



Mode of Conduction of Early Clinical Exposure in Anatomy During Covid 19 Pandemic: MBBS Phase I Students Perspective

Dr. Suvarna Gulanikar^{*1}, Dr. G. A. Shroff², Dr. Smita Shinde³, Dr. Savita Kadam⁴

¹Assistant Professor, ^{2,4}Professor, ³Associate Professor,
Department of Anatomy, MGM MC Aurangabad, Maharashtra

***Corresponding Author:**

Dr. Suvarna Gulanikar

Assistant Professor, Department of Anatomy, MGM MC Aurangabad, Maharashtra

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Abstract

Background- For last few decades medical students in preclinical years were following traditional curriculum, where they learnt theoretical knowledge without contact with the patient in a clinical context. To improve the knowledge of phase I students with relevant clinical experience, ECE was implemented in CBME curriculum. In Covid period, due to inability of student's exposure to patients, we choose online platform to conduct ECE for MBBS Phase 1 students.

Material & Methods- During covid 19 lockdown period, Online ECE sessions were conducted by department of anatomy MGM mc Aurangabad for students of 1ST MBBS 2020-21 batch. Total 25 ECE sessions were conducted approximately 6 sessions per week with 60 to 90 min dedicated for each ECE Session. After completion of all ECE sessions, Online Feedback was taken from all the students participated, by the mode of Google form, and statistical analysis done.

Results- 94% students agreed/ strongly agreed for incorporation of ECE sessions with traditional teaching for active learning. 36.6.% students agreed and 52.8% strongly agreed about online mode of conduction of ECE. few of them insist for online conduction of ECE with small group discussion. Overall excellent rating is given by 58.5 % students and very good by 33.8% students.

Conclusions- With present study It was concluded that in COVID pandemic, implementation of online ECE sessions along with traditional teaching methods could able to provide the effective mode for the successful integration of clinical and basic sciences and develop self-directed learning in phase 1 MBBS students.

Keywords: CBME, online, ECE, Integration, self-directed learning, phase 1 MBBS, Feedback

Introduction

Early years of undergraduate education are critical for the academic success of medical students. Such success depends not only on the expanding knowledge learned during these years, but also on pre-conceived attitudes towards medicine and the role of the physician. (1). To improve the quality and understanding of basic sciences taught to 1st phase medical students, various methods are implemented in new curriculum based on CBME. Early clinical exposure is one of the methods, selected for the present study.

For last few decades medical students in preclinical years were following traditional curriculum, where they learnt theoretical knowledge without contact with the patient in a clinical context. To improve the knowledge of phase I students with relevant clinical experience, ECE was implemented in curriculum. ECE Act as bridge between pre-clinical disciplines and clinical disciplines. (2)

Early Clinical exposure (ECE) is defined as a teaching learning methodology, which fosters exposure of the medical students to the patients as early as the first year of medical college. (3) This

methodology helps the students to apply the basic knowledge gained in the subjects clinically. ECE also makes the topic more interesting so that the students get motivated and self-directed learning is turned on (4)

The key principles underlying early clinical exposure are providing a relevant clinical context in earlier years of MBBS. The clinical context for ECE includes case scenario, videos, actual Patient, simulated patient etc. The presence of actual patients in every session of ECE is not essential, but preferred. The purpose of ECE is not to prepone the conventional clinical teaching but to provide better understanding of basic sciences through a clinical context. (5)

Integration of basic science knowledge with clinical symptomology and coming to diagnosis and planning for investigations and treatment is the key of success. So, to make students aware of clinical scenario and enhancing thinking skill, early clinical exposure is effective tool.

Mode of conduction of early clinical exposure is crucial and needs refinement as experience grows. Best way to get perception for improvisation is by undergraduate feedback. During Covid pandemic, ECE sessions could not be conducted in hospital set up, so we decide to conduct in classroom setting by using online platform.

Material And Methods

During covid 19 lockdown for 9 months, online traditional teaching was conducted. But due to lack of direct and non-verbal communication, Amount of motivation was not adequate. So, to provide relevant clinical context, we implement online ECE sessions for those students. We design the appropriate paper based clinical cases, radiographs, photographs of

histology slides, embryology models or videos and uploaded them online and e platform was used as effective media for discussion.

