	4	4
Sometimes	84	84
Often	5	5
Total	100	100

(Source : Primary Data)

Figure 4.8 Teachers' difficulty in operating apps



Interpretation:

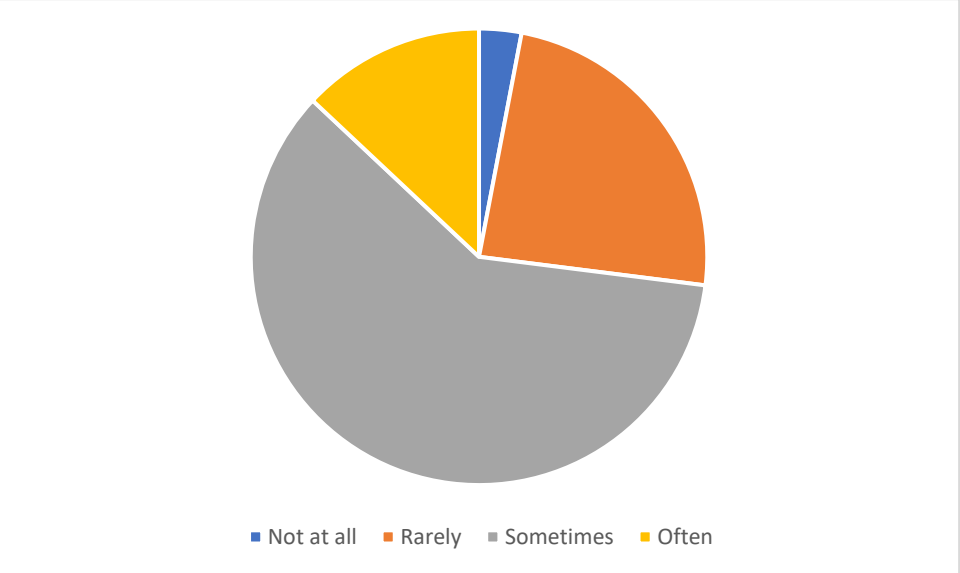
84% of respondents sometimes face difficulty in operating apps. 7% of people donot face difficulty in operating apps . 5% often faces difficulty in operating apps and 4% rarely faces difficulty in operating apps .

Table 4.9 Internet shortage problems

Variables	Number of respondents	Percentage of respondents
Not at all	3	3
Rarely	24	24
Sometimes	60	60
Often	13	13
Total	100	100

(Source Primary Data)

Figure 4.9 Internet shortage problems



Interpretation :

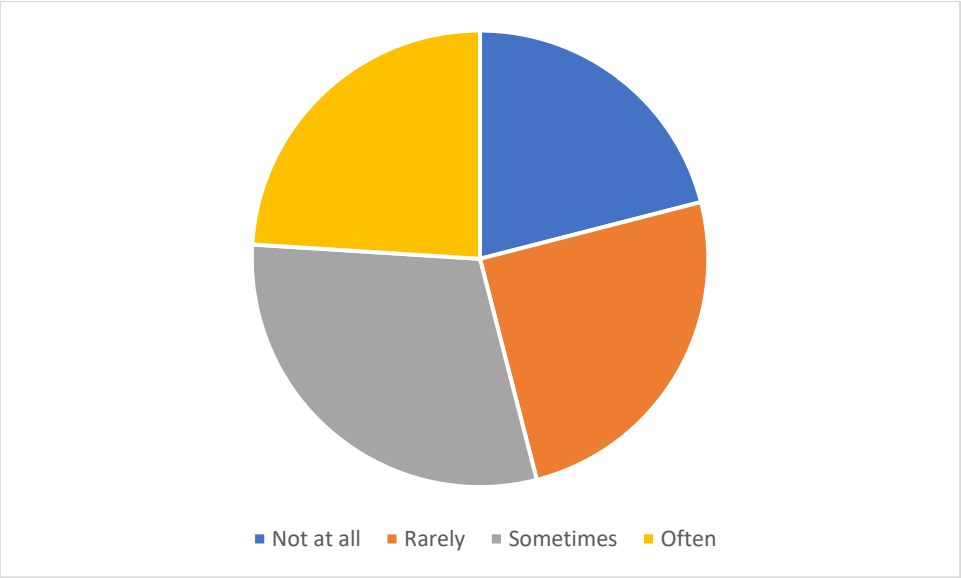
60% of respondents sometimes face internet problems . 24% of respondents rarely faces internet shortage problems . 13% of respondents often faces internet shortage problems. 3% of respondents not at all faces internet shortage problems .

Table 4.10 Difficulty in taking classes without seeing students face

Variables	Number of respondents	Percentage of respondents
Not at all	21	21
Rarely	25	25
Sometimes	30	30
Often	24	24
Total	100	100

(Source : primary data)

Figure 4.10 Difficulty in taking classes without seeing students face



Interpretation:

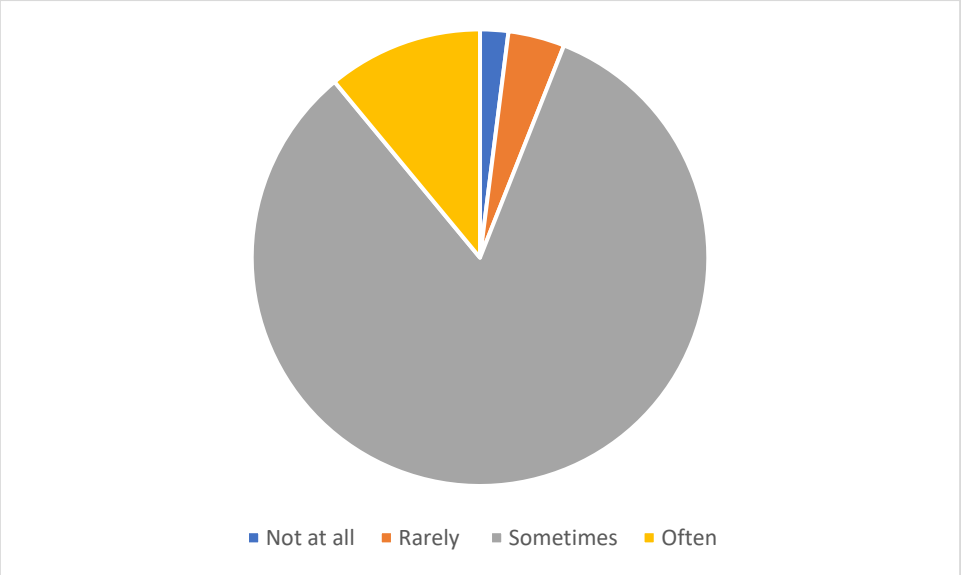
30% of respondents sometimes face difficulty without seeing students face. 25% of respondents rarely faces difficulty without their students face .24 % of respondents often faces difficulty without seeing their students face . 21% of respondents not at all faces such problem.

Table 4.11 To know whether teachers conduct test through Google Classroom

Variables	Number of respondents	Percentage of respondents
Not at all	2	2
Rarely	4	4
Sometimes	83	11
Often	11	83
Total	100	100

(Source : primary data)

Figure 4.11 To know whether teachers conduct test through Google Classroom



Interpretation :

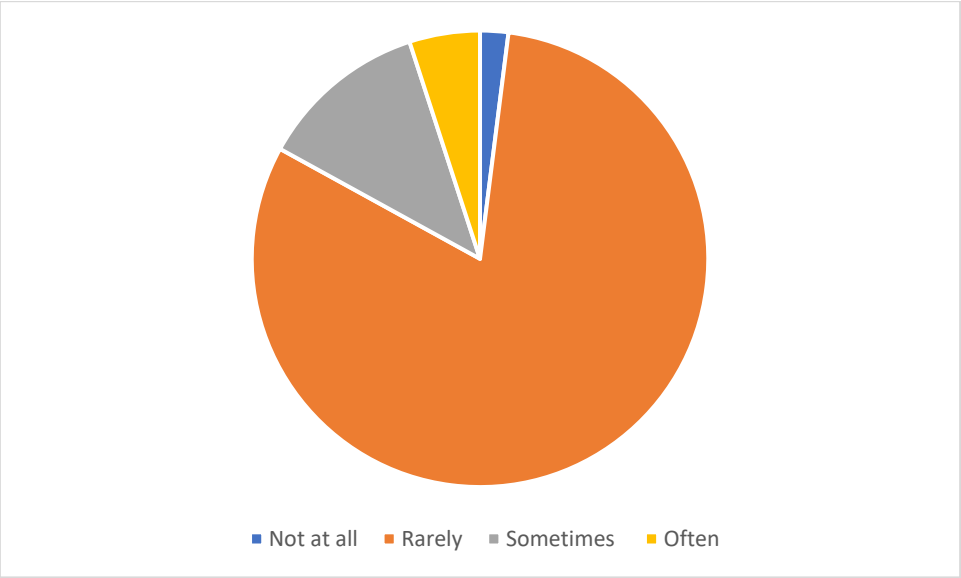
83% of respondents sometimes conduct test through google classroom . 11% of respondents often conduct tests through google classroom .4% of respondents only rarely conducts test through google classroom .2% of respondents not at all conducts tests through google classroom

