A STUDY ON CHALLENGES OF ICT IN EDUCATION FROM TEACHER'S PERSPECTIVE

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ABSTRACT

Use of ICT in every aspect of life is increasing day by day. It has become an integral part of human being life. Teachers are using ICT tools in imparting education to their students. In this paper we have discussed challenges faced by teachers in using ICT for teaching Students. During Covid Pandemic Period Teachers are teaching through online mode as all academic institutions have been closed due to country wide lock down. Objective of study involves Teachers' perception towards the use of ICT and barriers they faced while using ICT tools in online classes. We have collected primary data from 96 higher education teachers through Google Forms and applied percentage analysis method using Excel and presented the data in the form of graphs. We have findings regarding Teachers' expertise, their interest, comfort level, health issues arising due to use of ICT, Time management issues, their satisfaction level, platform they are using, method of delivering contents, average lecture per day, average no of students per lecture, level of satisfaction they feel during online class etc. Finally we have concluded with recommendations to overcome these challenges.

Introduction

Information and Communication Technology (ICT) includes electronic devices like computers, laptops, smart phones, Internet, radios, televisions, smart boards and projectors among others, which are nowadays widely being used in the teaching learning process. Using ICT in education makes the process of teaching and learning more creative, effective, and interesting for both students and teachers. During Covid pandemic time Physical classrooms are completely replaced by virtual and online class rooms. A wide range of Software Platforms are being used by teachers like Zoom, Google Meet, Cisco Webex, Microsoft Teams, Google Classrooms and a lot more for teaching effectively and efficiently. Chalkboard Teaching has been almost replaced by new teaching aids like video lectures, PowerPoint presentations, virtual boards etc. ICT has enabled the teacher, the use of Audio Visual means for delivering concepts which has a very deep impact on students' understanding

levels. The use of ICT has made Teaching Learning as much entertaining. New apps are being developed to suit mobile screens as a large category of students attend their classes on smart phones. Most of the Learning Management Systems (like Google Classrooms, MS Teams) provide facilities like uploading of Assignments, assessment of Student Progress, recording their attendance on daily basis, grading of students, printing report cards preparing online quizzes, recording lectures, Presenting Screen by students and their collaborations in different activities. ICT has changed the education field to a large extent by adding flexibility, easy accessibility, reducing space requirement as well as by providing safety during this corona time as students attend their classes by staying at home. It adds entertainment in education and thus makes it edutainment. Despite all these implementing and using ICT tools in education is a quite challenging and tedious task for Educators and teachers. Therefore this study aims to focus on teachers' perceptions of the challenges and obstacles preventing teachers from using ICT in the teaching. **Objective of the Study**

1. To examine the perception of teachers towards use of ICT in education

2. To study the challenges faced using ICT

Literature Review Merging ICT in Teaching Learning Process Use of ICT in Education is not a method; rather it is a tool to assist teachers in delivering content [1]. By implementing ICT in Education, learning can occur anytime and anywhere. Online study materials, for example, are available to the students every time. Videoconferencing based classrooms facilitate both Educators and students to interact at the same time easily and comfortably. [2]. Education plays an important role in social, economical development as well as raising human welfare. Use of Information and

communication technology (ICT) in education greatly helps in all kinds of developments. A rapid development in computer technology all over the word has made it possible the adoption of ICT at all levels of education throughout the word. [5]

Barriers in using ICT from Teacher's Perspective It is very true that ICT has become a fundamental part of our teaching learning system nowadays. Especially by the time corona has hit our life the whole education system is dependent on ICT majorly. We cannot deny this fact that it has become essential for teachers as well as students. But it is not so easy for teachers to move from traditional teaching method to online teaching by using online tools and technologies. There are many teachers which are incapable of making use of ICT properly and effectively. Educators do not have basic knowledge about how to use the tools. Proper training has not been given to teachers which could make them confident in embedding ICT in their teaching process. Inspire of the implementation of ICT in teaching through National Policy which came in 2013, there are still many schools which has failed to incorporate it in education. It could be due to lack of infrastructure, lack of internet connectivity, in short of knowledge about using technology and many other factors. Besides all of these there may be many other factors which may affect teacher's efficiency and ability to include ICT in their teaching. We have done an Online Survey about all of these problems which educators may have faced in imparting their classes through Online Tools. This survey is about their comfortable level, their health issues, their interest and much more factors. Following Factors are studied

● Infrastructure problems they are facing

● Health issues they are dealing with

● Easiness level in using tools

● Time duration they are giving on computer

Research Methodology For study purposes Primary data has been collected. A well structured questionnaire was designed and sent to higher education institutions teachers through Google forms. Secondary data was collected through web sites, journals and newspapers etc. The data was analyzed through MS Excel and presented through pie charts, bar diagrams. Percentage analysis was also done to make the data more analytical. We received 96 responses from the respondents.