Online ECE sessions were conducted by department of anatomy MGM mc Aurangabad for students of 1ST MBBS 2020-21 batch. Total 25 ECE sessions were conducted approximately 6 sessions per week with 60 to 90 min dedicated for each ECE Session. 12 ECE based on Gross Anatomy and 13 ECE based on Embryology and histology were conducted online in June and July 2021 during covid pandemic lockdown period.

Two faculties were allotted for active discussion for each ECE session. After giving case or histology slide or embryo model, various application-based questions are asked in sequential order. Role of Faculty is a facilitator, who guide students to reach the appropriate answer. These brainstorming sessions were unable students to enhance their active learning by analysis of cases, identification of organs and its clinical implication.

After completion of all ECE sessions, Online Feedback was taken from all the students participated, by the mode of Google form. It included their reviews on mode of conduction of ECE and other suggestions were invited. Feedback was taken in the questionnaire form. The validity of the questionnaire was assessed by experts of medical education and preventive medicine. Responses were recorded in the form of 5-point Likert scale.

- 1 = Strongly disagree. 2 = Disagree
- 3 = Neither agree nor disagree 4 = Agree
- 5 = Strongly agree

Table 1- Feedback questionnaire included following questions

1.	I am satisfied with depth of knowledge and guidance of the facilitator
2.	ECE should be incorporated in teaching learning method along with traditional teaching
3.	ECE helps me to become a lifelong learner

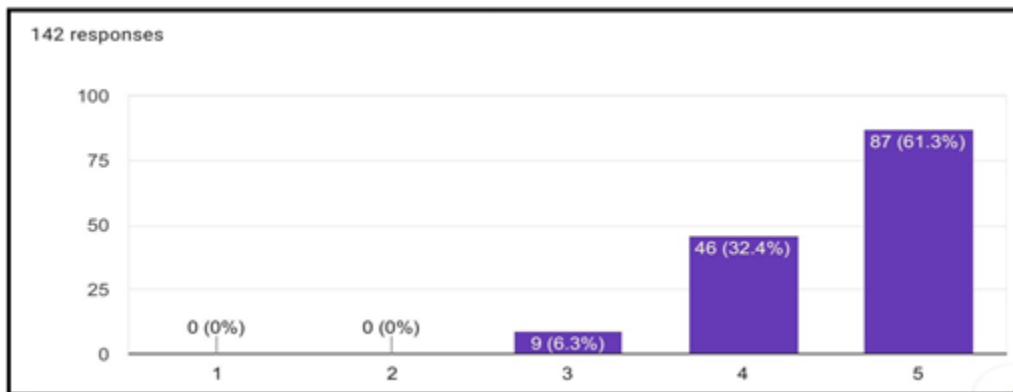
4.	ECE will help me to learn new challenges in medical field more effectively as self-directed learner.
5.	Applicability and relevance of ECE to anatomy curriculum
6.	Mode of conduction of ECE in anatomy [Online]
7.	ECE should be part of curriculum in basic sciences.
8.	Overall rating for ECE
9.	Any Suggestions

Feedback analysis will be done after clearance of scientific committee and Ethical committee approval from MGM Medical College, Aurangabad. The data is statistically analysed by using SPSS-PC Base 15 for window. Results will be defined and compared with other authors results.

Results-

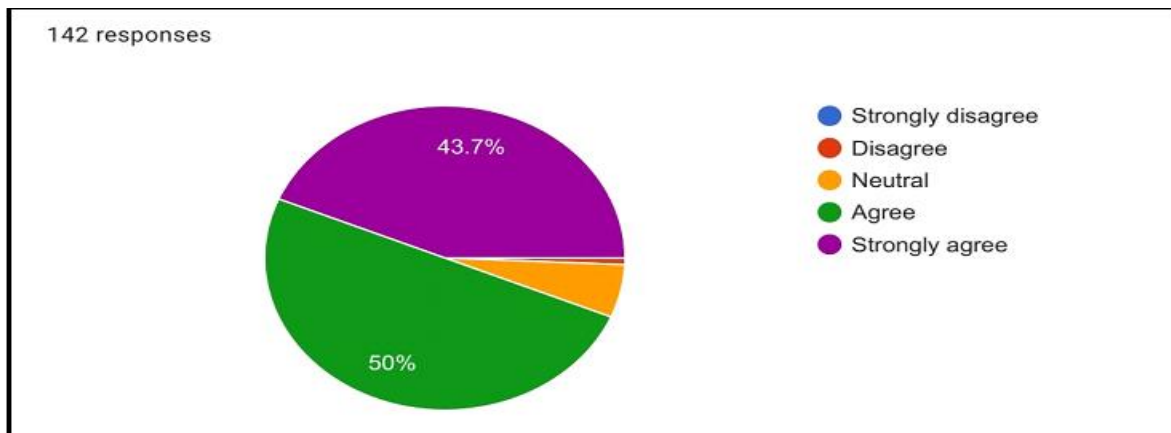
After completion of all ECE sessions students filled up feedback form They gave response on each question based on Likert scale [1 to 5], and lastly gave their opinion and suggestions on mode of conduction of ECE. total 142 students gave response in our study. following are the statistical analysis of feedback questionnaire.

