

Evaluation of online session over class room teaching program – A questionnaire based survey

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Abstract

Background: Changes in trend from offline to online discussion among the post graduate resident doctors during the Covid-19 Pandemic.

Aim: To evaluate preference of various post graduate residents regarding online sessions over former classroom training.

Material and methods: A questionnaire based online survey was carried out on 88 health care workers including Dentists, Doctors and Nursing officers. The Questionnaire had demographic details and a set of 12 questions that evaluated online session over class room teaching program.

Results: Out of 88 participants, 44.3% were males and 55.7% were females. The mean age of the participants was 26.57 years. Among the various health care professionals’ attitudes and practices regarding the online classes as compared to traditional offline classroom-based teaching program are tabulated in Table 1.

Conclusion: Unplanned and rapid move to online learning with no training, insufficient bandwidth, and little preparation – will result in a poor user experience that is uncondusive to sustained growth

Keywords: Online teaching, classroom-based studies, internship and residency, post graduates, health care professionals, COVID-19.

Introduction

In just a few years, e-learning has become part of the mainstream in medical education. While e-learning means many things to many people, at its heart it is concerned with the educational uses of technology¹ COVID-19 lockdowns have deeply impacted teaching programs.² March 2020 marked the commencement of COVID-19 pandemic, an on-going global pandemic of coronavirus disease. With the pandemic and the introduction of quarantine measures, online platforms usage saw a significant global increase. The COVID-19 pandemic has changed education forever. The COVID-19 has resulted in schools shut all across the world. Globally, over 1.2 billion children are out of the classroom. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. While countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 19.1 crore in 186 countries affected by school closures due to the pandemic. With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post-pandemic, and how such a shift would impact the worldwide education market.

Online Education is a very flexible learning system that allows students to study solely via the internet on their own computer at home, or wherever they see fit. Basically, student-teacher face to face meetings is not required, allowing students to study anywhere in the world. This sums up the main difference between online and offline classes another key difference between online learning vs offline learning is the flexibility of the classes. A third difference between online learning vs offline learning is the student-teacher interaction. Key differences between online and offline teaching includes:

Online education has certain advantages such as location doesn't matter in Online education and it has flexible hours, it is time saving cause attenders don't have to travel, is cheaper, more convenient as well as classes can be recorded. But it has certain disadvantages such as isolation of attendees, there's no competition, no interpersonal skills development is possible and limited topics can be covered and the attendees must have self-discipline.

The advantages of offline education include individualised monitoring, structured & disciplined setting, face to face interactions, interpersonal skills development and competitive atmosphere. It also has its own disadvantages such as fixed location, fixed schedule, requirement of study materials, dependency on the teachers and transport & accommodation. Samiullah Dost et al. 2020 assessed the perceptions of medical students towards online teaching during the COVID-19 pandemic and found that greatest perceived benefits of online teaching platforms included their flexibility and the commonly perceived barriers to using online teaching platforms included family distraction and poor internet connection.³ According to a Systematic Review conducted by Leisi Pei and Hongbin Wu 2019, there was no evidence that offline learning works better ,and compared to offline learning, online learning had advantages to enhance undergraduates' knowledge and skills, therefore, can be considered as a potential method in undergraduate medical teaching.⁴ The present web based survey was planned to assess the attitude and practices of regarding the online session over class room teaching program among the health care professionals.

Materials and methodology

The present survey was conducted following the approval by Institutional ethical committee for the sole purpose of

evaluating the preferences of various medical health care professionals regarding the online sessions conducted during the Covid-19 Pandemic.

The study sample included health care professionals from various health institutions in India who had presented or at least been a part of some kind of online based teaching (either seminars or journal clubs or topic presentation) during COVID-19. Health care workers of all ages, those at professional level, at any institution/background were included in the final analysis. Informed consent was obtained from the participants before filling the online survey and study was conducted in a short time frame viz. 17th Dec 2020 to 10th May 2021. A pilot study was conducted earlier on 10 participants to check the validity and comprehensibility of the questionnaire. The results of the pilot study showed an acceptable clarity of the questionnaire and a few questions were edited. These 10 participants from Pilot Study were not included in the final analysis.

A Web-based survey form was created and the link was shared using social media platforms like WhatsApp, Instagram, Facebook, SMS and Email. The survey link was sent only to the participants who were confirmed to have undergone, presented or at least been a part of some kind of online based teaching. By participating in the survey, the participants provided their consent as well. The contents of First section of the survey form included background information for providing awareness to the participants, questions for obtaining demographic details of participants and obtaining informed consent as well.