Table 4.12 whether they still conduct exams through online

Variables	Number of respondents	Percentage of respondents
Not at all	2	2
Rarely	81	81
Sometimes	12	12
Often	5	5
Total	100	100

(Source : Primary Data)

Figure 4.12 whether they still conduct exams through online



Interpretation :

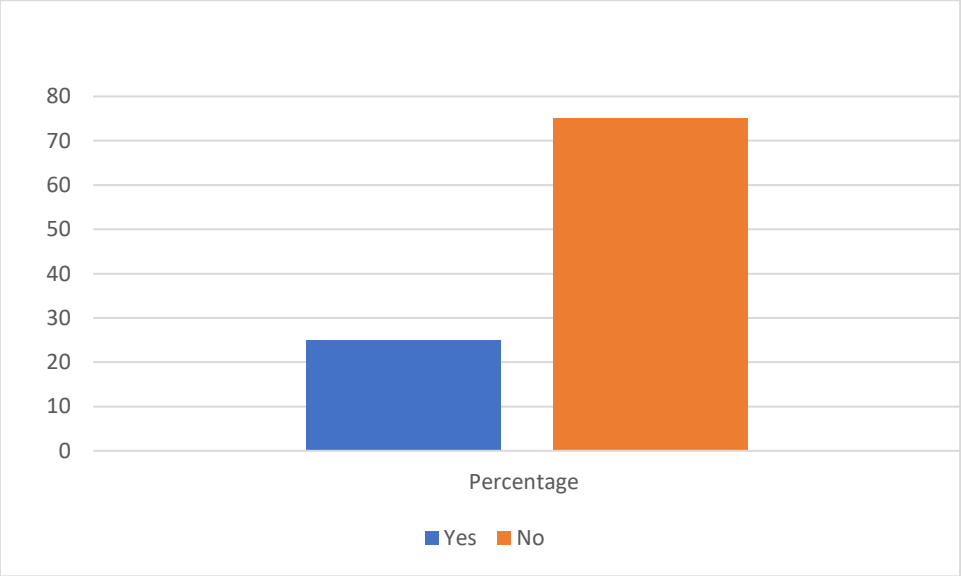
81 % of respondents rarely conducts exams through online . 12% of respondents sometimes conduct exams through online . 5% of respondents often conducts exams . 2% not at all conducts exams through online .

Table 4.13 Satisfaction of teachers conducting exams through online

Variables	Number of respondents	Percentage of respondents
Yes	25	25
No	75	75
Total	100	100

(Source : primary data)

Figure 4.13 Satisfaction of teachers conducting exams through online



Interpretation :

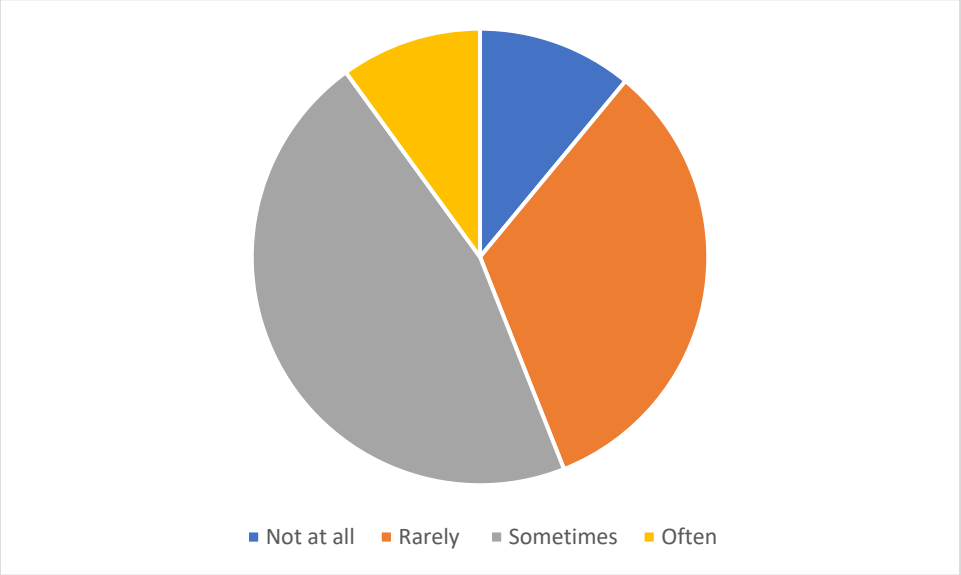
75% of respondents are not satisfied in conducting classes through online mode. 25% of respondents are satisfied in conducting classes through online mode.

Table 4.14 Response of students to Q and A session through online

Variables	Number of respondents	Percentage of respondents
Not at all	11	11
Rarely	33	33
Sometimes	46	46
Often	10	10
Total	100	100

(Source : primary data)

Figure 4.14 Response of students to Q and session through online



Interpretation :

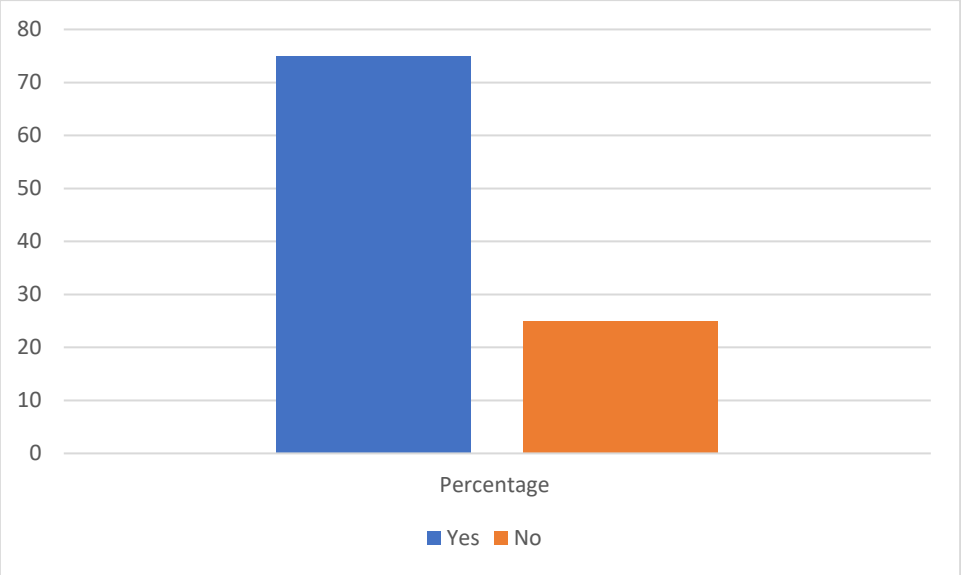
46% of respondents find that students only sometimes responds to their Qand A session.33% respondents rarely finds that students rarely responds to their Qand A session .11% of respondents finds that students don't respond to their Q and A session and 10 % of respondents find that students often responds to their questions .

