

# Assessment of Perception of Teachers Towards Online Teaching and Learning During Covid-19 Pandemic

Nagapati Prabhakar Bhat<sup>1</sup>, Prabhakar Adake<sup>1</sup>, Mahalaxmi S Petimani<sup>2</sup>, P Preethishree<sup>3</sup>

## ABSTRACT

**Introduction:** From the beginning of the year 2020 world is facing the pandemic due to Covid -19 infection. During this period, lot of challenges are being arisen and been faced in all the sectors. Education is one among these which has been hit badly due to the pandemic. Higher educational institutions and universities with a cause for continuing the educational activities invariably depend on the alternative modes of teaching and learning methods and most adapted is the online platform. Online teaching and learning activities have gained the most attention worldwide during the period of lockdown due to pandemic. **Materials and Methods :** This is a questionnaire based cross sectional study. This study included teachers of medical, dental, nursing and allied health courses teaching in various institutions across Karnataka, who give their consent to participate. A prevalidated structured questionnaire form (google form) assessing knowledge, attitude and challenges of teachers towards online teaching and assessment was shared via WhatsApp/ E-mail and the responses were collected, analyzed and interpreted. The sample size was estimated to be 184 and this study was conducted from July 2020 to December 2020. **Results:** 52.2% Female and 47.8% male participated in this study. 73.9% of staffs have engaged online class earlier before the lockdown. 92.4% suggested to continue teaching with online classes in this Covid-19 pandemic. 91.8% preferred laptop for online class and 89.7% preferred live online class with Power Point Presentation. 73.9% were used google meet as online platform. 82.6% opined 1-2 online class per day of 30-45 minutes each session. 86.4% felt conventional offline lectures are better than online classes. 73.4% expressed their difficulty in demonstrating the clinical skills during online class. **Conclusion:** From this study we can conclude that majority of teachers had earlier experience of taking online classes and suggested that they still have several obstacles, such as difficulty in teaching and assessment, time management and students motivation. In order to run e-learning entirely, then these obstacles should be solved first.

**KEY WORDS:** E-learning, Assessment of Perception, Covid-19 lockdown, Prevalidated Questionnaire.

## Introduction

World is facing the pandemic due to Covid-19 infection from the beginning of the year 2020. Several challenging situations have been faced in all the sectors during this period. Education is one among these which has been hit badly due to the pandemic.

Higher educational institutions and universities with a cause for continuing the educational activities invariably depend on the alternative modes of teaching and learning methods and most adapted is the online platform. Online teaching and learning activities have gained the most attention worldwide during the period of lockdown due to pandemic. With this development, many challenges have evolved like effectiveness of teaching, availability of internet, technical issues (from both the ends i.e. from teachers as well as students), effective learning and assessment tools, conduction of online theory and practical examinations, credibility of these examinations, availability of resource materials with students to be prepared for these assessment, usage

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Quick Response Code:



Website: [www.jmsh.ac.in](http://www.jmsh.ac.in)

Doi: 10.46347/jmsh.2021.v07i03.008

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of online institutional e-portals to provide e-resources for the students.<sup>[1]</sup> The United Nations (UN) and the WHO consider e-learning as an effective tool in addressing education needs.<sup>[2,3]</sup> Most of the universities and institutions are successful in adapting online platforms for teaching and assessment by framing proper guidelines and timely training of students as well as teachers on how to use various available and dependable online platforms. Multiple online platforms are available to conduct online teaching activities and are found to be user-friendly, authentic and genuine. Online teaching resulted in emergence of four themes which are the human connection (student-faculty and student-student), IT support, course design that is specific to e-learning and institutional infrastructure to support.<sup>[4]</sup> The Internet is playing major role in delivering information at lower cost than in face-to-face settings, thus providing more opportunities for learners to continue their education.<sup>[5]</sup> There is no second thought that the conventional classes provide an efficient way to transfer knowledge. The institutes tried to take the help of digital media in making the teaching easier and convenient for the students during the pandemic. With this type of model in mind, online classes were started in medical school teaching.<sup>[6]</sup> The challenges faced by the teachers and students in adopting to the new mode of teaching is the matter of concern.

Traditional classrooms teaching and assessment patterns are not possible in this current situation of covid-19 pandemic. Hence, adapting to new technologies to continue educational activities is of prime importance. Competency and training of the faculty to achieve success in the online education requires at most attention. The review of literature has shown various studies conducted to identify and assess perception and attitude of the teachers towards online teaching and assessment. The research gap is found when it comes to study the perception of the teachers towards the online education during Covid-19 pandemic in India, when online teaching and assessment has been emerged as the available option to continue learning. The present study was taken up to know the perception of teachers towards online teaching activities in our institution.