Data Analysis
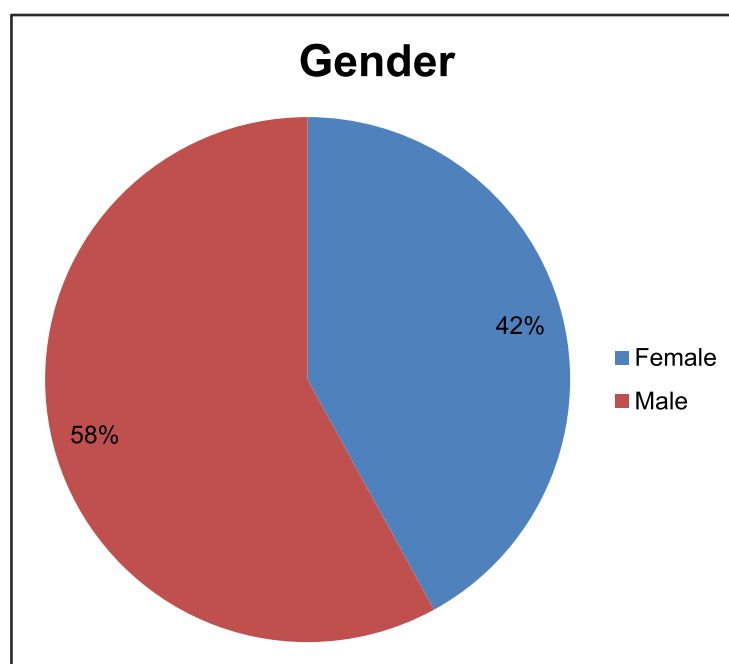
Figure 1
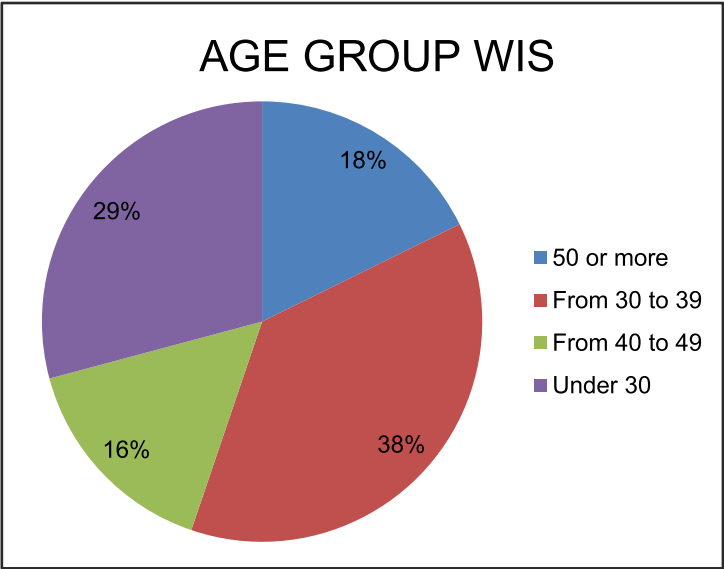
Table 1: Gender Wise Distribution

Gender	No	%
Female	40	42%
Male	56	58%

AGE GROUP WIS

18%
29%
16%
38%

- 50 or more
- From 30 to 39
- From 40 to 49
- Under 30

Figure 2

Table 2 : Age Group Wise Distribution

Age Group	No of Teachers	%
50 or more	17	18%
From 30 to 39	36	38%
From 40 to 49	15	16%
Under 30	28	29%

Subject(s)/Area

- Arts
- Business management
- Commerce
- Computer Science
- Economics
- Education
- Fashion Technology
- Languages
- Management
- Mathemtics
- Pharmacy
- Sanskrit
- Science
- Secondary teacher
- Social Studies/Humanities
- Social Work
- Technology

