



# INFORMATION TECHNOLOGY A KEY PLAYER OR NOT FOR FACULTIES IN ONLINE TEACHING

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**Abstract:** The demand for Information technology increased during covid-19 pandemic. Every small and big businesses were shut physically due to covid-19 restrictions which led to a concept of work from home means working virtually. As everything was shut down even the schools and colleges, so the educational institutions also took the decision of teaching online. The teachers/faculties were not very much familiar with online teaching as it was not a part of their regular teaching before the pandemic. The purpose of this paper is to study the opinion or views of teachers/faculties regarding the online teaching, whether it is the best way of teaching or not and are they comfortable to completely go for online teaching in future. This paper will also focus on the difficulties faced by the faculties in online teaching and also what impact does online teaching has on students.

**Index Terms - Information Technology, online teaching, faculties, technical challenges**

## I. INTRODUCTION

The advent of online teaching has brought about a seismic shift in the landscape of education, with Information Technology (IT) emerging as a critical enabler of this transformation. In the wake of the COVID-19 pandemic, the importance of IT in facilitating remote learning has become even more pronounced, as educators and students alike have been forced to adapt to a virtual learning environment. In this context, the question of whether IT is truly a key player in online teaching for faculties remains a topic of intense interest and debate.

On the one hand, proponents of IT argue that technology has revolutionized the way in which faculties teach, enabling them to engage with students more effectively, provide more personalized instruction, and deliver content in a more interactive and engaging manner. On the other hand, critics of IT point to the challenges associated with its use, such as the need for specialized training, the potential for technical glitches and interruptions, and the risk of students becoming disengaged or distracted.

Against this backdrop, this research paper seeks to examine the role of IT in online teaching and whether it truly serves as a key player for faculties. To achieve this objective, the paper will draw on a range of existing literature and empirical data, examining the benefits and challenges associated with the use of IT in online teaching, as well as the role it plays in enhancing the overall learning experience for students.

## I. OBJECTIVE OF RESEARCH

- To study the views and opinions of faculties for both technical and non-technical courses towards online teaching and traditional teaching.
- To find which mode of teaching is more convenient to faculties for both technical and non-technical courses.
- To find out the difficulties faced by faculties for teaching technical and non-technical courses.

## II. SCOPE OF RESEARCH

In this research, we essayed to gather better insights about perception towards online teaching and classroom teaching from the from the faculties of different colleges teaching to undergraduate and post-graduate students. By incorporating the outcomes, we tried to highlight the preferences of faculties for teaching technical and non-technical courses in online or classroom form. Both exploratory and descriptive research questions were incorporated into our study.

In this study, faculties from different colleges/university were surveyed having technical or non-technical educational background. The only instrument used in this survey was a questionnaire.

Respondents were not specifically selected based on educational background or any specific college or university.

## III. RESEARCH METHODOLOGY

This study used both snowball and convenience sampling methods. Because the questionnaire was distributed online, a random sampling method was used. A link to the survey was shared with faculties. Respondents were not selected according to any special criteria.

### 3.1 Population and Sample

Survey respondents came from same occupation in India, including only faculties of different colleges/universities.

### 3.2 Data and Sources of Data

A questionnaire completed in Google form was chosen as the research tool. The questionnaire included different question blocks. The questions were in MCQ format and check boxes. Ideas for some of the questions were taken from taken from the previous research papers.

Online distribution of the questionnaire and completion of the data collection process took 15 days. The sample size of the study was 80 respondents.