Table 4.15 : whether their institution provides enough facilities to conduct online classes

Variables	Number of respondents	Percentage of respondents
Yes	75	75
No	25	25
Total	100	100

(Source : primary data)

Figure 4.15 whether their institution provides enough facilities to conduct online classes



Interpretation :

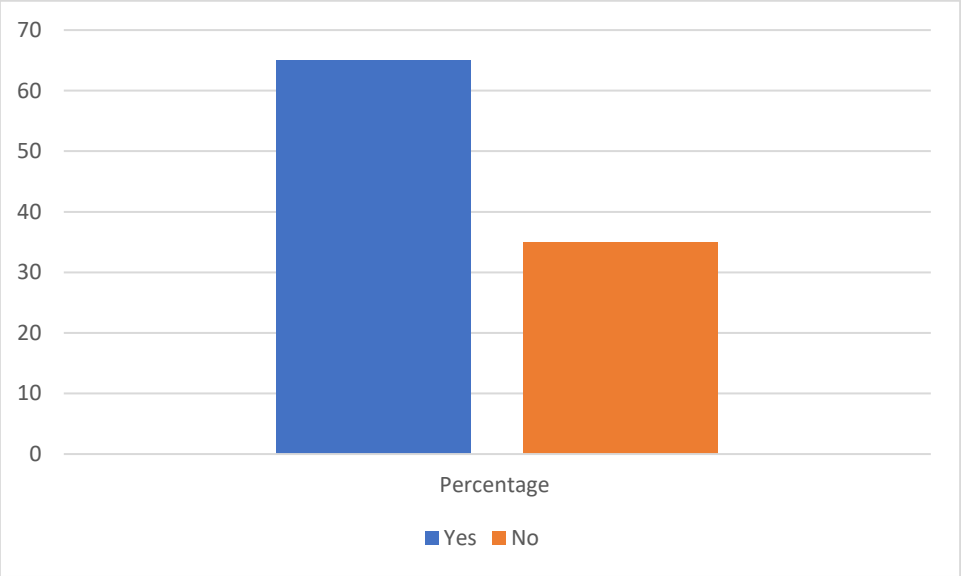
75% of respondents agree that their institution provides enough infrastructure facilities and 25% donot agree that their institution provides enough infrastructure facilities

Table 4.16 Completion of syllabus on time through online class

Variables	Number of respondents	Percentage of respondents
Yes	65	65
No	35	35
Total	100	100

(Source : primary data)

Figure 4.16 Completion of syllabus on time through online class



Interpretation :

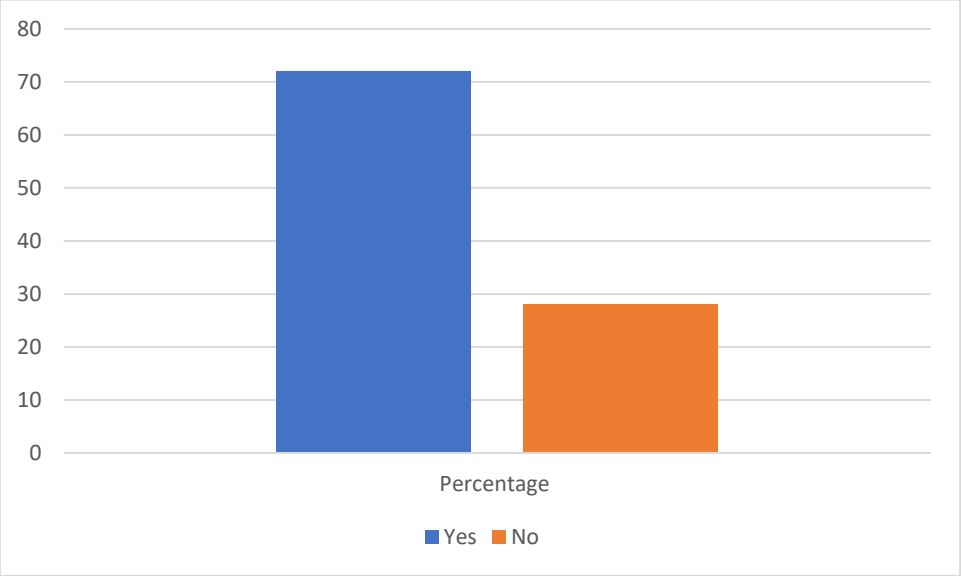
65% of respondents are able to complete their syllabus on time .35 % of respondents finds it difficult to complete their syllabus on time .

Table 4.17 The teachers use powerpoint presentations to take online classes .

Variables	Number of respondents	Percentage of respondents
Yes	72	72
No	28	28
Total	100	100

(Source : primarydata)

Figure 4.17 The teachers use powerpoint presentations to take online classes .



Interpretation:

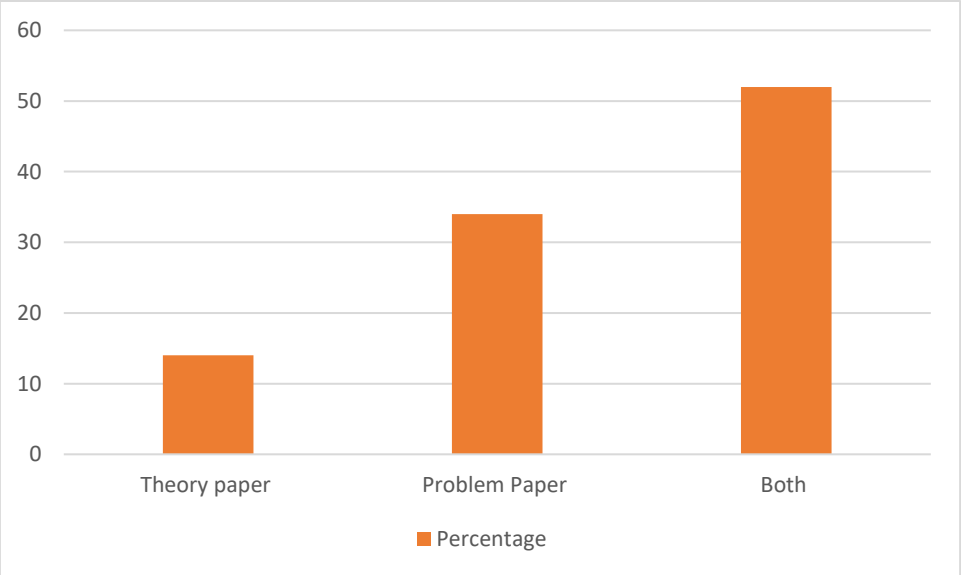
72% of respondents uses powerpoint presentations to take online classes . 28% of respondents donot use powerpoint presentations to take online classes

Table 4.18 Type of paper teachers dealing with

Variables	Number of respondents	Percentage of respondents
Theory paper	14	14
Problem Paper	34	34
Both	52	52
Total	100	100

(Source : primary data)

Figure 4.18 Type of paper teachers dealing with



Interpretation :

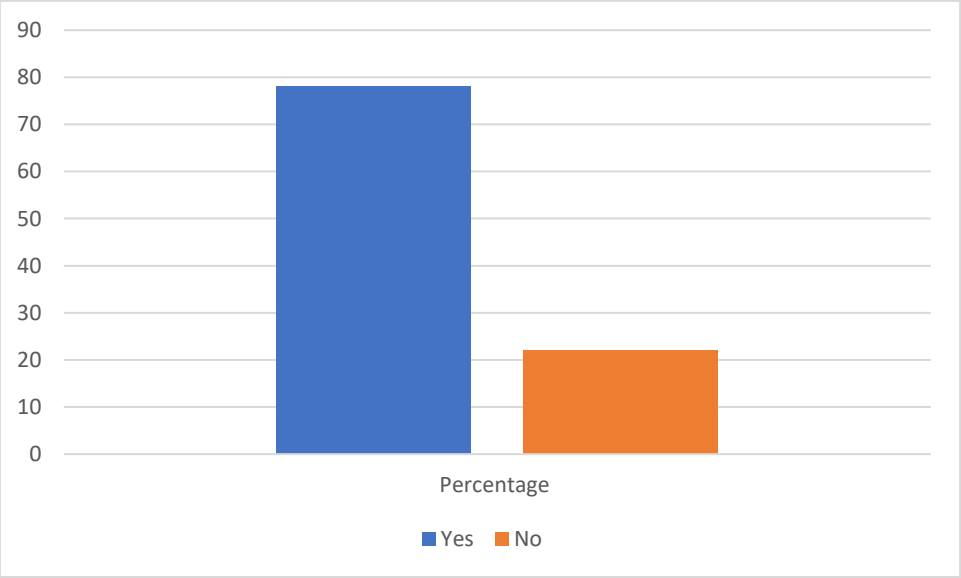
52% of respondents deals with both theory and problem paper . 34% of respondents deals with problem paper .14% of respondents deals with theory paper .