9% 13% 1% 11% 1% 15% 2% 2% 1% 4% 1% 9% 20% 1% 4% 1% 4% 1%
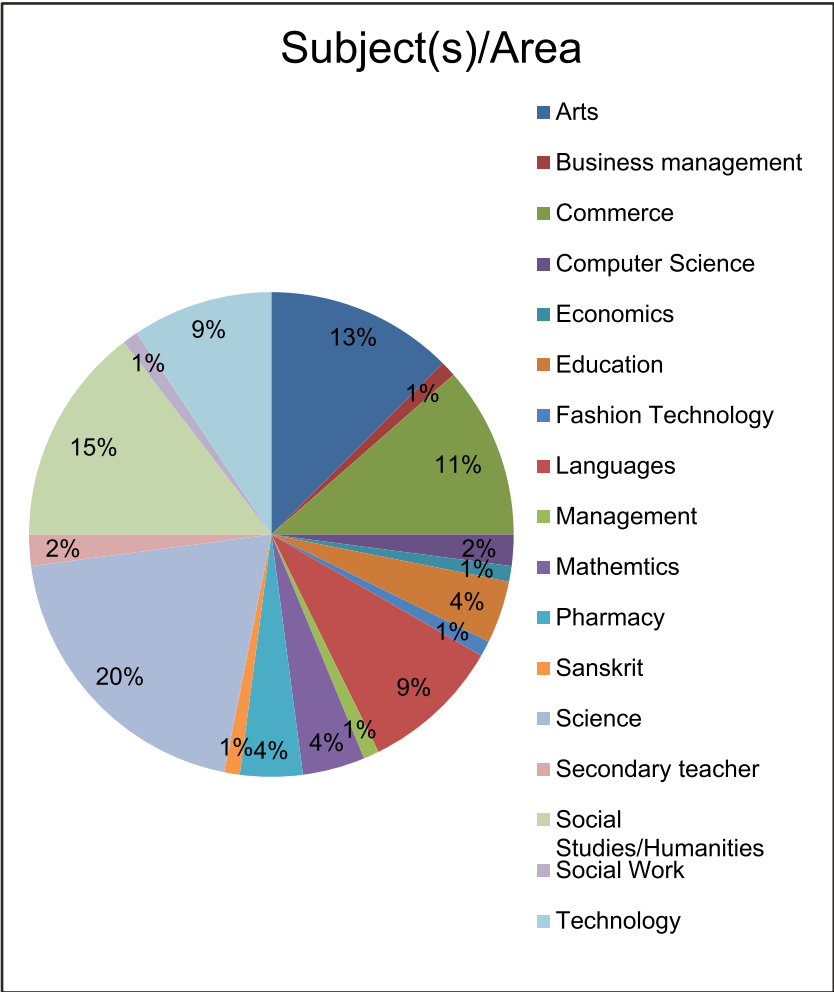
Figure 3

Table 3 : Subject Wise Distribution

Subject Area	No	%
Arts	12	13%
Business management	1	1%
Commerce	11	11%
Computer Science	2	2%
Economics	1	1%
Education	4	4%
Fashion Technology	1	1%
Languages	9	9%
Management	1	1%
Mathematics	4	4%
Pharmacy	4	4%
Sanskrit	1	1%
Science	19	20%
Secondary teacher	2	2%
Social Studies/Humanities	14	15%
Social Work	1	1%
Technology	9	9%

Experience in Teaching
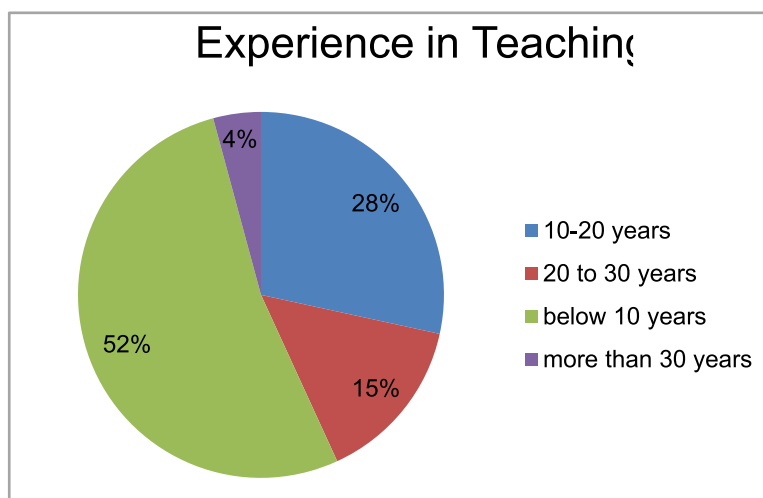
Figure 4

Table 4 : Experience in Teaching

Years	No	%
10-20 years	27	28%
20 to 30 years	14	15%
below 10 years	50	52%
more than 30 years	4	4%

Since How log time you are using ICT as Teaching Aid
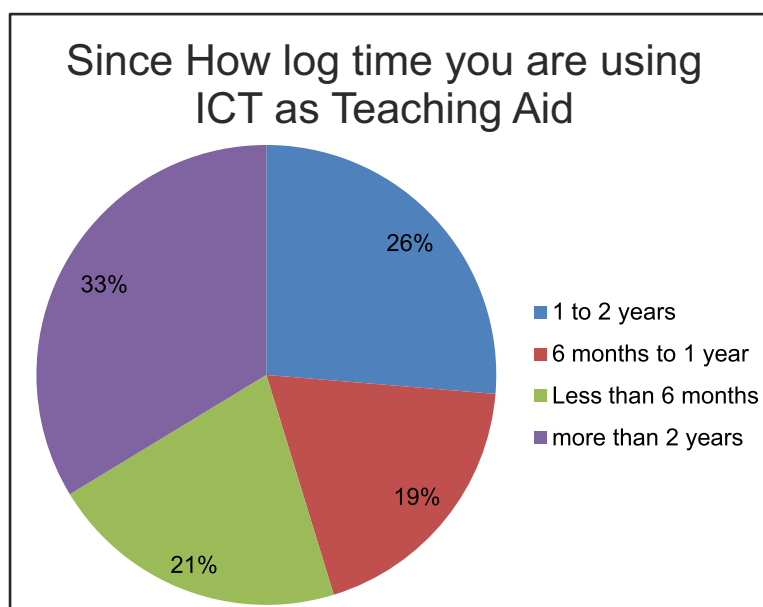
Figure 5