### 3.3 Theoretical framework

#### 1. Challenges Of Online Teaching in India: A Qualitative Approach

**Asha Latha Mathew, Nihidha Srinivassin, Dr. S. Sasikala, Lavanya G, Dr. S. Karunanidhi.**

The Covid - 19 Pandemic has taken a toll on various sectors. The education sector has undergone a 360-degree shift wherein education was shifted to online platforms. The online teaching process is a much-habituated concept in developed countries; however, it is newfangled in India. Though the evolution to online teaching entailed a smooth transition, a year later, the niceties of online teaching seem to be taking a toll on facilitators and students. The trials faced by teachers and perceived changes in behavior among students are to be explored to initiate steps to ensure a comfortable learning space. With this intention in mind, a semi-structured interview schedule was prepared considering the theory of change and telephonic interviews were conducted among 54 teachers from schools and colleges. The results are discussed in light of challenges in online learning, concerns regarding students, how to improve online teaching, and the training needs to be addressed among students.

#### 2. Factors influencing faculty satisfaction with online teaching and learning in higher education.

**Doris U. Bolliger and Oksana Wasili.**

Faculty satisfaction is considered an important factor of quality in online courses. A study was conducted to identify and confirm factors affecting the satisfaction of online faculty at a small research university, and to develop and validate an instrument that can be used to measure perceived faculty satisfaction in the context of the online learning environment. The online faculty satisfaction survey (OFSS) was developed and administered to all instructors who had taught an online course in fall 2007 or spring 2008 at a small research university in the USA. One hundred and two individuals completed the web-based questionnaire. Results confirm that three factors affect satisfaction of faculty in the online environment: student related, instructor-related, and institution-related factors

#### 3. Teaching Challenges and Strategies of Malaysian Educators in Online Teaching during COVID-19 Pandemic.

**Umi Kalsom Masrom, Mardiana Idris, Zailani Josuh.**

This research aimed to design a model and test confirmatory factor analysis to better explain the effects of teachers' challenges on teaching strategies during online teaching and learning. The results found significant relationship between technological challenges and content challenges and teaching strategies. However, no significant relationship was found between pedagogical challenges and strategies. Finally, this study reported that there is a significant effect of teaching challenges on teaching strategies.

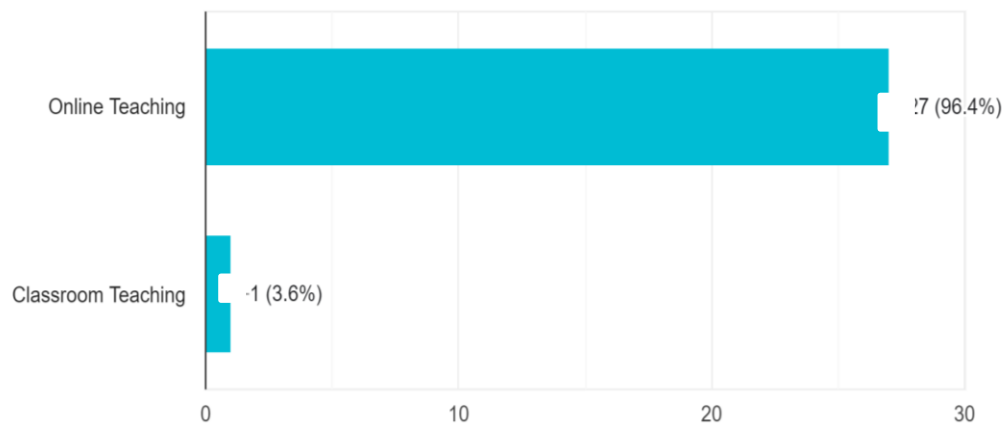
### 3.4 Limitations of the Research Study:

One of the major limitations is the sample size of 80 respondents. A much larger sample size would give more reliable results. This paper is only limited to know the views and opinions of faculties for both technical and non-technical courses towards online teaching and classroom teaching and to find the difficulties faced by faculties in online teaching and also to find which form of teaching do the faculties prefer to teach in future for both technical and non-technical courses