Table 4.19 Difficulty in conveying concepts related to problem paper in online class

Variables	Number of respondents	Percentage of respondents
Yes	78	78
No	22	22
Total	100	100

(Source : primary data)

Figure 4.19 Difficulty in conveying concepts related to problem paper in online class



Interpretation:

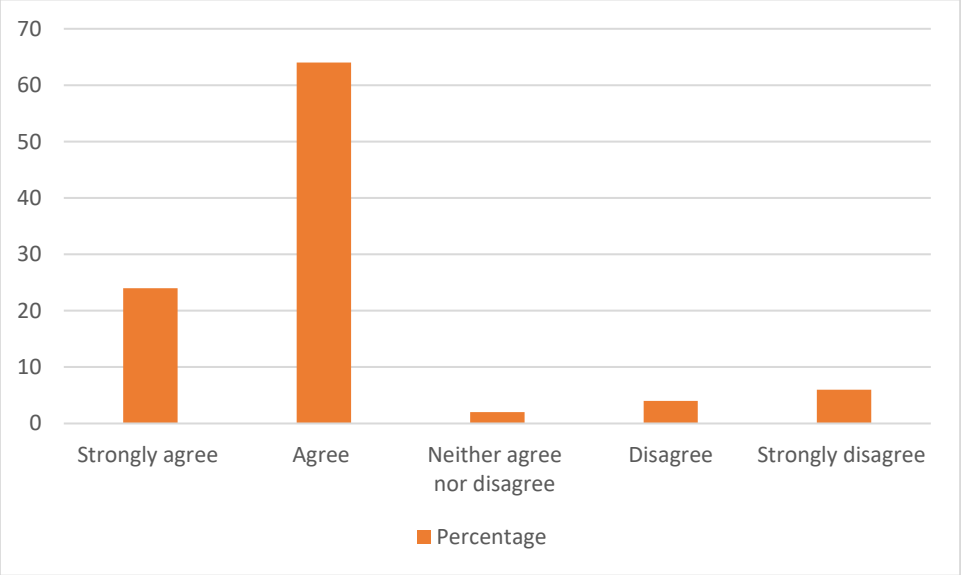
78% of respondents finds it difficult to convey concepts related to problem paper. 22% of respondents doesnot find it difficulty to convey concepts related to problem paper .

Table 4.20 Improvement of technological skills to assess students using various techniques through online teaching

Variables	Number of respondents	Percentage of respondents
Strongly agree	24	24
Agree	64	64
Neither agree nor disagree	2	2
Disagree	4	4
Strongly disagree	6	6
Total	100	100

(Source : primary data)

Figure 4.20 Improvement of technological skills to assess students using various techniques through online teaching



Interpretation :

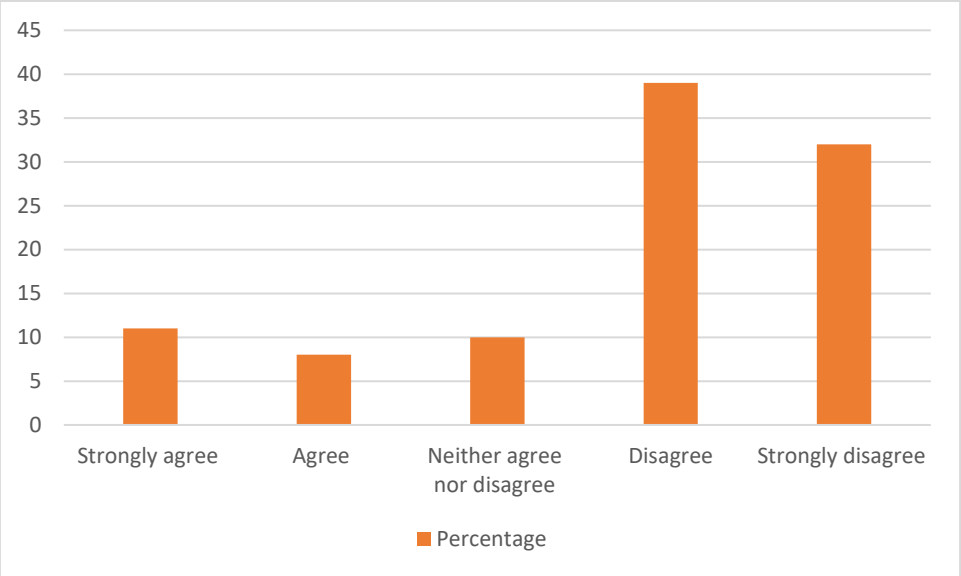
About 64% of respondents agree that online teaching helps to improve their technological skills to assess students using various techniques .About 24% strongly agrees to this statement .About 2 % of respondents neither agrees nor disagrees to the above statement . 6% of respondents strongly disagrees to this and 4% of respondents disagrees to the above statement .

Table 4.21 Students can be evaluated well enough in online education

Variables	Number of respondents	Percentage of respondents
Strongly agree	11	11
Agree	8	8
Neither agree nor disagree	10	10
Disagree	39	39
Strongly disagree	32	32
Total	100	100

(Source: primary data)

Figure 4.21 Students can be evaluated well enough in online education



Interpretation :

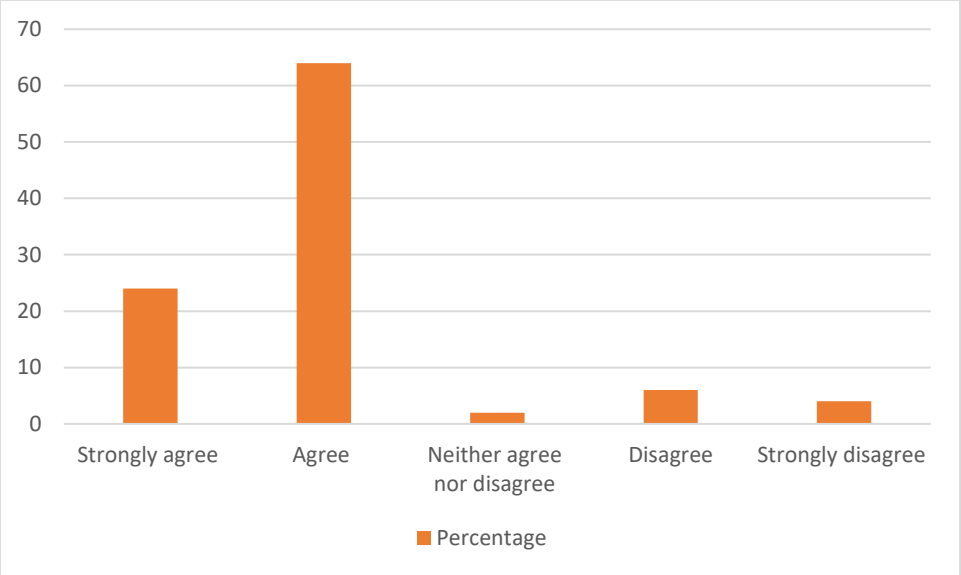
39% of respondents disagrees to the statement that students can be evaluated well enough in online education . 32% of respondents strongly disagrees to this statement . 11% of respondents strongly agrees to this statement . 10% of respondents neither agree nor disagree to the above statement .8% of respondents agrees to this statement .

Table 4.22 Online assessment measures fairly students achievements

Variables	Number of respondents	Percentage of respondents
Strongly agree	24	24
Agree	64	64
Neither agree nor disagree	2	2
Disagree	6	6
Strongly disagree	4	4
Total	100	100

(Source : primary data)

Figure 4.22 Online assessment measures fairly students achievements



Interpretation :

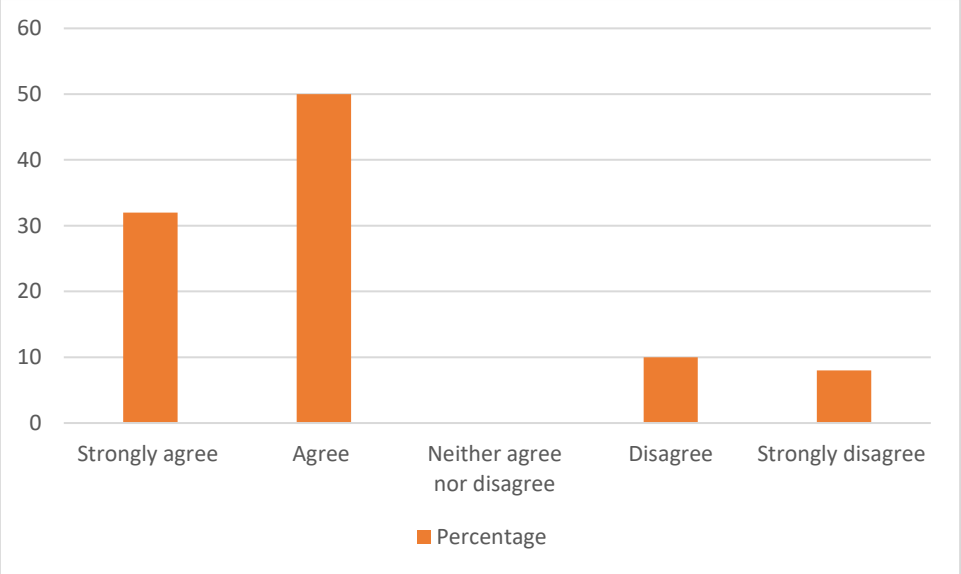
About 64% of respondents agree that online teaching helps to improve their technological skills to assess students using various techniques .About 24% strongly agrees to this statement .About 2 % of respondents neither agrees nor disagrees to the above statement . 4% of respondents strongly disagrees to this and 6% of respondents disagrees to the above statement .