Table 5 : Duration of Using ICT

Duration	No of Teachers	%
1 to 2 years	25	26%
6 months to 1 year	18	19%
Less than 6 months	20	21%
more than 2 years	32	33%

Which Online Platform you are Using to Teach?
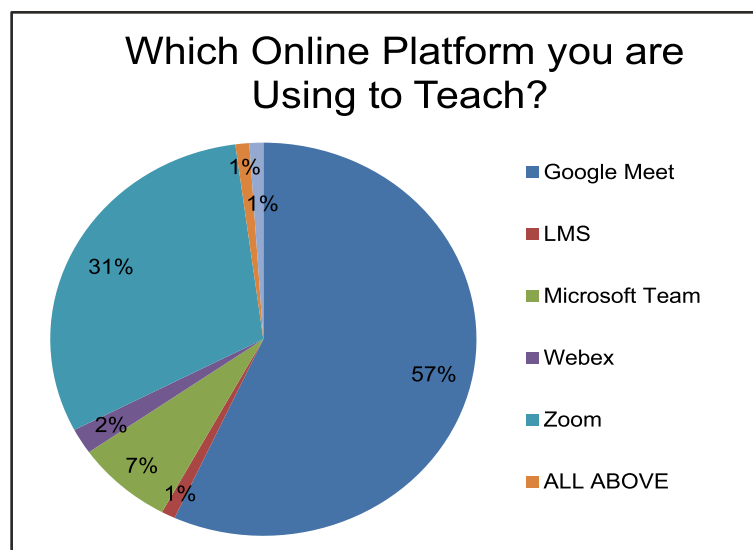
Figure 6

Table 6 : Platform Used

Platform	No of Teachers	%
Google Meet	54	57%
LMS	1	1%
Microsoft Team	7	7%
Webex	2	2%
Zoom	29	31%
ALL ABOVE	1	1%
Zoom, Google Meet , Microsoft Teams	1	1%

Figure 7

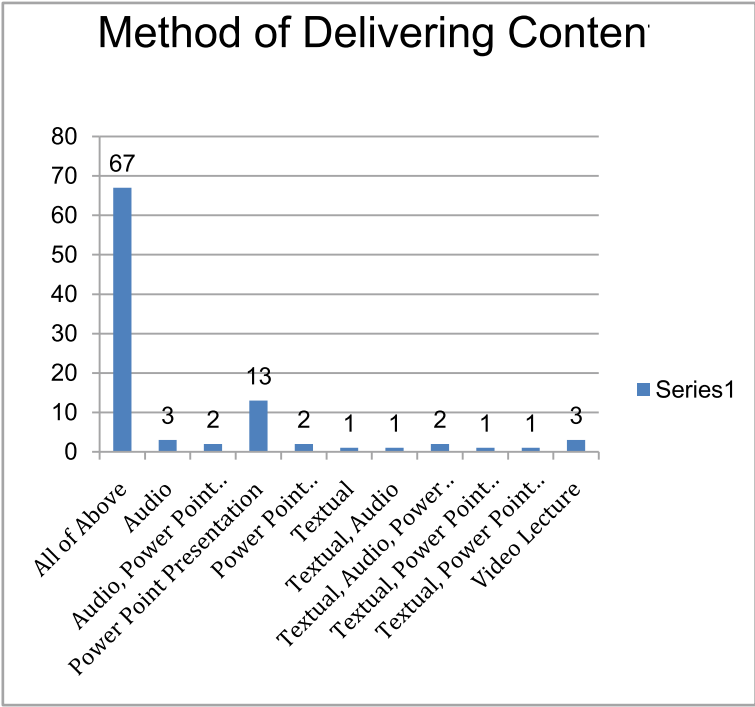| Method Used	No of Teachers	%
All of Above	67	70%
Audio	3	3%
Audio, Power Point Presentation Video Lecture	2	2%
Power Point Presentation	13	14%
Power Point Presentation, Video Lecture	2	2%
Textual	1	1%
Textual, Audio	1	1%
Textual, Audio, Power Point Presentation	2	2%
Textual, Power Point Presentation	1	1%
Textual, Power Point Presentation Video Lecture	1	1%
Video Lecture	3	3%