### 3.5 Statistical tools

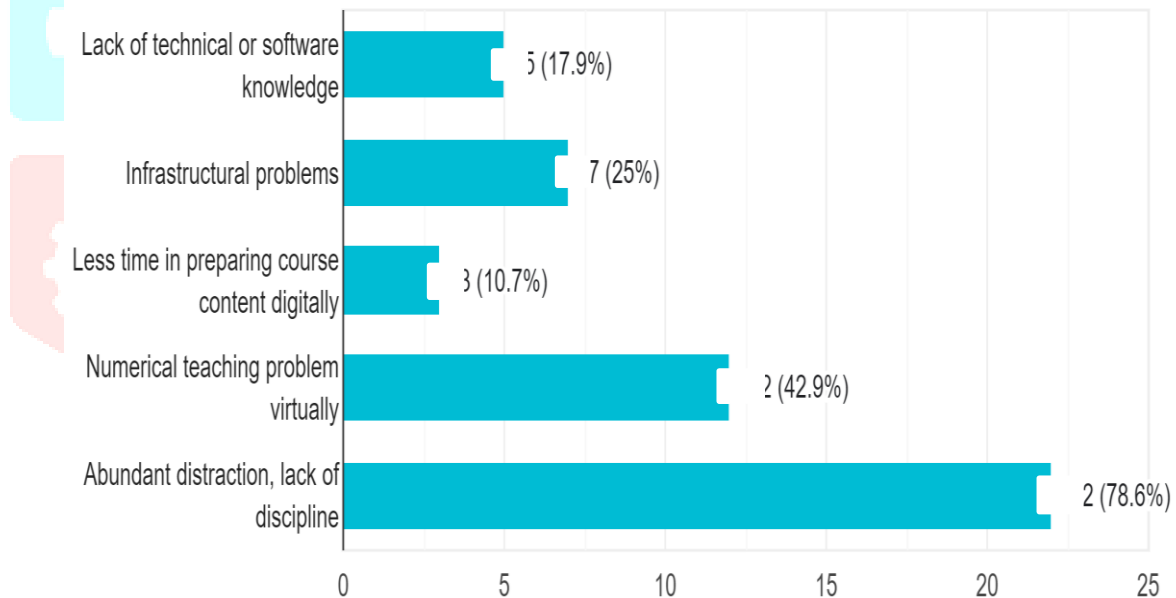
Data is formed on the basis of questioner circulated, and the data is analyzed based on the faculty preferences for teaching and in which form more difficulties are faced.

1. In which form of teaching more difficulties are faced?



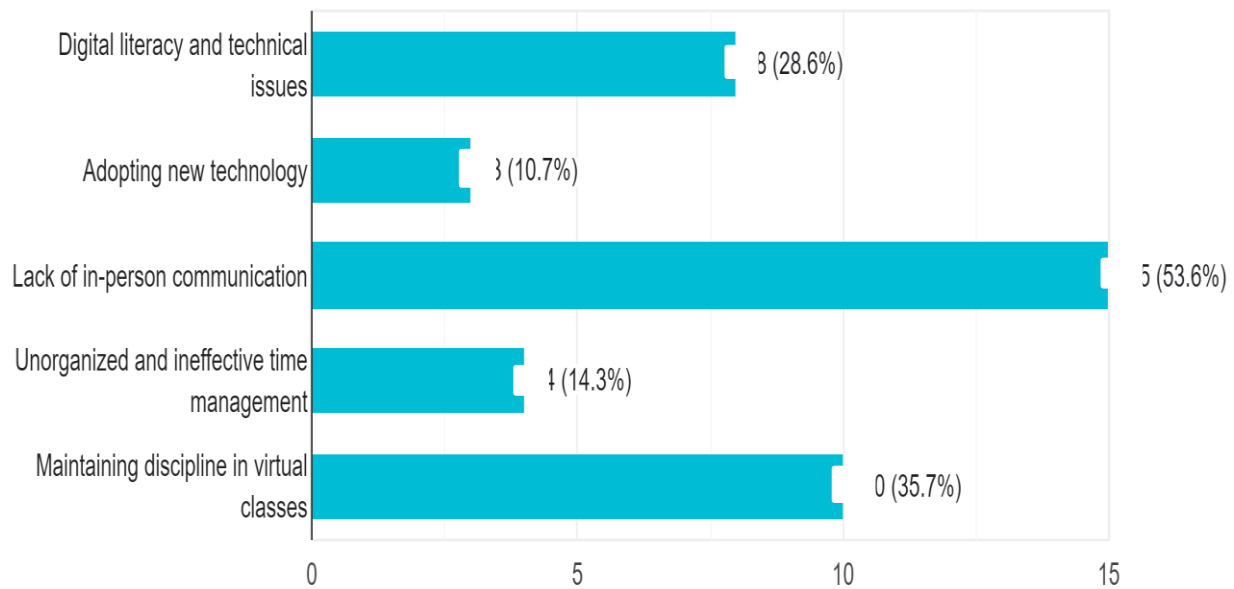
The above bar graph shows that majority of faculties face difficulties in online Teaching.

