



A STUDY ON MEDICAL STUDENTS PERCEPTION ON ONLINE CLASSES DURING THIS COVID PANDEMIC

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ABSTRACT Educational institutes across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Most educational institutes have shifted to online learning platforms to keep the academic activities going. However, the questions about the preparedness, designing and effectiveness of e-learning is still not clearly understood, particularly for a developing country like India, where the technical constraints like suitability of devices and bandwidth availability poses a serious challenge. In this study, we focus on understanding Medical Student's perception and preference towards the online learning through an online survey of 150 first mbbs students. We also explored the student's preferences for various attributes of online classes, which will be helpful to design effective online learning environment. The results indicated that majority of the respondents are ready to opt for online classes to manage the curriculum during this pandemic though their main preference was offline classes. Majority of the students preferred to use smart phone for online learning. We found that students prefer recorded classes with quiz at the end of each class to improve the effectiveness of learning. The students opined that flexibility and convenience of online classes makes it attractive option, whereas broadband connectivity issues in rural areas makes it a challenge for students to make use of online learning initiatives. However, in medical education system where many courses are practical oriented, shifting completely to online mode may not be completely possible. In the present study we are trying to find out the advantages and disadvantages of online classes in the students point of view.

KEYWORDS : Online classes, covid pandemic

INTRODUCTION:

Since the first case of coronavirus disease 2019 (COVID-19) in the UK,(1) the WHO has declared the COVID-19 outbreak as a global pandemic.(2) The nationwide lockdown restrictions to control the spread of disease and 'flatten the curve' have impacted all aspects of life;(3-5) inevitably, medical education has also been affected, with the halting of lectures, clinical postings and patient examinations.(6-7) Such measures have resulted in a sudden shift in teaching methods towards online teaching. Online teaching has played a key role in medical education over recent years,(8-10) demonstrated several benefits in enhancing student learning.(11) A recent systematic review suggested that offline teaching and online teaching are equivalent in terms of outcomes of examinations.(12) Key drawbacks have also been highlighted, including time constraints to implement effective online teaching.(8) The unprecedented COVID-19 pandemic has caused a sudden shift towards the exclusive adoption of online teaching, forming the primary source of medical education and enabling students to continue to learn. The COVID-19 pandemic has undoubtedly impacted the delivery of medical education with a sudden shift towards online teaching platforms. This study is done on 150 medical students of NRI Medical college, Sangivalasa, Visakhapatnam. The study extensively explored the benefits of and barriers to online teaching methods. Teaching sessions have covered key clinical conditions, case studies and examination questions via live-streamed tutorials through platforms such as Zoom, shown to have high levels of engagement (13,14).

Educational institutes across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Most educational institutes have shifted to online learning platforms to keep the academic activities going. However, the questions about the preparedness, designing and effectiveness of e-learning is still not clearly understood, particularly for a developing country like India, where the technical constraints like suitability of devices and bandwidth availability poses a serious challenge. In this study, we focus on understanding Medical Student's perception and preference towards the online learning through an online survey of 150 first mbbs students. We also explored the student's preferences for various attributes of online classes, which will be helpful to design effective online learning environment.(15)

The present study is aimed at finding the students perception towards

online learning and the advantages and disadvantages of it, and their suggestions to improve the outcome.

MATERIALS AND METHODS:

This study is done on 150 medical students of NRI Medical college, Sangivalasa, Visakhapatnam. The study extensively explored the benefits of and barriers to online teaching methods.

An online questionnaire was given which was filled by the students and the results have been analysed.

The students name was not mentioned in order to maintain the confidentiality.

The questionnaire had the following questions:

- 1) Sex/ age
- 2) Whether they were exposed to online classes previously Y/N
- 3) Device used for online classes.
- 4) Main source for data? Mobile/wifi
- 5) Whether they liked online classes over offline Y/N
- 6) Reasons for preferring online classes?
- 7) Reasons for preferring offline classes?
- 8) Can online classes replace the offline classes in future?
- 9) If Y/N give reasons.
- 10) Desired duration for online classes
- 11) Advantages of online classes
- 12) Disadvantages of online classes
- 13) Suggestions to improve outcome from online classes

The mbbs students were asked to fill this questionnaire and the results are analysed mainly under three main categories:

- 1) advantages of online classes
- 2) disadvantages of online classes
- 3) measures to improve outcome through the online classes

RESULTS:

Out of 150, 143 filled questionnaires were received and the results have been analysed. Out of the received responses 70% of the students preferred online classes over offline in order to combat with the present pandemic situation with a few suggestions to improve the outcome.