Figure 8

Range of Students	Actual no of Students	%
10-15	10	10%
16-20	10	10%
21-25	13	14%
Fewer than 10	5	5%
More than 25	58	60%
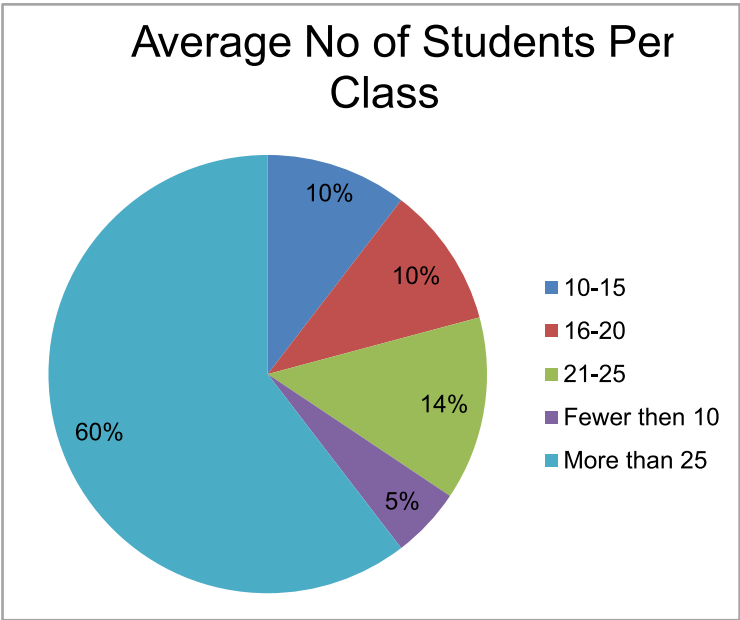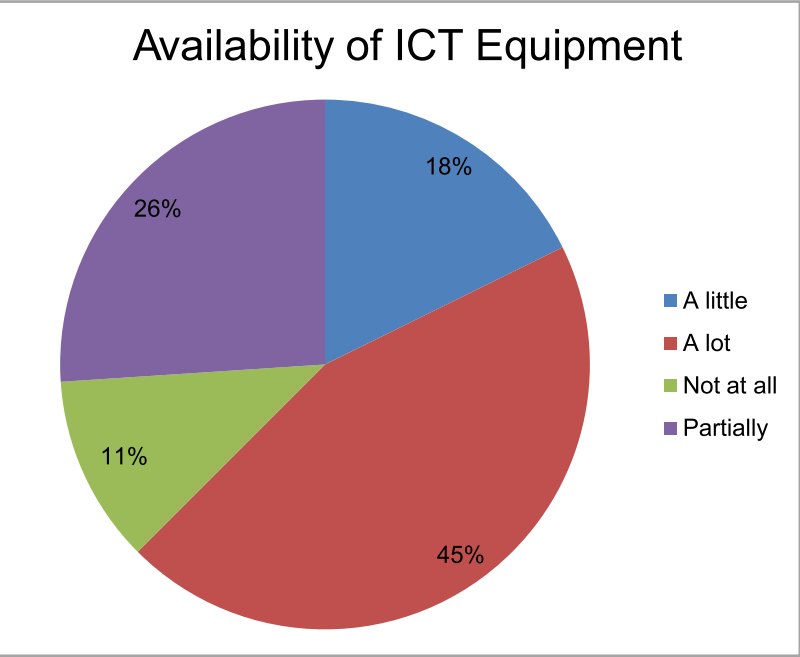
Availability of ICT Equipment

Figure 9

Amount of Knowledge	No of Teacher	%
A little	17	18%
A lot	43	45%
Not at all	11	11%
Partially	25	26%
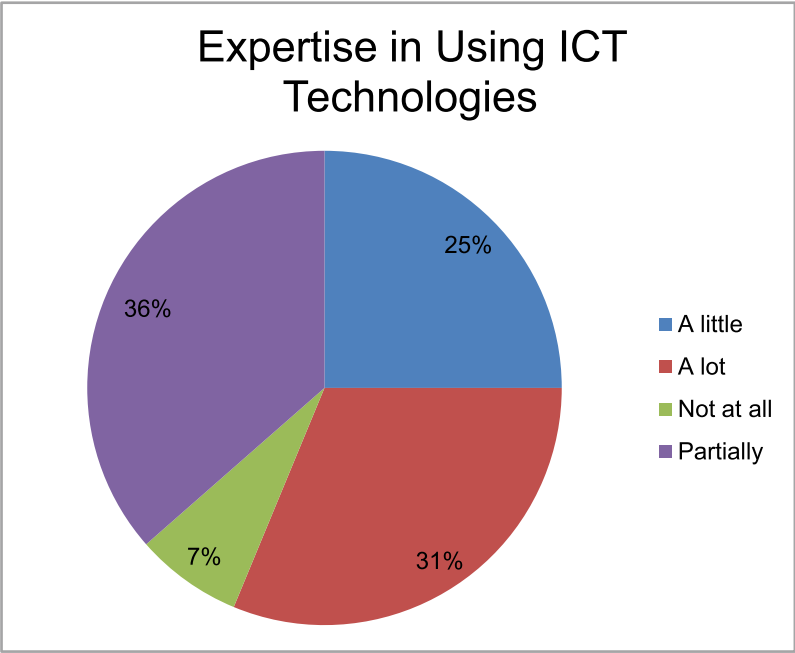
Expertise in Using ICT Technologies