## Materials and Methods

This study included teachers of Medical, Dental, Nursing and Allied health science course in various institutions across Karnataka, who gave their consent to participate. Ethical clearance was obtained from

the Institutional Ethical Committee before starting the study (YEC-1/2020/043). Informed consent was taken from all the participants after describing the purpose of the study and the assurance to maintain the anonymity and confidentiality. A structured, prevalidated questionnaire form (using Google forms) was shared via WhatsApp or e-mail. The responses were then collected, analyzed and interpreted. The questionnaire had been finalized after discussion and validation from experts. There were 18 questions which assessed their Knowledge, Attitude and Challenges in online teaching and assessment. The data collection was done from July 2020 to December 2020. Snow ball sampling technique was followed in collecting the data. Statistical analysis was performed with IBM SPSS Version 23.0 for Windows. Results were expressed in the form of percentages and proportions.

## Results

Among 190 responses collected in this questionnaire-based study, six teachers did not give consent to participate (Figure 1). Hence, a total of 184 responses were considered. Of these, 52.2% were female and 47.8% were male (Figure 2). The age of participants ranged from 20 to 60 years. Maximum participants were found to be in the 30–40 year age group (Figure 3).

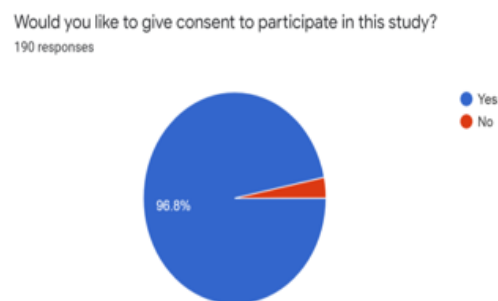


Figure 1:

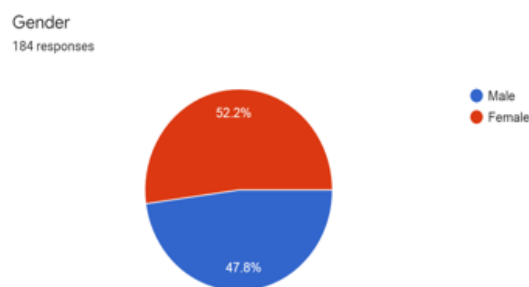


Figure 2:

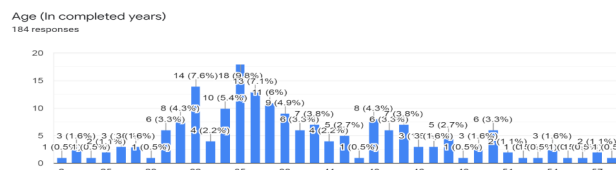


Figure 3:

Among 184 participants, 62.5% belonged to Medical College, 17.4% were from Nursing institutions, 13.6% were from Allied health sciences and the rest belonged to Dental College (Figure 4).

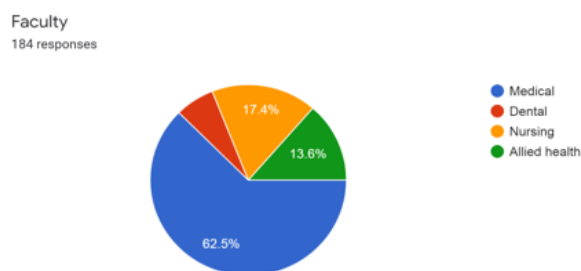


Figure 4:

73.9% of the study participants had used online platform for teaching, even before the pandemic began (Figure 5).

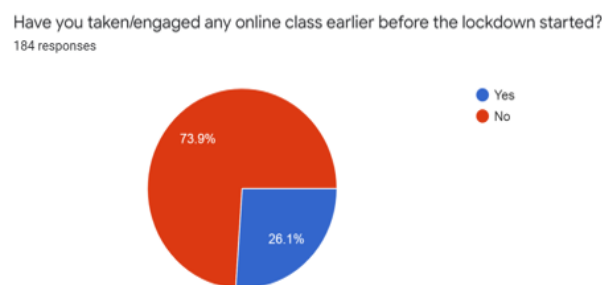


Figure 5:

92.4% of the participants were of the opinion that online teaching should be continued in this Covid-19 pandemic. 52.7% teachers suggested that students can do self directed learning during this period (Figure 6).