Table 4.23 Online tools are easy to use

Variables	Number of respondents	Percentage of respondents
Strongly agree	32	32
Agree	50	50
Neither agree nor disagree	0	0
Disagree	10	10
Strongly disagree	8	8
Total	100	100

(Source: primary data)

Figure 4.23 Online tools are easy to use



Interpretation :

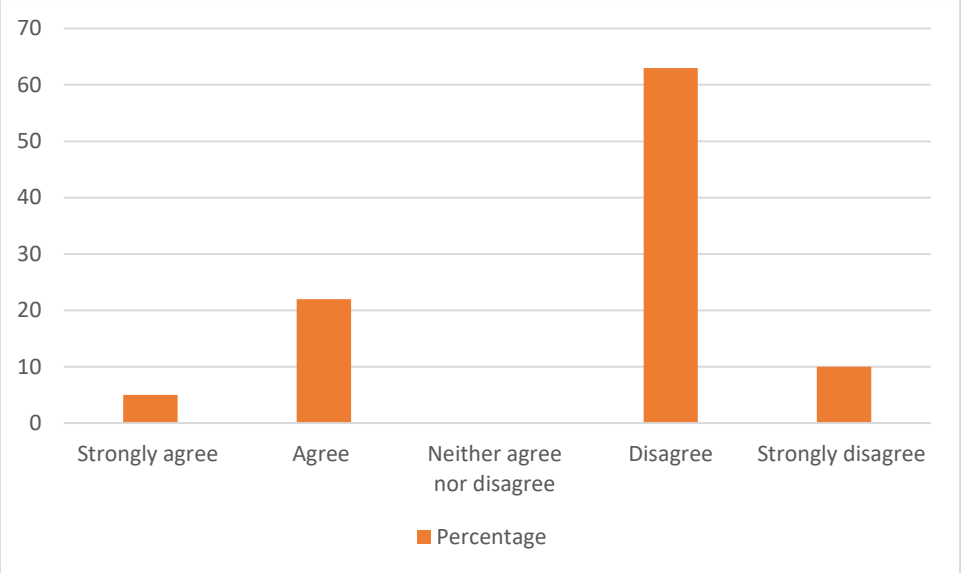
50% of respondents agree to the statement that online tools are easy to use , 32% strongly agrees to this statement . 10% of respondents disagree to the statement ,8% of respondents strongly disagrees to this .

Table 4.24 Satisfaction of student teacher interaction during online class

Variables	Number of respondents	Percentage of respondents
Strongly agree	5	5
Agree	22	22
Neither agree nor disagree	0	0
Disagree	63	63
Strongly disagree	10	10
Total	100	100

(Source: primary data)

Figure 4.24 Satisfaction of student teacher interaction during online class



Interpretation:

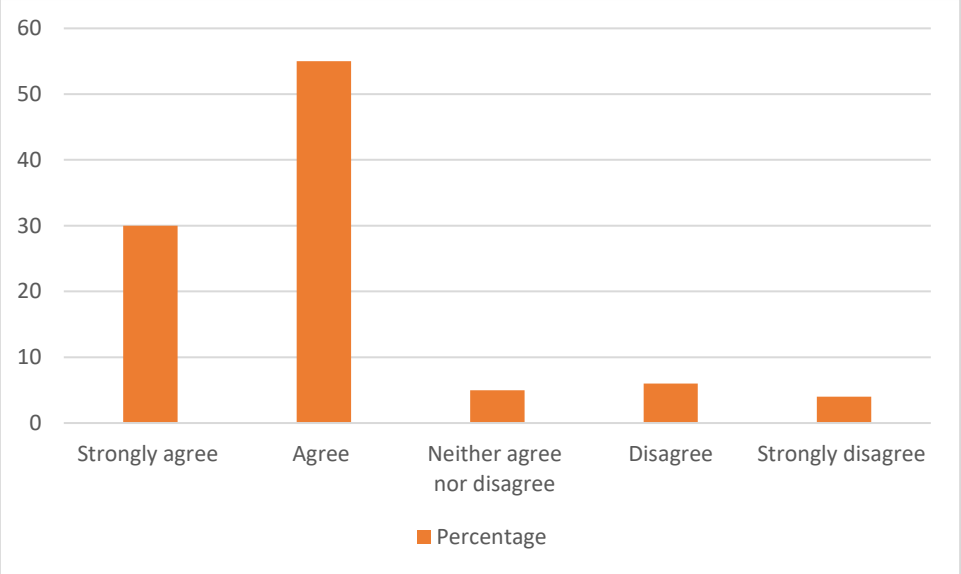
63% of respondents disagree to the statement that they are satisfied with the student teacher interaction during online class .22% of respondents agree to the above statement .10% strongly disagrees to the statement .5% strongly agrees to this statement .

Table 4.25 There is increase of mental stress among teachers .

Variables	Number of respondents	Percentage of respondents
Strongly agree	30	30
Agree	55	55
Neither agree nor disagree	5	5
Disagree	6	6
Strongly disagree	4	4
Total	100	100

(Source : primarydata)

Figure 4.25 There is increase of mental stress among teachers .



Interpretation :

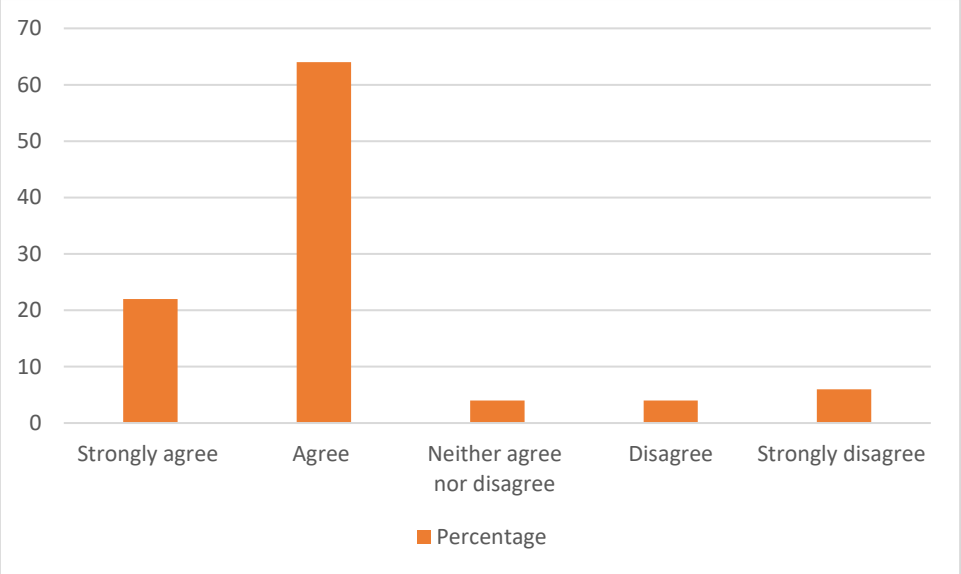
55% of respondents agree to the statement that there is increase of mental stress among teachers . 30 % of respondents strongly agrees to the above statement .6% of respondents disagrees to the statement .5% neither agree nor disagrees to this and 4% of respondents strongly disagrees to this .