Figure 10

Amount of Expertise	No of Teachers	%
A little	24	25%
A lot	30	31%
Not at all	7	7%
Partially	35	36%

Does using ICT for teaching affect your Mental Health

- ■ A little
- ■ A lot
- ■ Not at all
- ■ Partially
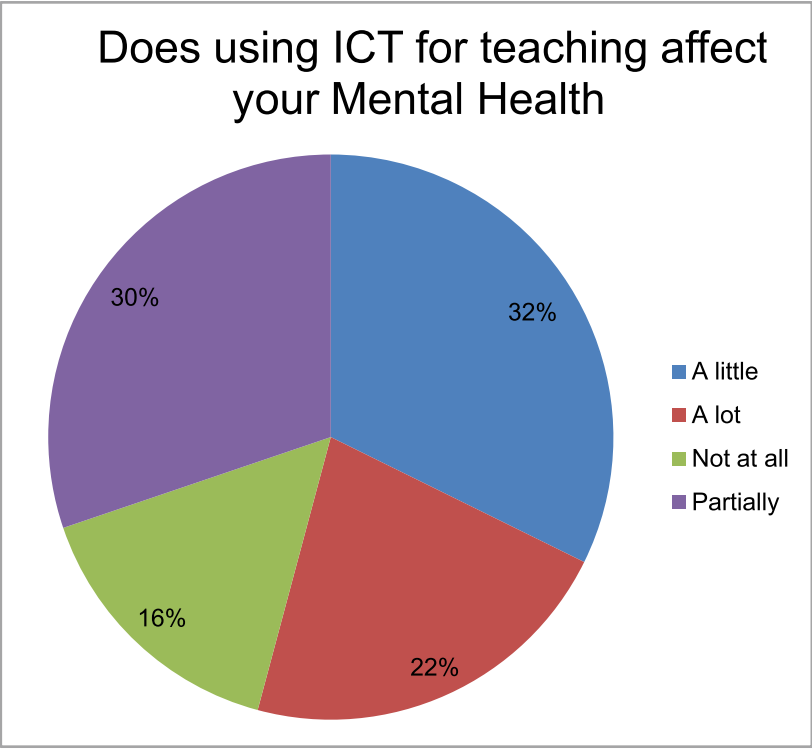
Figure 11

Table 11 : Affect on Mental Health

Degree of Affect on Mental Health	No of teachers	%
A little	31	32%
A lot	21	22%
Not at all	15	16%
Partially	29	30%

Does using ICT for teaching affect your Physical Health?

- ■ A little
- ■ A lot
- ■ Not at all
- ■ Partially
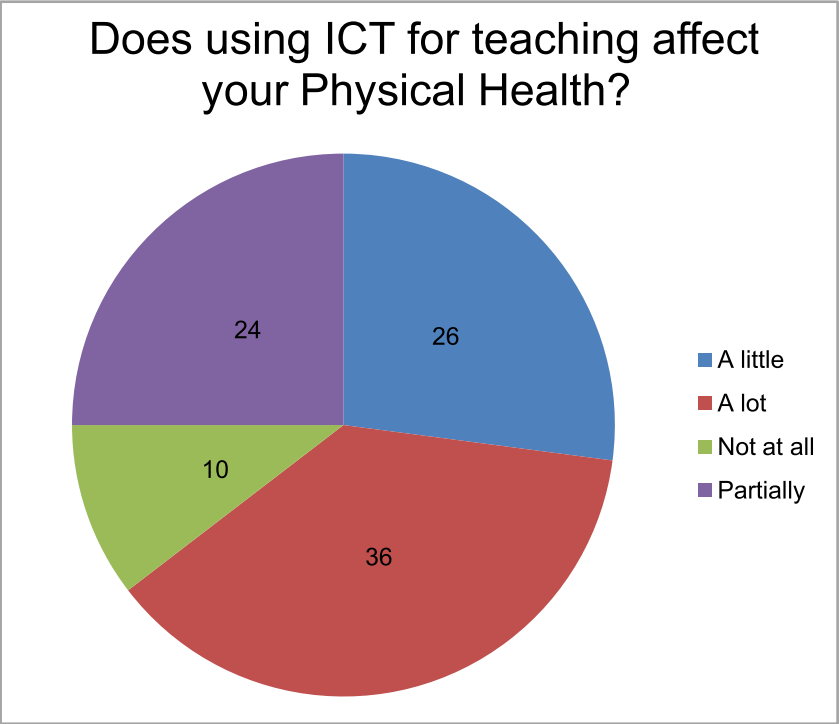
Figure 12