To conduct the online classes, 91.8% faculties preferred laptop, 31% preferred desktop and 25% preferred smart phone (Figure 7)

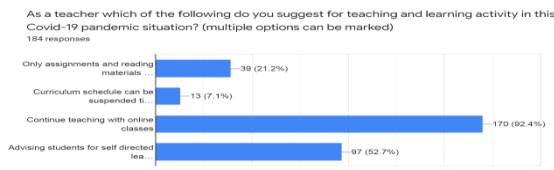


Figure 6:

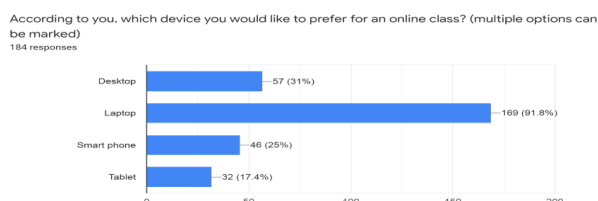


Figure 7:

Live online class with PowerPoint presentation was chosen by 89.7% participant where as 29.9% suggested live online class without PowerPoint Presentation (using Chalk /board or only voice) as described in Figure 8.

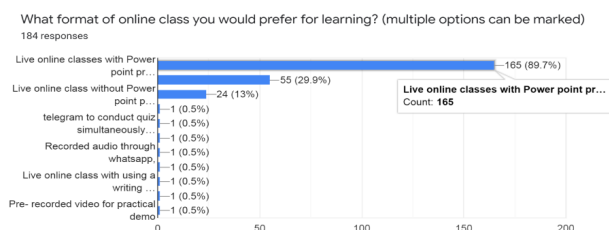


Figure 8:

73.9% teachers in our study used Google meet platform for online teaching (Figure 9 )

82.6% participants were of the opinion of conducting 1-2 online classes per day (Figure 10 )

73.9% participants felt that the online class should be of 30-45 minutes duration (Figure 11)

71.2% participants agreed to the option that 75-100% students were able to join the online class at right time (Figure 12)

In this study, 79.3% teachers opined that lack of eye contact with students to know their attention was the major challenge followed by connectivity

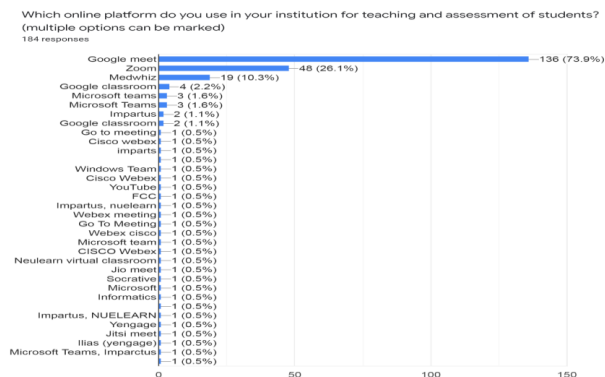


Figure 9:

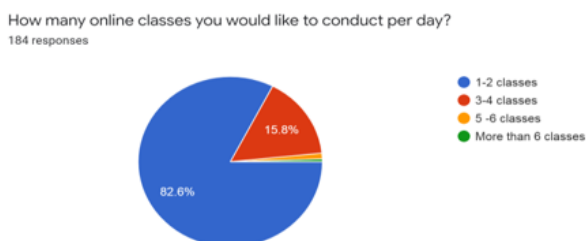


Figure 10:

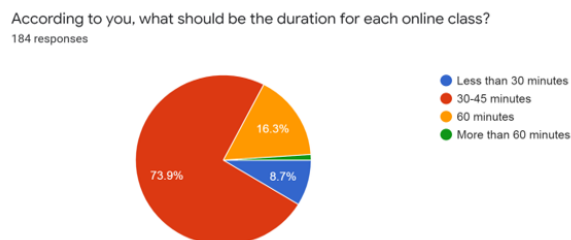


Figure 11:

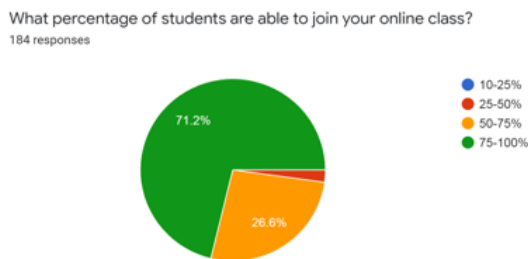


Figure 12:

issues (73.4%), interruption of class due to admitting students in between the class (44%) [Figure 13].