Second section had questions for assessing the attitudes and behaviour while being part of online teaching sessions. The questionnaire consisted of a set of 12 multiple choice questions in English language, where the participants were asked to select the most relevant answer.

The participants were told the importance of answering the questions honestly and confidentially.

Results

A total of 88 health care professionals across India participated and completed the questionnaire-based survey for evaluating online session over class room teaching program. The survey responses carried out were downloaded onto google sheets and it was found 44.3% and 55.7% of participants were males and females respectively. The mean age of the participants was 26.57 years.

Out of 12 questions, first questions assured that participants had been a part of at least one online session during Covid-19 lockdown. The next three questions assessed the mental state of participants during online session as compared to online session in which 25.3% of participants were always in a more relaxed state and 6.9% were rarely in a relaxed state while presenting an online webinar compared to classroom presentation. 36.4 % strongly agreed having more strain in eyes during an online session compared to class room session whereas 1.1% strongly disagreed. 27.3% strongly agreed that long screen time led to loss of attention during the online session and none of the participants had strong degree of disagreement.

Next two set of questions assessed the level of interaction between the presenter and participants in which 3.4% of participants strongly agreed whereas 28.4% strongly disagreed that the communication between presenter and attendees was more effective in online session than class room sessions. In the next question 25% strongly agreed that interaction with teacher was limited during an online session and 3.4 % strongly disagreed.

Next three set of questions assessed the concentration and distraction of participants in the two settings and 11.4% strongly agreed that more concentration is required during

on-line session compared to offline session 10.2% strongly disagreed. In another question 2.3% participants strongly agreed to feeling that the purpose of seminar is better achieved through online session than class room teaching and 18.2% strongly disagreed. In next question 8% were rarely distracted to do some other work while attending an on-going online session whereas 16.1% were always distracted.

Last three set of questions evaluated the problems and productivities of two settings in which 3.4% strongly agreed that as a presenter online webinar was more productive for attendees and 11.4% strongly disagreed to this aspect. 5.7% always made excuses for loose internet connection or similar excuse during the online session as they were either not interested in attending it or not prepared to attend it whereas 18.2% rarely did this. 11.4% participants always switched off their camera intentionally to perform their personal work and 21.6% rarely did this. The results have been tabulated in Table 1.

Discussion

This study aimed to evaluate health care workers including Dentists, Doctors and Nursing officers' experiences in online session, which is considered a newly adopted approach in Covid-19 Lockdown era over class room teaching program. Distance e-learning sessions have emerged as a new method of teaching to maintain the continuity of medical education during the COVID-19 pandemic.

In this study, we explored student's opinions regarding their online sessions, their attitudes and challenges they faced during their new experience of learning, limitations, faculty staff performance, overall satisfaction as well as future perspectives.

As described by Howlett et al., "Electronic (e) or online learning can be defined as the use of electronic technology and media to deliver, support and enhance both learning

and teaching and involves communication between learners and teachers utilising online content".⁵

Traditional (i.e., face to face) teaching is considered an essential long-standing approach in medical education.⁶ As traditional approaches in medical education are facing increased challenges because of the increase in clinical demands and reduction in available time, a shift in traditional medical education practice to online, distance, or electronic learning has been noticed in the last few decades.^{7,8}

Online learning can provide students with "easier and more effective access to a wider variety and greater quantity of information". However, the transition from traditional to online learning is not without challenges. Increasing time constraints and demands are continually placed on students and educators alike, driving departments to find new ways of providing a more personalised, self-directed learning experience.⁹

Medical graduates of the twenty-first century are expected to 'hit the ground running', requiring not only a traditional clinical education but also one that is up-to-date with the latest technologies in order to ensure flexibility in a dynamic workplace. There has never been a greater need for educators, students and clinicians to continuously update their skills, to remain abreast of the changing healthcare environment and to remain 'digitally literate.'¹⁰ It has also been recognised that changes and developments in medical education are putting extra pressure on already overworked faculty.¹¹

The increasing use of 'inverted' or 'flipped classrooms' within medical education has led to discussion on the potential of Massive Open Online Courses (MOOCs) integration into medical training. The shift from lecture-based class to the use of Massive Open Online Courses (MOOCs) and the availability of open access resources pose a teaching challenge with maintaining tradition often

being a barrier in adopting online learning approaches by educators.¹²

Future Implications

Interactive models of learning have changed the future perspectives of education with e-learning and it becomes clear that the traditional models of education are increasingly unsuitable to the modern paradigm shift.