Table 12 : Affect on Physical health

Degree of Affect on Physical Health	No of teachers	%
A little	26	27%
A lot	36	38%
Not at all	10	10%
Partially	24	25%

Does using ICT for teaching affect your Family Time
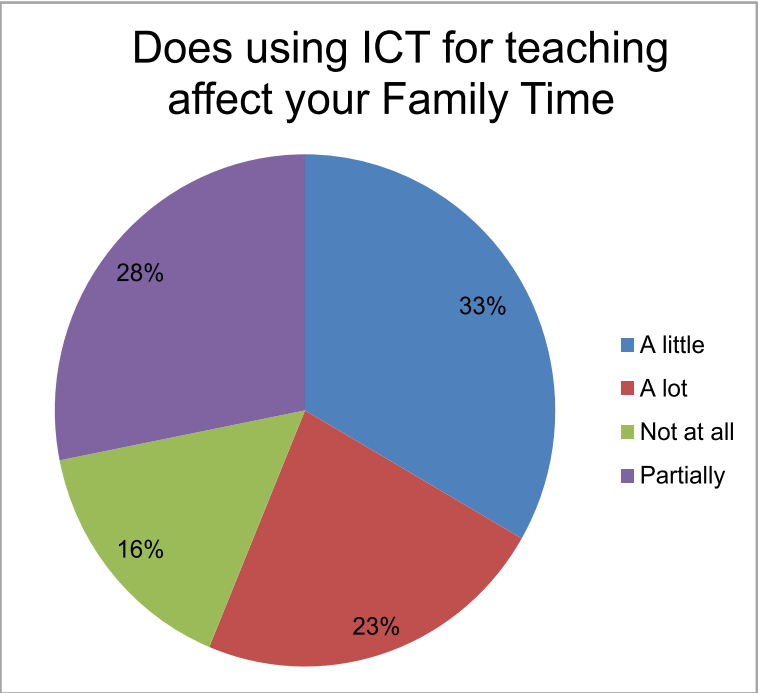
Figure 13

Degree of Affect on Family Time	No of teachers	%
A little	32	33%
A lot	22	23%
Not at all	15	16%
Partially	27	28%

How much attentive do you find your students in class?
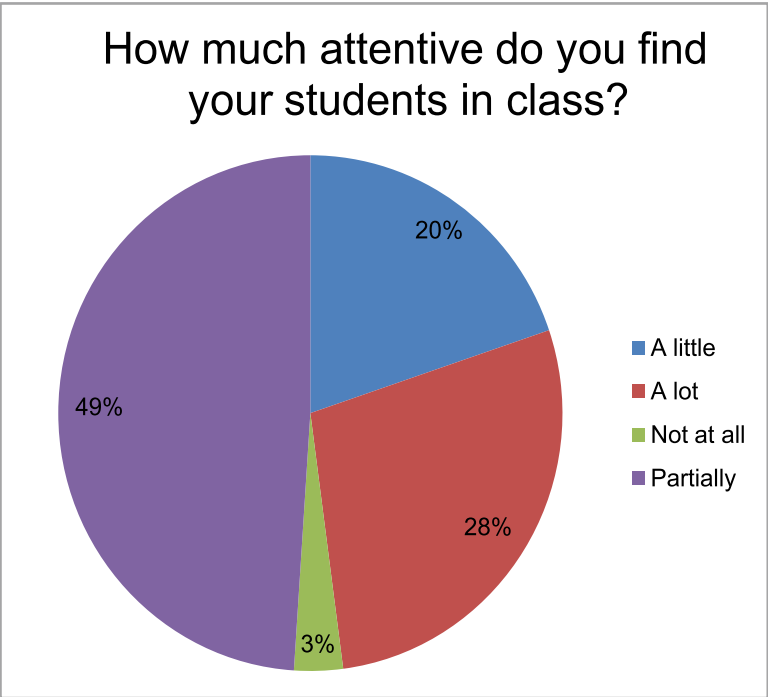
Figure 14

Degree of Attentiveness	No of Teachers	%
A little	19	20%
A lot	27	28%
Not at all	3	3%
Partially	47	49%