The results were mainly analysed under three parameters

- 1) advantages of online classes
- 2) disadvantages of online classes
- 3) measures to improve outcome through the online classes

Advantages of online classes:

Results of the study indicate that flexible schedule and convenience was ranked as the major benefits of the online learnings. Online education offers students the opportunity to study at their own pace and time of their convenience. Hence, flexibility and convenience are major drivers behind the demand for online education.

Social distancing during this pandemic wouldn't be possible in offline classes so they preferred online classes during such times.

Disadvantages:

The lack of practical skills remains a major disadvantage. Overall, students did not find online teaching to be engaging or enjoyable, with limited opportunities to ask questions. Furthermore, on average students were neutral when asked whether online teaching should be more interactive, but did not find it as effective as face-to-face teaching.

Various devices preferred by the respondents for attending online classes were Smartphone (57.98%), laptop (35.83%), tablet (4.89%) and desktop(0.65%) which clearly suggests that if any organization which wants to develop an application for the online learning, it has to ensure that the platform is compatible with smartphone. Mobile data pack was the source of internet for 82% of the respondents. So poor network in some remote areas has remained a drawback for some of the students. Slow connections can also make accessing course platforms and materials frustrating. Online classes will be successful only if internet facility is provided to all by making it equitable and affordable.

Suggestions and measures to improve outcome through the online classes

Recorded classes uploaded at the college website/YouTube was the most preferred (54.2%) class format by whereas 29.44% of the respondents preferred live classes that can be recorded, 16.92% opined in favour of live classes and 1.65% preferred only reading materials. Majority of the respondents preferring recorded classes and live classes that can be recorded since it gives them a flexibility in learning. Regarding the nature of reading materials majority of the respondents (84%) preferred video content supplemented with reading materials. More than half (53%) of the respondents preferred the instructor to teach using PowerPoint presentations.

Around 68% of the learners wanted online classes for twice in a week with 39% respondents preferring 45 min duration for each class. Around 58% of the respondents desired to spend only 2-3 hours in a day for online class and wanted a break of 15 min in between each class.

Various methods preferred for clarifying the queries were a platform with option for posting queries through live chat, email and WhatsApp.

We found that students prefer recorded classes with quiz at the end of each class to improve the effectiveness of learning.

DISCUSSION:

The primary purpose of this study was to examine the preference and perception of students regarding the online classes. Majority of the respondents preferred online classes to cope up with the curriculum due to lockdown in the wake of COVID-19 pandemic, whereas 30% of the respondents suggested suspending the classes or providing reading materials till the lockdown is lifted (15). We also identified the learners' perceptions of successful components and hindrances in online learning environment. Early work has provided some fundamental insights into the prospects of online learning (Cereijo et al., (1999); Hartley and Bendixen (2001); Hill (2002)) (16). The components identified by the participants were in line with previous research. One of the primary factors listed for determining the success of online classes was structure of online classes. This finding is reinforced by the studies of Dempsey and Van Eck (2002); Song et al.(2004); Allen (2011). In order to enhance the productivity of the learners' long duration classes should be avoided and sufficient break should be given between two consecutive classes. It will not only avoid cognitive load but also takes care of the physical strain caused due to prolonged

use of electronic gadgets. It was supported by Thompson's (2014) formula of work for 52 min and break for 17 (17). Technical proficiency of teachers and learners related to usage of computer and internet is a major factor determining the effectiveness of online classes. It was in line with the findings of Tsai and Lin (2004); (18) Convenience and flexibility were identified as the strength of online classes.

CONCLUSION:

With efforts to prevent the spread of the novel coronavirus, the contours of education system are changing with online education becoming the primary means of instruction. Universities and institutions are shifting to online platforms to catch up with the curriculum. It may be too early to say how students and teachers will cope with online learning as they figure out the constraints, reorient to address them but the perception and readiness of teachers and students is an important consideration which we have tried to document. The findings of this study indicated that the students have a positive attitude towards online classes in the wake of corona. The online learning was found to be advantageous as it provided flexibility and convenience for the learners. Students preferred wellstructured content with recorded videos uploaded in university websites. They also indicated the need for interactive sessions with quizzes and assignments at the end of each class to optimise the learning experience Overall the students feel that the online classes could be made more interactive in order to grab their attention. The online classes only remain a substitute in this pandemic time but cannot replace the offline classes as they are missing their practical skills.

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