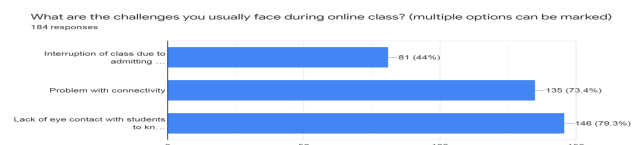


Figure 13:

86.4% teachers were in favor of conventional off-line lectures than online classes (Figure 14 )

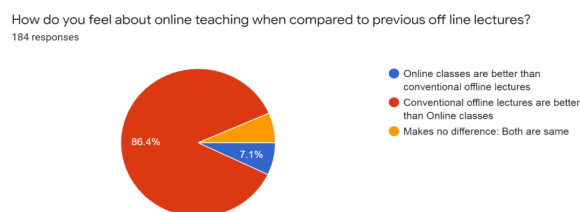


Figure 14:

81.5% teachers chose the option “Flexibility/can be taken anywhere” and 47.3% opted the option “safe & no fear of infection” (Figure 15).

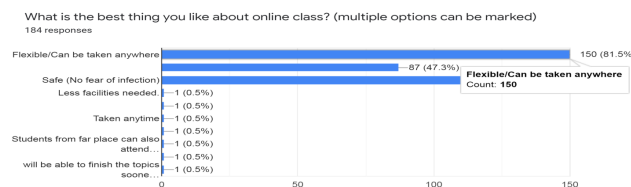


Figure 15:

73.4% teachers expressed their difficulty in demonstrating the clinical skills during online class and 60% opined that online classes are teacher centered and less of student interaction (Figure 16).

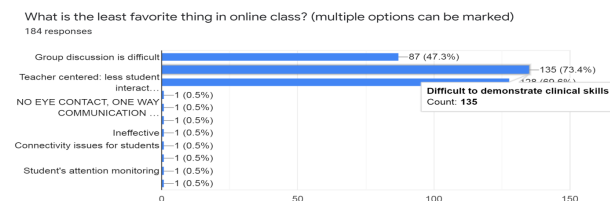


Figure 16:

Regarding the best way to evaluate/assess students in online platform, 40.2% teachers suggested the use of MCQ test by posting it in institutional forum activity website and 30.4% teachers opined the use of written exam with audio/visual monitoring. 15.2% favored open book exam and 14.1% opined to postpone the exam till pandemic ends (Figure 17).

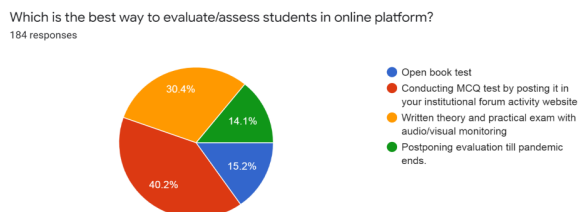


Figure 17:

47.8% of teachers disagreed to recommend online classes as a preferred teaching learning method in future (Figure 18)

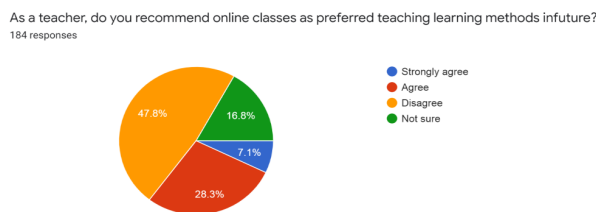


Figure 18:

47.3% teachers expressed their difficulty in recording attendance during online class as they were unable to track the “joining in” status and “left the meeting” status. 40.2% teachers recommended that attendance should be given only to those who attend full class (Figure 19)

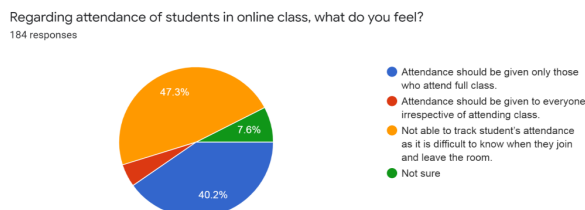


Figure 19:

73.9% teachers expressed their difficulty in conducting online practical class pertaining to clinical skills (Figure 20). Others mentioned different methods which can be followed during online mode (OSPE/OSCE, video demonstration etc).

cal skills (Figure 20). Others mentioned different methods which can be followed during online mode (OSPE/OSCE, video demonstration etc).



Figure 20:

51.6% participants were aware of Learning Management System (LMS) but most of them were not aware of its advantages (Figures 21 and 22).