Graph 1- I am satisfied with depth of knowledge and guidance of the facilitator



61.3 % students were strongly agreed for overall guidance of facilitator in ECE sessions.no one disagreed with it.

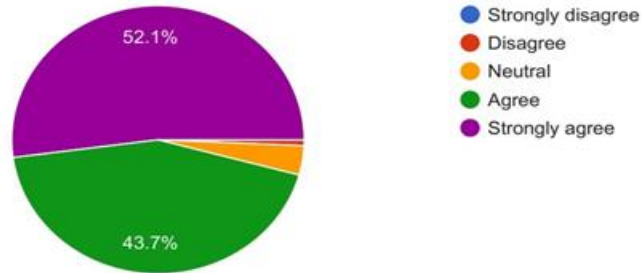
Graph 2- ECE should be incorporated in teaching learning method along with traditional teaching



It suggests almost 94% students agreed/ strongly agreed for incorporation of ECE sessions with traditional teaching for active learning.

Graph 3- ECE helps me to become a lifelong learner

142 responses

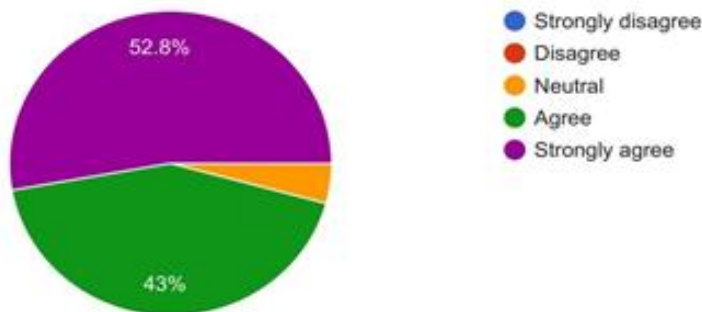


According to European commission [EC] lifelong learning is defined as “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective” [7]

In our study 95.8% students agreed that ECE is one of the best modes helps them to improve their personal and professional skills, acquire extra new knowledge and to become a lifelong learner.

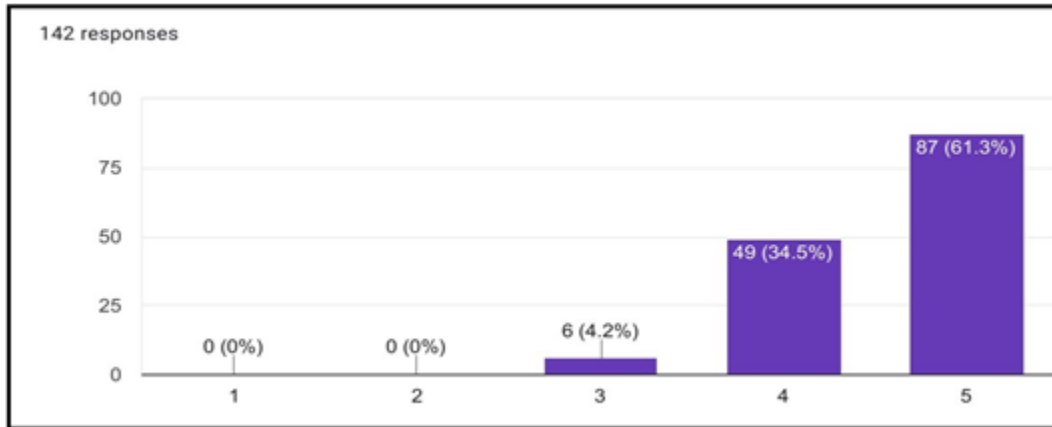
Graph 4 - ECE will help me to learn new challenges in medical field more effectively as self-directed learner