Table 4.26 Online teaching will replace conventional method of teaching

Variables	Number of respondents	Percentage of respondents
Strongly agree	22	22
Agree	64	64
Neither agree nor disagree	4	4
Disagree	4	4
Strongly disagree	6	6
Total	100	100

(Source : primary data)

Figure 4.26 Online teaching will replace conventional method of teaching



Interpretation :

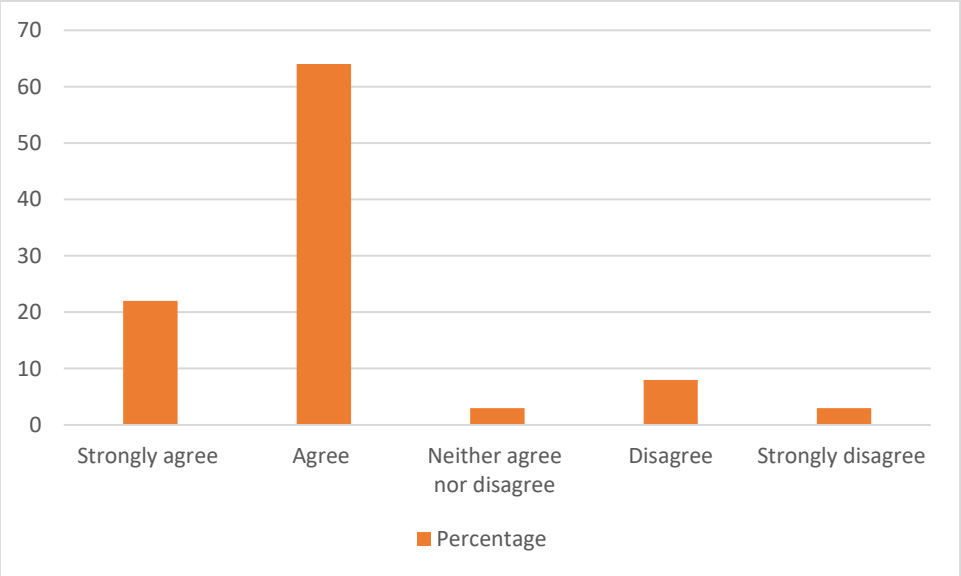
About 64% of respondents agree that online teaching helps to improve their technological skills to assess students using various techniques .About 22% strongly agrees to this statement . 6% of respondents strongly disagrees to the above statement .About 4 % of respondents neither agrees nor disagrees to the above statement . 4% of respondents disagrees to this

Table 4.27 Seriousness when compared to conducting classes in college / schools

Variables	Number of respondents	Percentage of respondents
Strongly agree	22	22
Agree	64	64
Neither agree nor disagree	3	3
Disagree	8	8
Strongly disagree	3	3
Total	100	100

(Source : primary data)

Figure 4.27 Seriousness when compared to conducting classes in college / schools



Interpretation :

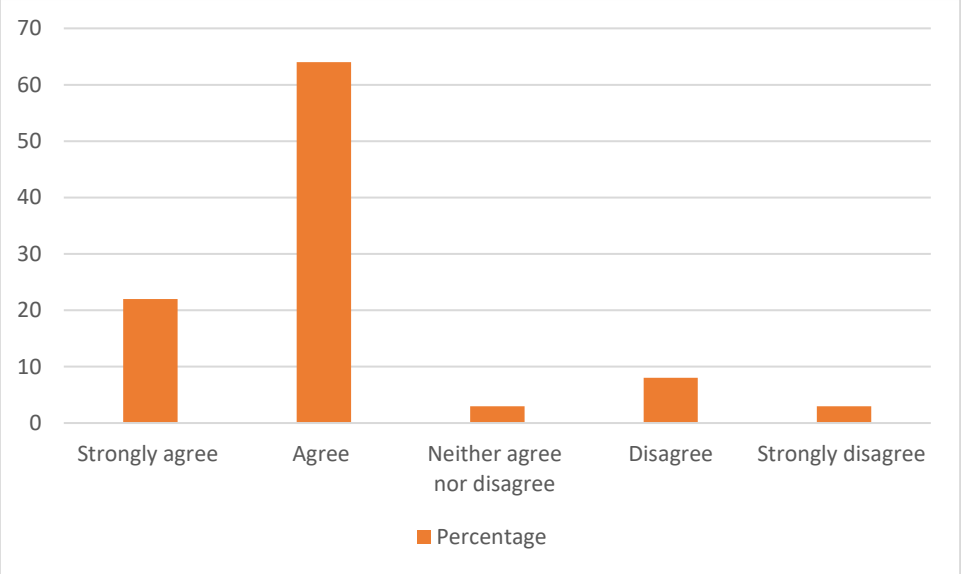
About 64% of respondents agree that it is hard to take class with the same seriousness when compared to conducting classes in colleges / schools.About 22% strongly agrees to this statement . 8% of respondents disagrees to the above statement .About 3 % of respondents neither agrees nor disagrees to the above statement . 3% of respondents strongly disagrees to this .

Table 4.28 Online teaching involves less cost to teachers

Variables	Number of respondents	Percentage of respondents
Strongly agree	5	5
Agree	81	81
Neither agree nor disagree	3	3
Disagree	7	7
Strongly disagree	4	4
Total	100	100

(Source : primary data)

Figure 4.28 Online teaching involves less cost to teachers



Interpretation :

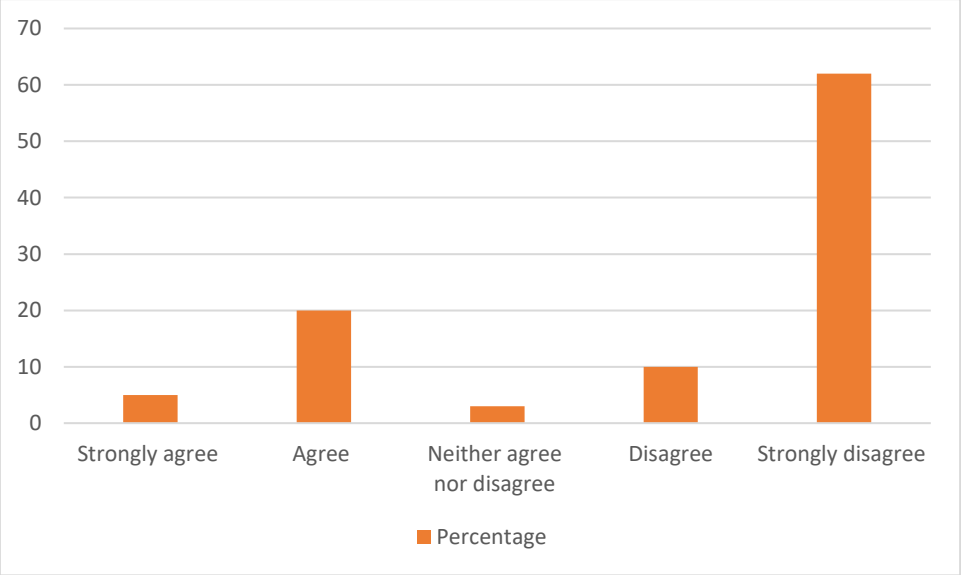
81% of respondents agrees to the statement that online teaching involves less cost to teachers .7% of respondents disagrees to this . 5 % of respondents strongly agrees to this .4 % strongly disagrees to this .3 % neither agree nor disagree .

Table 4.29 Students join regularly for online classes

Variables	Number of respondents	Percentage of respondents
Strongly agree	5	5
Agree	20	20
Neither agree nor disagree	3	3
Disagree	10	10
Strongly disagree	62	62
Total	100	100

(Source : primary data)

Figure 4.29 Students join regularly for online classes



Interpretation:

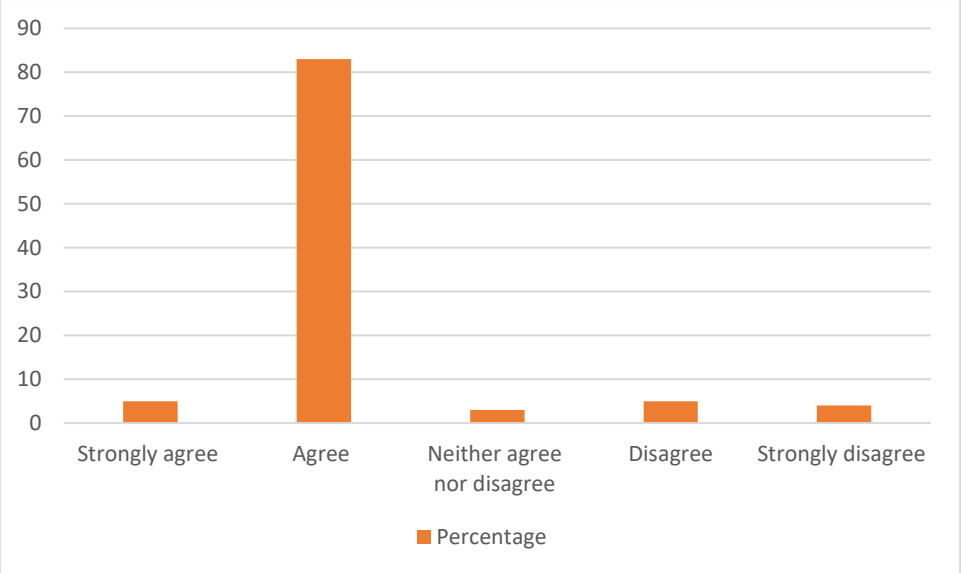
62% of respondents strongly disagrees to this statement that students join regularly for online classes . 20% agrees to this .10% disagrees to this . 5% stongly agrees to this . 3% neither agree nor disagree to this statement