2. What challenges do you face while teaching online technical courses?



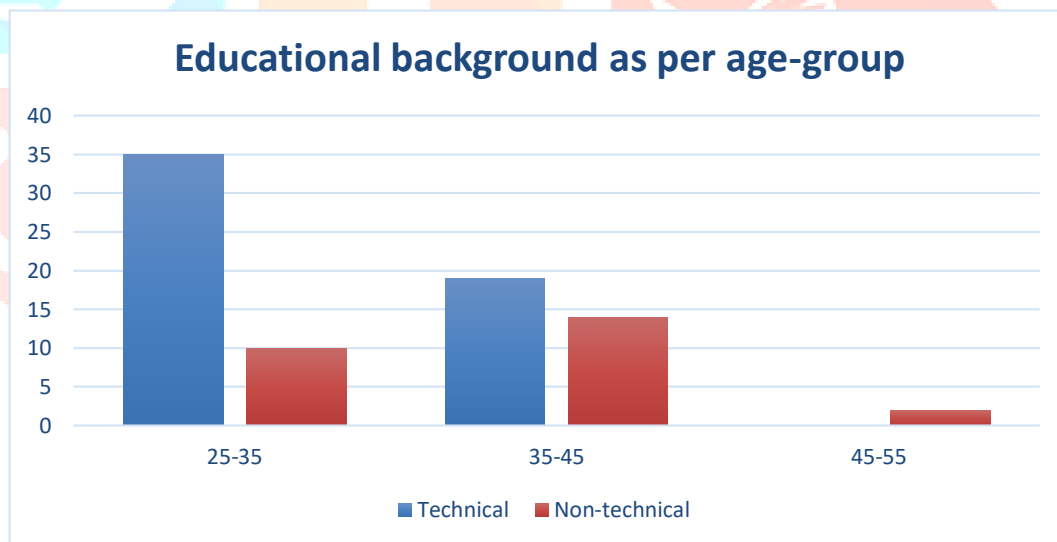
The most difficulty faced by the majority of faculties in teaching online technical courses is abundant distraction, lack of discipline and leading it with numerical problem teaching virtually.

3. What challenges do you face while teaching online Non-Technical courses?



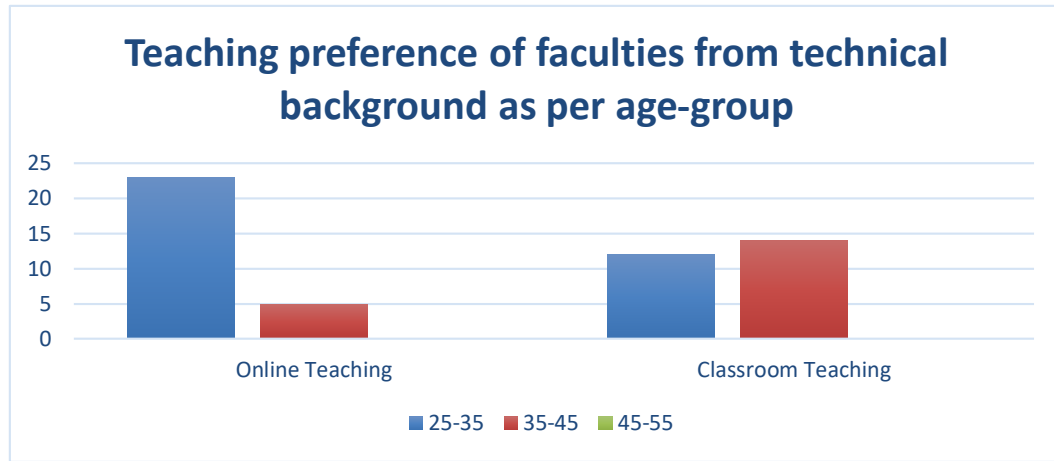
The above bar graph shows that lack of in-person communication is the major challenge of online teaching.