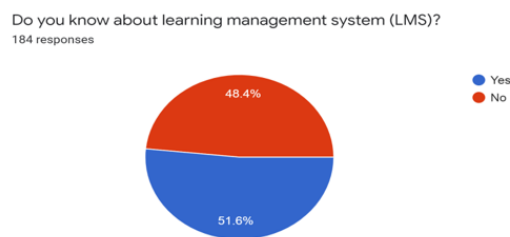


Figure 21:

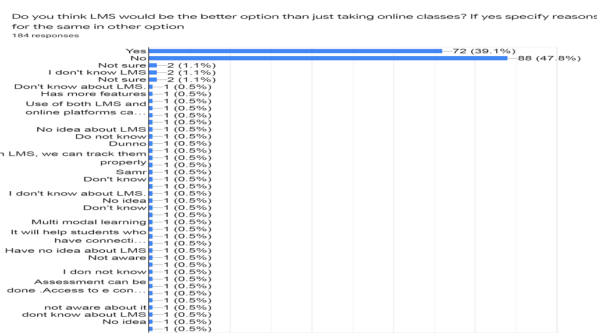


Figure 22:

## Discussion

Medical profession being a challenging one requires commitment and dedication from both teachers and students. Teacher is an important pillar of teaching and learning. Interest in the subject and teaching skills are essential for a teacher to reach

his/her students. Education of students during the lockdown due to ongoing pandemic disease is a considerable challenge for a teacher. Online teaching through various platforms is in place since the last decade around the world. However, it is now widely accepted and being followed by almost every teacher in view of teaching students as well as completing their syllabus.

Our study shows the prior experience of many teachers in taking online classes and an opinion of majority of the teachers to continue the online classes in this Covid-19 pandemic. A similar kind of study conducted in the Government and private universities and colleges of Uttarakhand, India, showed that the online education helped in strengthening and expanding the teacher's knowledge in the subject and technical skill as well. They also felt that online teaching mode had increased the working hours of a teacher due to time constraints in online teaching – a disadvantage.<sup>[7]</sup>

Majority of teachers in our study preferred (i) Laptop for taking online class, (ii) Live online class with PowerPoint Presentation. Most of them had used “Google-meet” as online platform. Opinion of 1-2 online classes/day of 30-45 minutes duration each was the highest chosen response. Majority of them felt conventional offline lectures are better than online classes and also that online classes are more teacher centered with less of student interaction. Most of the teachers expressed their difficulty in taking attendance and conducting online practical class pertaining to clinical skills. Teachers expressed mixed opinions about recommending online classes as a preferred teaching learning method in the future.

A study conducted at Punjab University, Chandigarh, India, observed that majority of teachers opined video recording of lecture for future reference is a necessity. More than 50% teachers were of the opinion that e-learning cannot replace the conventional offline methodology.<sup>[8]</sup> Bassfar et al reported that there is no significant difference in the teacher candidates' attitudes and self-efficacy toward e-learning.<sup>[9]</sup> The result is also supported by the findings in the study conducted by Zehir Topkaya and Yavuz<sup>[10]</sup> where they showed the importance of self-efficacy towards using e-learning technology in relation to different variables. A Study by Koc and Bakir observed the relationship between teachers' use of computer technologies and self-efficacy beliefs, attitudes and knowledge about

computer technologies, perceptions of computers as educational tools. They found a significant correlation between all these variables.<sup>[11]</sup> Similarly, a study conducted by Tuparova D et al., showed the positive attitude of teachers towards using computers and Internet in their work.<sup>[12]</sup>

The strength of our study was the teachers who participated in huge numbers and gave us a good sample size.

### Limitations of the study

Limitations of this study include: Short duration, some of the questions used were not open ended type. This might have lead to hindrance in exploring the actual assessment of perception of teachers towards online teaching and learning during Covid-19 Pandemic.

### Conclusion

Technological advancement in the field of medical sciences has reformed educational quality, promoting adaptive and collaborative learning by the students and the teachers. We are of the opinion that e-learning plays a powerful role in education, but it cannot be a replace the traditional face-to-face offline/classroom learning. A complete shift to digital learning is a bit tricky. However, we cannot ignore the benefits derived from e-learning. There is a need to understand the hardship that come in the way of online teaching & learning and take appropriate measures to overcome those in view of delivering a good quality education to students.

### Acknowledgment

We thank all the teachers who have participated in this study.

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**How to cite this article:** Bhat NP, Adake P, Petimani MS, Preethishree P. Assessment of Perception of Teachers Towards Online Teaching and Learning During Covid-19 Pandemic. *J Med Sci Health* 2021; 7(3):32-38

Date of submission: 08.06.2021

Date of review: 04.10.2021

Date of acceptance: 10.11.2021

Date of publication: 10.02.2022