Table 4.30 Students makes delay in joining classes

Variables	Number of respondents	Percentage of respondents
Strongly agree	5	5
Agree	83	83
Neither agree nor disagree	3	3
Disagree	5	5
Strongly disagree	4	4
Total	100	100

(Source : primary data)

Figure 4.30 Students makes delay in joining classes



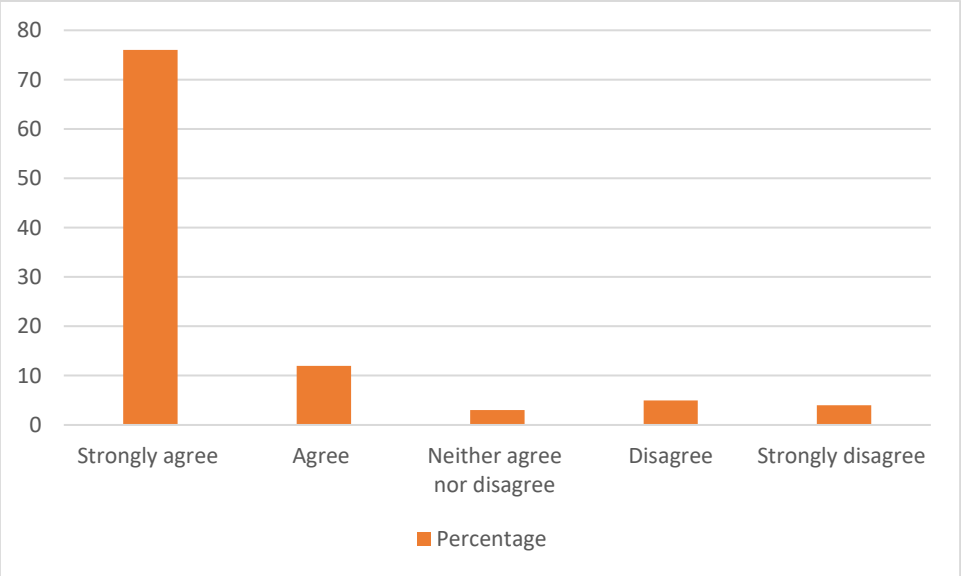
Interpretation :

83% of respondents agrees to this statement that students makes delay in joining classes .5% strongly agrees to this . 5% disagrees to this . 4% strongly disagrees to this statement 3% neither agree nor disagrees to this .

Table 4.31 Difficulty of students to understand the concepts through online classes

Variables	Number of respondents	Percentage of respondents
Strongly agree	76	76
Agree	12	12
Neither agree nor disagree	3	3
Disagree	5	5
Strongly disagree	4	4
Total	100	100

(source : primary data)



Interpretation:

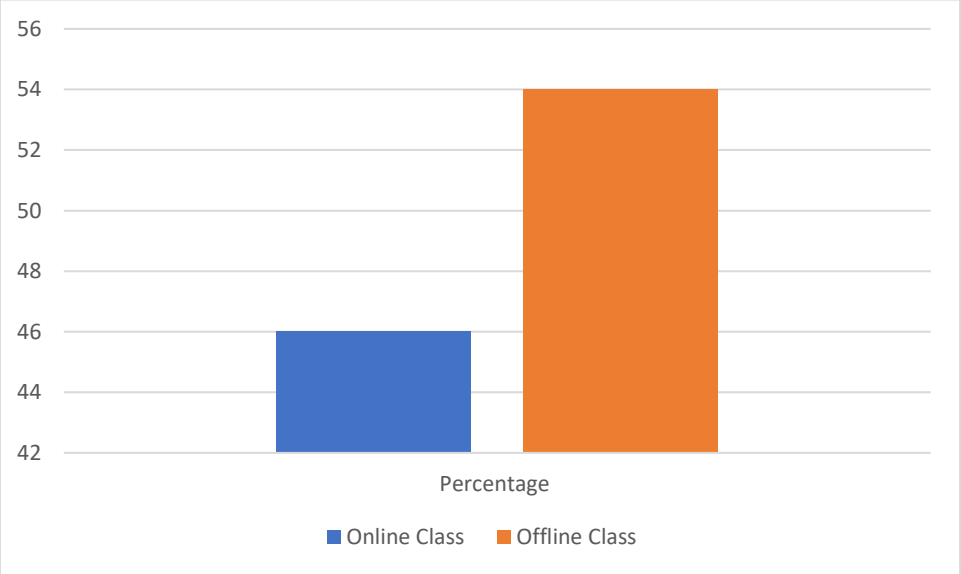
76% of respondents strongly agrees to the statement that students find difficulty to understand concepts through online classes . 12% of respondents agrees to this . 5% of respondents disagrees to this . 4% of respondents strongly disagrees to this . 3% of respondents neither agree nor disagree to this statement .

Table 4.32 preference of online class or offline class

Variables	Number of respondents	Percentage of respondents
Online Class	46	46
Offline Class	54	54
Total	100	100

(source : primary data)

Figure 4.32 Preference of online class or Offline class



Interpretation :

54% of respondents prefer Offline Class . 46% of respondents prefers Online Class

CHAPTER V

FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

- Most of the respondents are from female category (55%) and the remaining are from male category (45%).

- Around 42% of respondents are from age category of 35-45 and least respondents are from category above 55.

- 35% of the respondents are working under private institutions .

- 37% of respondents works under school category .

- 86% of respondents favours google meet . Through google meet they can easily create a video meeting with more enhanced features . It is the best teaching app; using it, teachers can create digital classrooms, share links with students, and mute students. To ensure the highest video quality, teachers use Google Meet .

- 51%of the respondents finds online teaching not fully effective . students gets easily distracted and forgets to focus on their lessons . Transitioning to online teaching has been difficult for many teachers. Technical issues, student engagement, controlling class size, evaluating student learning, and time management are some of the major difficulties that teachers have encountered.

- 57% of respondents prefers laptop. It helps the teachers to handle classes easily . It shares a wide screen which is better than smart phone and its doesn't much strain the eyes.

- 84% of the respondents sometimes find difficulty in operating apps while conducting online classes because they might not have proper gadgets and face internet shortage problems .

- 60% of the respondents sometimes face internet shortage problems .It might be due to long class hours which consumes data ,and it can be due to internet connection problems in rural area .

- 30% of respondents sometimes face difficulty in online class without seeing their students face . Because physical presence of teachers is more effective , it helps teachers to provide more personal attention to students

- 83% of respondents sometimes uses google classroom while they test through online . It helps to streamline assignments and foster communication. It can be used with other tools such as gmail, google calender, google docs

- 81% of respondents rarely conducts exams through online. Most of the institutions conducts a hybrid mode of learning .

- Around 75% of respondents are not satisfied regarding conducting exams through online . The major issues related with conducting exams online are internet connectivity issues and online exam security.

- 46% of respondents are not much satisfied with the response of Qand A session through online . It might due to their absence or students get easily distracted in online classes .
- 75% of respondents are satisfied with the facilities provided by college to conduct online classes.
- 65 % of respondents are able to complete syllabus on time through online class.
- 72% of respondents uses powerpoint presentations to take online classes. It helps to present information in multiple ways through text images and videos . We can use PowerPoint to emphasise important topics in your presentation when presenting a lecture or short presentation. PowerPoint's visual structure makes it simple to project timelines and pictures.

- 52% of respondents are dealing with both theory and problem paper .

- 78%of the respondents faces difficulty in conveying concepts related to problem paper in online classes . There is lack of face to face interaction between teachers and students and teachers find it difficult to realise whether students are able to understand the concepts related to problem paper
- 64% of respondents Agrees that online teaching helps teachers to improve their technological skills to assess students using various techniques . Students today frequently demonstrate their expertise through online tests. Teachers can also learn a lot from them about what their students know and where they need assistance. Students who may have hectic schedules or who live in remote locations can have greater freedom with the use of online assessment tools. Additionally, it makes education more widely accessible. Now, rural students can take examinations and receive an education on par with those in more populated areas.
- 39% of respondents disagrees to the statement that students can be evaluated well enough in online education .
- 64% of respondents agree that online assessment measures fairly students achievement . A variety of techniques have been employed by instructors, including timed multiple-choice exams, or send assignments to the teacher by a specific deadline, video viva voce or oral exams, gauging discussion board participation, online presentations, and real-world assessments or projects.