Level of satisfaction in using ICT in teaching?
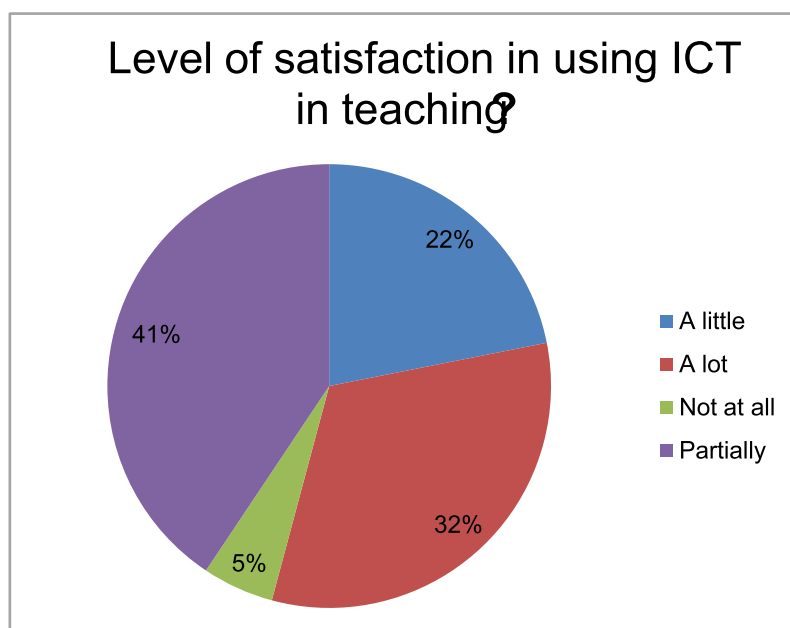
Table 15 : Level of Satisfaction

Level of Satisfaction	No of Teachers	%
A little	21	22%
A lot	31	32%
Not at all	5	5%
Partially	39	41%

Figure 15

Findings Analysis has been made with the help of numerous charts depicting different aspects of teacher's characteristics. Below are the major findings with data analysis:

1. Most of female teachers are using ICT Technology as a Teaching Aid.

2. Young educators are using ICT More as a tool for imparting education.

3. Educators from Different Subject areas are using ICT more or less as teaching aid. Percentage is higher in Science faculty.

4. Teachers with less number of year experience are forming a major part in teaching using ICT where as more experienced teachers showing less interest in using ICT.

5. Due to Covid Pandemic 32 % of teachers using the ICT in education since last two years. It means it is latest concept and as the time is being passed more and more teachers are adapting this trend. There are about 21% of teachers which have started using ICT since last 6 months only.

6. Analysis shows that in online Teaching most famous Online Platforms are Google Meet (54%) and Zoom (29%). Rest is others. The main reasons behind their popularity are their easy to use interface and less bandwidth consumption as well as their compatibility with every hardware and operation system platform.

7. Most of the teachers (67%) use all kinds of methods Like Text, Audio, Video, PPTs, for preparing and delivering contents to their students. They do not depend on a single method. 13 % teachers teach with the help of PowerPoint Presentations. Al others uses one or other methods for teaching purpose according to their comfort. There are few teachers which are talking the help of textual information, sending notes to students.

8. 60 % of teachers have 25 students on an average basis in their lectures. Rest is teaching even below this. This shows that less number of student participate in online classes. There may be several reasons behind this. Lack of interest, fear, unavailability of resources like computer, mobile phones, internet etc.

9. Analysis shows that only 43% of teachers are fully equipped with all kind of resources. While rest are either partially, a little or don't have such resources which is also a big issue.

10. Data also shows that Percentage of teacher who is experts in using these technologies is very little (30%). Lack of interest, lack of proper training, fear of being failure, or event lack of proper resources may also be the reason.

11. Study has also revealed that a sufficient amount of teachers are facing physical health issues like neck pain, back pain, eye strain, headache etc.

12. Using these technologies is also affecting mental health of teachers like sleeping disorder, anxiety, loss of memory, unhappy mood, change in behavior etc.

13. In Online Teaching Teachers have to spend maximum time for preparation of content in the form of PowerPoint Presentations, recording and editing videos, preparing quizzes taking assignments through online mode. This has a great impact on their family life. They cannot give proper time to their family and kids.

14. Teachers are themselves not satisfied with this method of teaching. Low bandwidth from any of the side, lack of interest from student side, less control as compared to class room teaching and many more factors are there reducing the satisfaction level of teachers.

Conclusion Although, ICT has proven to be a most effective tool in today's era, yet there are many challenges, Educators and teachers are facing which makes it difficult to implement and utilize its potential to the maximum. We observed that lack of proper training and environment, adverse effects of using ICT tools on physical and mental health, lack of willingness due to fear of failure, shortage of resources, limited knowledge about these technologies, lowest degree of control over students and time management are some of the major reasons behind this. We strongly recommend that proper seminar session must be organized by institutions to educate teachers about the uses and benefits, efforts must be made by institutions to provide proper resources and facilities to them, to give them proper training, appointing ICT expert professionals to assist them in content development until they become experts, lower their burden to relax them physically and mentally.

References

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