4. Educational background of faculties as per age-group.



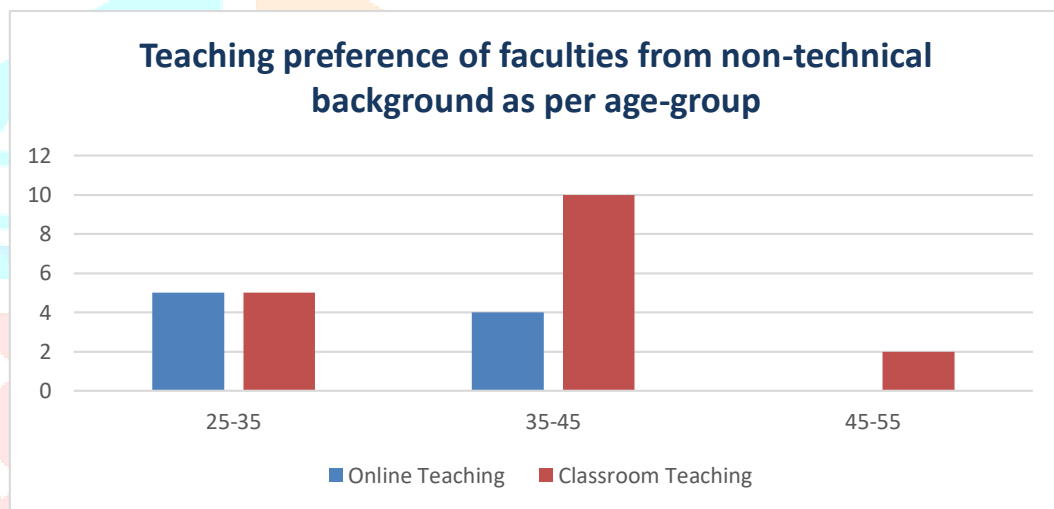
The above bar graph shows that majority of respondents belong to the age group of 25-35 and few belong to the age group of 35-45. Also the respondents are further segregated into technical and non-technical educational background. The blue color denotes that respondents belong to technical background and red color denotes that faculties belong to non-technical background.