- 50% of the respondents agree that online tools are easy to use . It is more flexible and and can be accessed from anywhere . In the classroom, teachers frequently don't have enough time for individualised instruction. Some educational apps make it possible to connect the teacher and student at any time.. On the other hand, educators have opportunities to provide pupils with additional information. Teachers can post homework and other assignments using some of the apps. The students can complete their tasks and submit them via the app as well.

- 63% of respondents are not satisfied with the student teacher interaction during online classes . The connection between teachers and students not only has a beneficial impact on learning outcomes, but it also mediates those outcomes through the psychological climate and learning engagement. Additionally, psychological environment and learning engagement have a chain-mediating effect on the teacher-student interaction influence mechanism that affects students' learning outcomes. To put it another way, teacher-student contact encourages students to learn by fostering a pleasant psychological environment, which in turn influences the learning impacts that students experience.

- 55% of respondents faces mental stress during online classes . It might be due to increased work load or lack of training . The difficulty of engaging students during online classes is one of the issues educators encounter. Nowadays, students are compelled to switch to online education. It is a novel way for students to learn. This makes it challenging for educators to involve pupils in online instruction. Students gain knowledge at home. Thus, even during the live meetings, individuals easily become distracted and lose focus.

- 64% of the respondents agrees that online teaching will replace conventional method of teaching. Online education is the way of the future in part because of its flexibility. Online learning gives students the freedom to learn at their own pace and convenience, in contrast to traditional classroom settings. The course materials and lectures are accessible to students from anywhere in the world at any time. This suggests that even students with other obligations can continue their study. Thanks to online learning, working professionals may now improve their abilities and advance in their careers while still maintaining a healthy work-life balance. Each student has a distinctive learning style, which makes learning opportunities versatile. Through online learning, students can customize their learning opportunities to suit their individual needs. Students can choose the materials they want to utilize, the pace at which they want to learn, and the kinds of assignments they want to complete. Students can thus study in a way that is most successful for them, which might lead to better academic performance.

Students can enroll in courses offered by colleges and institutes all over the world without ever leaving their homes. Because of this, students in developing countries now have access to high-quality education that was previously beyond of their reach.

- 64% of respondents feels hard to take class with the same seriousness when compared to conducting classes in schools/ college . Because teachers and students feel less motivated regarding online classes

- 81% of the respondents agrees online teaching involves less cost reducing the need for physical classroom space and other resources such as textbook and other materials . Comparing online learning to traditional education offers several advantages. It gives students the chance to study at their own pace without worrying about skipping any lectures or assignments. Additionally, it enables people to work when they are most effective and concentrate on what is important in life, such as professional objectives or family obligations. It also enables educators to conduct classes with less cost .

- 62% of respondents strongly disagree to the statement that students join regularly for online classes . Because many students still struggle to adjust to this new mode of learning and because they are not even involved, they are unable to relate to the themes that are given in class.One of the main causes of loss of interest is distractions, which includes social media and gamesAs a result of the lack of extracurricular activities, students have been burnt out.students' eyes, necks, and ears are suffering due to excessive screen usage.additionally, students are reluctant to leave their comfort zone. students prefer recorded lectures to in-person instruction, which causes them to accumulate more recordings because it is time-consuming to view recordings.

- Around 83% of respondents agrees that students makes delay in joining classes . The students feel less motivated to join classes regularly . Some students may not be able to meet at specific times .Others may have a lot going on their background that they are trying to block out or even hide from rest of the class.

- 76% of respondents strongly agree that students face difficulty to understand concepts through online mode because they get easily distracted and lack of proper communication . Managing screen time is one of the biggest challenges students face . A further drawback is the technical issue , during online classes challenges with poor internet access occurs frequently . Urban and small town communities have the most trouble keeping the internet connection steady .It obilerates the student's ability to learn .

- 54% of respondents prefer offline classes . Because teachers are more able to concentrate on teaching subjects and students are able to focus completely on the subject being covered in class . Teachers can give individual attention which helps students to perform better in exams . They gain a better comprehension of all subjects and have more clarity regarding their doubts . Through offline classes students can engage in hands on practice in several subject areas .Only in offline classes it is possible to comprehend a subject in a better way .

SUGGESTIONS

- Teachers must be provided enough training to get easily adapted to various technology in teaching .
- The institutions must take appropriate measures to reduce the work stress among teachers.
- The students must be advised to switch on their cameras while teaching so there will be better interaction between the teachers and students .
- Students should be encouraged to ask doubts during online sessions .
- Showing teacher's face also makes classes more interactive
- Try to record the lecture videos taken through online classes and avoid making lectures too long .
- Students must be encouraged to post their doubts in the chat section.
- Teachers should get adapted to use digital pen and tablets to convey concepts related to problem paper .
- Teachers can use response sheets from students to know whether their teaching is effective through online mode .
- Institutions should provide proper gadgets to make classes effective .
- Teachers can try to get a good internet connection package during online classes

CONCLUSION

Technological development has improved educational quality by encouraging collaborative and adaptable learning among teachers and students. The majority of institutions have switched to a mixed form of learning after the wake of the Covid-19 outbreak. Distance learning courses are now being offered by more universities. In order to adapt to different conditions, teachers are urged to use a hybrid style of teaching. The majority of respondents in this survey were able to finish their coursework, but they had trouble in properly communicating their ideas. Most respondents said they preferred offline classes.To remove the obstacles in online teaching, it is crucial to think about them and take appropriate action. It can be challenging to switch to digital learning. We cannot, however, dismiss the advantages of online learning. To provide students with an excellent education, it is important to recognise the challenges that online teaching and learning at present and to take the necessary steps to address them.

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ANNEXURE

A STUDY ON TEACHERS' PERCEPTION TOWARDS ONLINE TEACHING WITH SPECIAL REFERENCE TO ERNAKULAM DISTRICT

QUESTIONNAIRE

1. Name

2. Gender

    - Male
    - Female

3. Age

    - Between 25-35
    - Between 35 -45
    - Between 45-55
    - Above 55

4. Type of school/ college

    - Government
    - Self financing
    - Government aided
    - Private Schools
    - Others

5. In which section are you teaching online?
    - School
    - UG
    - PG
    - UG and PG
    - Others

6. Which app do you primarily favour using?
    - Google Meet
    - Zoom
    - Webex
    - Moodle
    - Any other specify .

7. Evaluate your experience towards online teaching

   - Effective
   - Not Effective

8. Tool / Device used in online teaching

   - Mobile Phone
   - Tablet
   - PC
   - Laptop
   - Others

9. Do you feel difficulty in operating apps while conducting online classes

   - Not at all
   - Rarely
   - Sometimes
   - Often

10. Do you face internet shortage problems

    - Not at all
    - Rarely
    - Sometimes
    - Often

11. Do you face difficulty in taking classes without seeing their face

    - Not at all
    - Rarely
    - Sometimes
    - Often

12. Do you conduct tests through google classroom

    - Not at all
    - Rarely
    - Sometimes
    - Often

13. Do you still conduct exams through online ?

    - Not at all
    - Rarely
    - Sometimes
    - Often

14. Are you satisfied with conducting exams through online?

- Yes
- No

15 . Do students respond to your Q and A session through online

- Not at all
- Rarely
- Sometimes
- Often

16. Do your institution provides enough facilities to conduct online classes

- Yes
- No

17. Are you able to complete syllabus on time through online classes

- Yes
- No

18. Do you use powerpoint presentations for taking online classes

- Yes
- No

19. Which type of paper are you dealing with

- Theory paper
- Problem paper
- Both

20. Do you find any difficulty in conveying concepts related to problem paper in online class

- Yes
- No

How well do you agree to the statements

Statements	Stronglyagree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
21 .Online teaching helps teachers to improve their technological skills toassess students using various techniques					
22. Students can be evaluated well enoughin online education					
23. Online assessmentmeasures fairly students achievements					
24. Online tools are easy to use					
25. You are satisfied with the student teacherinteraction during online classes					
26. There is increase ofmental stress among teachers					
27. Do you feel online teaching will replace conventional method ofteaching					
28. I feel it hard to takeclass with the same seriousness when compared to conducting classes in colleges /schools					

29. Online teaching involves less cost					
30. students join regularly for online classes					
31. students make delay in joining classes					
32. students find it difficult to understand the concepts through online classes					

33. What do you prefer ?

- Online Class
- Offline Class