142 responses



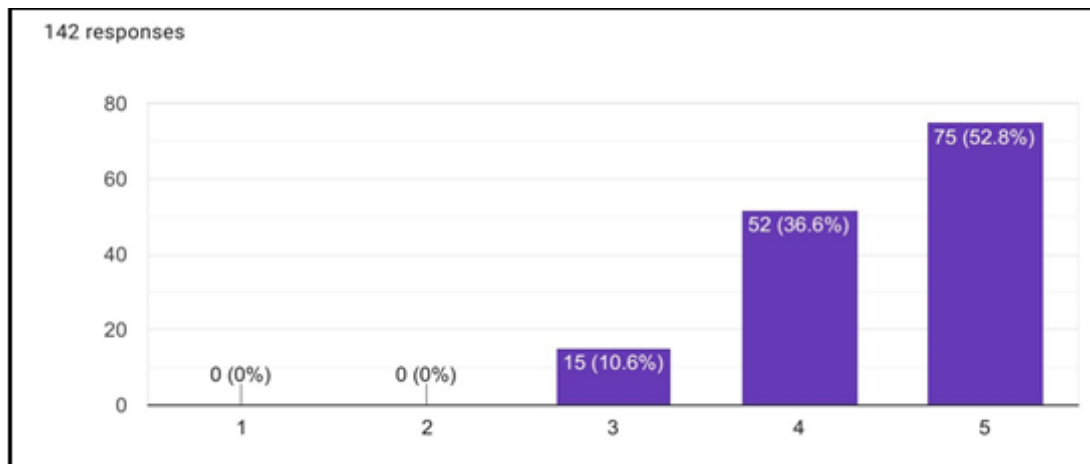
95.8% students accept that ECE helps them to become effective self-directed learner Self-Directed Learning (SDL) is a process in which individuals take initiative, with or without help of others in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes [8]. Above responses suggest that one of the effective modes for SDL is ECE.

Graph 5- Applicability and relevance of ECE to anatomy curriculum



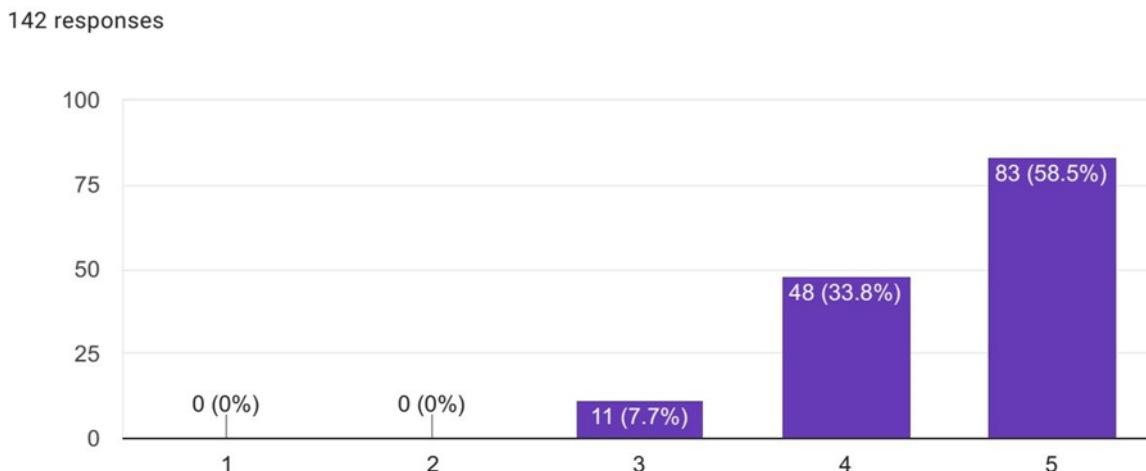
Almost 95 % students agreed relevance of ECE to anatomy curriculum. ECE sessions were conducted based on gross anatomy, histology as well as embryology. It provides understanding of interpretation and clinical application related to various subjects.