## 5. Teaching preferences of faculties as per age-group from technical background



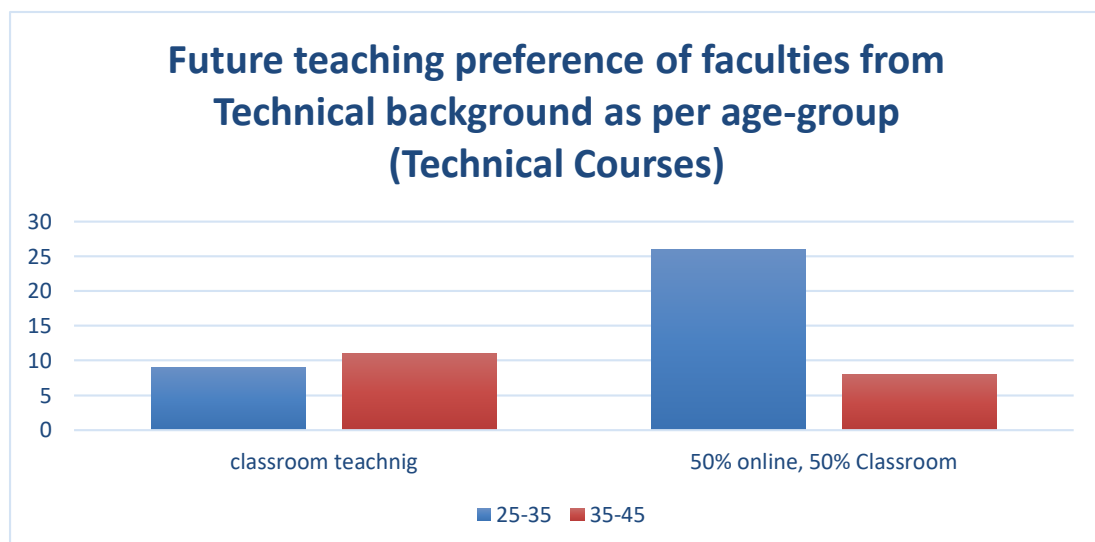
The above bar graph shows preferences of faculties from technical background as per the age-group. Majority of faculties belong to the age-group of 25-35 and they prefer online teaching form. There are some faculties who prefer classroom form of teaching who belong to age-group of 25-35.

## 6. Teaching preferences of faculties from non-technical background as per age-group.



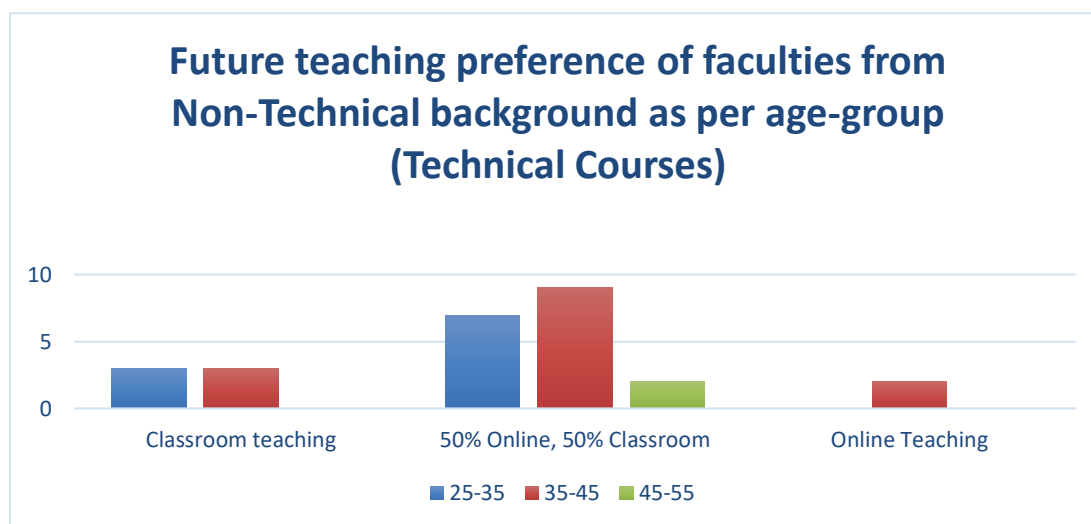
The above bar graph shows that faculties belonging to the age-group of 35-45 prefer classroom form of teaching and very few prefer for online form of teaching.

## 7. Future teaching preferences of faculties for technical courses from technical background as per age-group



The above bar shows future teaching preference of faculties for technical courses who belong from technical background. Majority of faculties belong to the age-group of 25-35 and they prefer 50% online and 50% classroom teaching form while few prefer for classroom form of teaching.

8. Future teaching preferences of faculties for technical courses from non-technical background as per age-group.



The above bar graph shows future preference of faculties for technical courses who belong from non-technical background. Majority of faculties belonging to the age-group of 35-45 prefer 50% online and 50% classroom form of teaching and also some of the faculties belonging to the age-group of 25-35 prefer for 50% online and 50% classroom form of teaching and very few prefer for classroom form of teaching.