Conclusion

While some believe that the unplanned and rapid move to online learning – with no training, insufficient bandwidth, and little preparation – will result in a poor user experience that is un conducive to sustained growth, others believe that a new hybrid model of education will emerge, with significant benefits

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References

1. Ellaway R, Masters K. AMEE Guide 32: e-Learning in medical education Part 1: Learning, teaching and assessment. *Med Teach*. 2008 Jun;30(5):455-73
2. Motte-Signoret E, Labbé A, Benoist G, Linglart A, Gajdos V, Lapillonne A. Perception of medical education by learners and teachers during the COVID-19 pandemic: a cross-sectional survey of online teaching. *Med Educ Online*. 2021 Dec;26(1):1919042
3. Dost S, Hossain A, Shehab M, Abdelwahed A, Al-Nusair L. Perceptions of medical students towards online teaching during the COVID-19 pandemic: a national cross-sectional survey of 2721 UK medical students. *BMJ Open*. 2020 Nov 5;10(11):e042378
4. Pei L, Wu H. Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. *Med Educ Online*. 2019 Dec;24(1)
5. Howlett D, Vincent T, Gainsborough N, Fairclough J, Taylor N, Vincent R. Integration of a case-based online module into an undergraduate curriculum: what

is involved and what is effective? *e-Learning*. 2009;6(4):372–84

6. Albarrak A. Education in a technological world: Communicating current and emerging research and technological efforts [Internet]. 1st ed. Formatex Research Center; 2011
7. Moberg TF, Whitcomb ME. Educational technology to facilitate medical students' learning: background paper 2 of the medical school objectives project. *Acad Med*. 1999;74(10):1146–50
8. Shachar M, Neumann Y. Differences between traditional and distance education academic performances: a meta-analytic approach. *The International Review of Research in Open and Distributed Learning* [Internet]. 2003
9. Mooney G, Bligh J. Information technology in medical education: current and future applications. *Postgrad Med J*. 1997;73(865):701–4
10. Costello E, Corcoran MA, Barnett JS, Birkmeier MC, Cohn R, Ekmekci O, Falk NL, Harrod T, Herrmann D, Robinson S, Walker B. Information and communication technology to facilitate learning for students in the health professions: Current uses, gaps, and future directions. *Online learning: Official Journal of the Online Learning Consortium*. 2014;18
11. Ozuah P. Undergraduate medical education: thoughts on future challenges. *BMC Med Edu*. 2002;2(8):1–3
12. Polonetsky J, Tene, O. Who is reading whom now: privacy in education from books to MOOCs. *VAND. J. ENT. & TECH. L*. 2015

Legend Table

Table 1: Descriptive analysis of the survey

	Always	Sometimes	Often	Never	Rarely
1. Have you presented or participated in any online seminar or presentation during lockdown?	38.6	29.5	21.6	6.8	3.4
2. Are you in a more relaxed state while presenting an online webinar compared to classroom presentation?	25.3	42.5	18.4	6.9	6.9
8. While attending an on-going online session, how often are you distracted to do some other work?	16.1	36.8	34.5	4.6	8
9. During the on-going online session how often do you switch off your camera intentionally to perform your personal work?	11.4	33	21.6	11.4	21.6
5. Is the communication between presenter and attendees more effective in online session than class room sessions?	26.1	14.8	35.2	18.2	5.7
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
6. Do you feel the purpose of seminar is better achieved through online session than class room teaching?	18.2	37.5	34.1	6.8	2.3
7. As a presenter, do you think that online webinar is more productive for attendees?	11.4	30.7	28.4	23.9	3.4
3. Do you feel that more concentration is required during on-online session?	10.2	8	22.7	47.7	11.4
4. Do you feel more strain in eyes during an online session compared to class room session?	1.1	6.8	15.9	39.8	36.4
10. Do you feel long screen time lead to loss of attention during the online session?	0	3.4	22.7	46.6	27.3
11. Do you feel that your interaction with teacher is limited during an online session?	3.4	11.4	21.6	38.6	25
12. Did you ever make excuse for loose internet connection or similar excuse during the online session as you were either not interested in attending it or not prepared to attend it?	5.7	26.1	14.8	35.2	18.2