Graph 6 - Mode of conduction of ECE in Anatomye



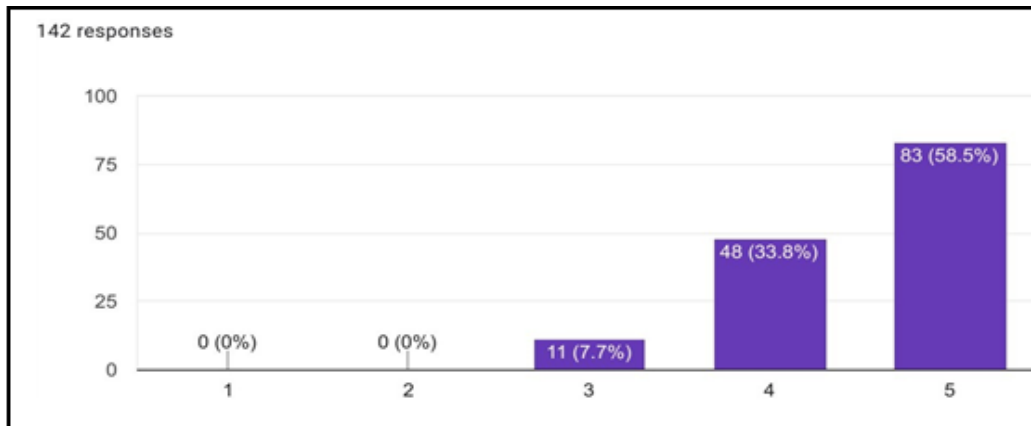
10.6% students were neutral, while 36.6.% agreed and 52.8% strongly agreed about online mode of conduction of ECE. it suggests students more in favour of classroom small group ECE sessions than online mode.

Graph 7.- ECE should be part of curriculum in basic sciences



Almost 92 % students were agreed for inclusion of ECE in curriculum of basic science. They found it useful for understanding of the topic well.

Graph 8- Overall rating of ECE



Overall excellent rating is given by 58.5 % students, very good by 33.8% students and good by 7.7 % students.

Q.9 - Any Suggestions-

it is the open-ended question. Most of the suggestions were positive and directed more towards ECE to be a part of curriculum.

Few of suggestions were really appreciable and welcomed for further improvisation of next ECE sessions and removal of loop holes of its conduction. the responses and suggestions are as given below.

1. The ECE is kind of fun and correlative learning. It helps to develop interest in the subject. It provides more in-depth information.
2. Students appreciated the teachers’ creative efforts for online conduction of ECE in covid pandemic for students benefit.
3. students found that ECE sessions are very helpful and develops more interest in learning.
4. Students suggest to make ECE compulsory part of anatomy curriculum.
5. They thought ECE conduction will help them a lot in their university exams and improves their practical knowledge too.
6. Few students highlight the drawbacks of online conduction of ECE that without prior understanding of concept of the topic, the students simply google the questions and try to answer, which may not be very helpful.
7. Some students emphasised for same ECE topic should be conducted in small groups with discussion with individual student.

8. few Students preferred classroom discussion of ECE over online platform, and requested to conduct offline once covid pandemic over.
9. Some insisted for integration of ECE topics with topics of syllabus for better understanding.

Discussion-

The key principle of conducting ECE sessions is to provide relevant clinical context in first phase of MBBS. ECE sessions can be taken in classroom , hospital or community settings.

Due to covid pandemic all the MBBS lectures were shifted to online mode. As the students could not be exposed to the real patients, we decided to conduct the ECE sessions online on e platform. The feedback towards ECE by online mode were taken on google platform and attitude of students towards ECE in online mode towards learning applied aspect of anatomy was studied.

In our study 94% students agreed for incorporation of ECE along with traditional teaching in anatomy curriculum. 52.1% strongly agree that ECE help them to become Lifelong learner. While 52.8% strongly agreed that ECE will make them an effective self-directed learner.89.4% students accept the ECE as one of the best modes of conduction in Anatomy. 58.5% students strongly agreed to include ECE in Anatomy curriculum. 61,3 % students were strongly satisfied about depth of knowledge and guidance of facilitator.

Overall excellent rating given by 58.5% students while very good rating given by 33.8% students.

Study by Shalini Kumar suggests that 97% students responded that ECE module was helpful. 66% responded that videos in the session have helped them to learn more. 29% students liked the discussion part of the session for better understanding of the topic. 89.2% found the ECE module in making the topic interesting and 49.2% students gave opinion that online sessions should be conducted along with classroom settings.[6]

Conclusion -In Covid pandemic period, students could not able to attend classes in college set up., so online teaching methods were adopted for continuation of teaching learning of the students includes didactic lectures, practical's along with ECE sessions. Students found the online ECE sessions during pandemic were very helpful and correlation with clinical cases make the topics more interesting.

It was concluded that in COVID pandemic, implementation of online ECE sessions parallel with traditional teaching methodologies could able to provide a effective mode of conduction for the successful integration of clinical and basic sciences and develop self directed learning skills in phase 1 MBBS students.

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