#### IV. RESULTS AND DISCUSSION

Based on the questionnaire the findings of the research paper are such that the maximum faculties preferred classroom teaching more as compared to online teaching. Also most difficulties are faced in online teaching instead of classroom teaching as per the faculties responses. Through the questionnaire we also found out the difficulties faced by the faculties in online teaching for technical and non-technical courses, for technical courses the major difficulty faced by the faculties was teaching numerical problems virtually and for non-technical courses the difficulty was lack of in-person communication. Faculties preferred more for 50% online and 50% classroom for teaching technical courses and also opted for classroom teaching. For non-technical courses also the faculties preferred for 50% online and 50% classroom teaching in future. The impact of online teaching on education industry has a mixed result both positive and negative impact. Faculties views on student performance and participation in online and in-person class is such that the performance of students in online class is generally lower than in-person class. As per the questionnaire the faculties say that the affects of online teaching on students learning and engagement depends on the individual student and the specific course, and some also say that it has a mixed impact on student learning and engagement with some student benefiting and some student struggling. Based on the findings it can be said that faculties prefer classroom rather than online teaching. Online teaching do has advantages like it is time saving, can be accessed from anywhere and anytime and etc but it also has disadvantages which makes the faculties to turn towards classroom teaching. The findings show that the faculties would like to teach 50% online and 50% classroom teaching form in future for non-technical courses whereas for technical courses some faculties would like to go with classroom teaching while some prefer to go with 50% online and 50% classroom teaching in future, there is a little difference between the selection of both the forms. The findings also showcase the difficulties faced by the faculties for technical courses in online teaching as abundant distraction and lack of discipline and teaching numerical problem virtually, teaching technical courses in online form is not that easy as compared to non-technical courses as the technical courses consist of numericals and practicals where explaining and teaching these things virtually is little difficult. Therefore the faculties prefer either classroom teaching or 50% online and 50% classroom teaching for technical courses. The respondents of this questionnaire belong to two age groups which is 25-35 and 35-45 and majority of faculties having a teaching experience of more than 5 years and some faculties has an online teaching experience of maximum 3 years. Also the faculties possess some qualities and majorly highlighted are time management and presentation skills. Further analysis shows that majority of faculties belong to the age-group of 25-35 and are from technical background. Faculties with technical background belonging to the age group of 25-35 prefer online form of teaching the most and few prefer for classroom teaching while faculties belonging to the age-group of 35-45 and having technical background prefer classroom teaching. While faculties of same age-group belonging to non-technical background prefer classroom form of teaching and few prefer for online form of teaching. Faculties belonging to age-group of 25-35 prefer 50% online and 50% classroom form of teaching while few prefer for classroom form of teaching to teach technical courses in future. And faculties belonging to age-group of 35-45 prefer classroom form of teaching ad few prefer 50% online and 50% classroom form for teaching technical courses in future. Also majority of faculties belonging to both 25-35 and 35-45 age group and having non-technical background prefer online form of teaching for non-technical courses in future, and very few prefer for 50% online and 50% classroom form of teaching.



## V. CONCLUSION

Through this paper it has been found that Faculties prefer teaching technical courses in 50% online and 50% classroom format in future and for non-technical courses the faculties would prefer to teach in online form. It is also found that even if technology plays a vital role in online teaching, faculties do face difficulties while teaching technical courses in online form. It is also found that faculties belonging to the age-group of 25-35 prefer online form of teaching but they do also prefer 50% online and 50% classroom form of teaching for technical courses while faculties belonging to the age group of 35-45 prefer classroom and 50% online and 50% classroom form of teaching for technical courses in future. Also majority of faculties belonging to age group of 25-35 and 35-45 having technical or non-technical background prefer online form of teaching for non-technical courses.

## Recommendation:

- There is a need to find solutions to the difficulties faced by faculties in online teaching for technical courses.
- Faculties should be given technical knowledge or training to overcome/face the difficulties faced in online teaching.

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