



Faculty's Forum

Undergraduate Dermatology: Interactive Teaching Strategies in a Lecture

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ABSTRACT

An evolving need for learner centric approach in teaching calls for innovative methods that can be utilised by teachers in the classroom and clinical setting. In this article, we have outlined few teaching strategies that can be used to make lectures more engaging and participative. These methods not only promote active learning but also increase attention, and encourage critical thinking in the audience.

Keywords: Teaching, Learning, Interactive, Skills, Flipped classroom

‘To teach is to learn twice’

Raimi R. New York Times

The Hippocrates oath states that the doctor should ‘gladly share such knowledge as is mine with those who are to follow’ which implies that doctors have a duty to teach, apart from healing others. In fact, the word doctor is derived from the Latin word ‘docere’ meaning ‘to teach’. Eventually, the term was used to refer to qualified medical professionals. This suggests that teaching is an inherent part of our profession. This is more so for doctors working in medical colleges involved in teaching undergraduate and postgraduate students.

A PARADIGM SHIFT IN UNDERGRADUATE CURRICULUM

The competency-based undergraduate curriculum introduced by the National Medical Commission emphasises the application of knowledge and a learner-centric approach. It defines global competencies that the learner is expected to achieve to qualify as an Indian Medical Graduate. These competencies focus on knowledge and skills needed in real life situations. The curriculum in dermatology comprises 18 topics with 73 competencies with various suggested teaching methods that include lectures, small group discussions, bedside clinics and demonstrations.^[1] Time allotted for lectures is 20 h, whereas integrated teaching and self-directed learning have been given 5 hours each.

ROLE OF LECTURES IN LEARNING

Lectures have been used as the primary mode of teaching as they are time and cost-effective and allow the teacher control over the content. At the same time, didactic lectures

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have been considered outdated as they do not often engage the learners well. Hence, all efforts should be made to make the lectures ‘active’ and incorporate interactive strategies.

In traditional lectures, the flow of information is unidirectional from teacher to students, whereas, in active learning, there is a bidirectional flow of ideas and content due to interaction with the audience. Active learning is an instructional approach, in which students actively participate in the learning process. Prince defines active learning as ‘any instruction method that engages students in the learning process. Active learning requires students to do meaningful learning activities and think about what they are doing.’^[2] Research has shown that active learning engages the students in the learning process, increases their attention span and motivates them to think critically.

Herein, we discuss a few techniques that can be used to make lectures more interactive [Figure 1].

PHENOMENA OF PRIMACY-RECENCY EFFECT

Primacy-recency effect is the observation that information presented at the beginning (primacy) and end (recency) of a lesson or learning episode is retained and recalled better than information presented in the middle.^[3] This primary fundamental can be utilised to structure the lecture, in which important content is delivered at the beginning of class, whereas the past 15 min can be used to summarise salient points.^[4] Since the attention nadirs in the middle, this time should have various engaging activities to maintain the interest.

STRATEGIES TO MAKE LECTURES INTERACTIVE

The beginning of the lecture is the time to generate interest and allow the audience to know what is in store for them in the next 1 hour. The learning objectives should be clearly stated at the start of the class. It is important to emphasise here that these objectives may differ according to the audience. An outline of the lecture or a road map can be presented and the same can be referred to later in the class. The process of introduction of lesson or topic by making an environment suitable for learning is called as ‘set induction’. It is a technique to get the students ready for learning by focusing their attention on what is to be learned. It provides a foundation for the topic and also helps in linking ‘known’ to unknown’. A variety of techniques can be used for ‘set induction’ and to provoke curiosity and interest in the topic:^[5]

- Narrating a real-life story or experience with patient (encounter with a patient with vitiligo can also help in understanding the psychological impact of disease)
- Share a clinical image or vignette (image of a patient with erythroderma when teaching about psoriasis or eczema)
- Pose a clinical problem and invite solutions (what do you think is the management of this patient with acne vulgaris?: helps to know what the students already understand about the topic).

The main purpose of the above techniques is to create interest in the audience. Hence, these should be utilised effectively and not overdone.

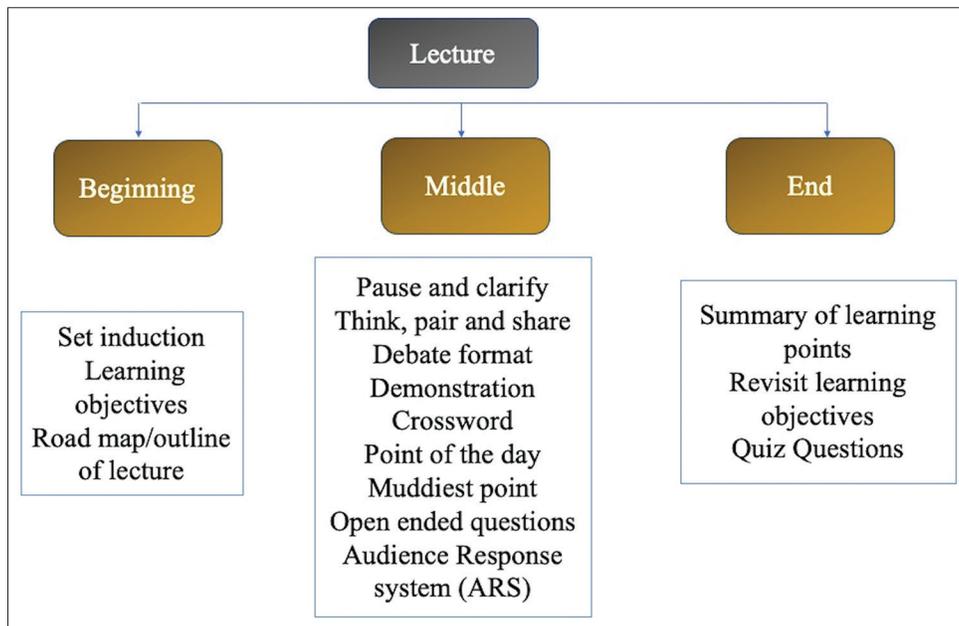


Figure 1: Techniques that can be used in the beginning, middle and end of lecture to make it more interactive.

The middle part of the lecture is the time to engage the learners in various tasks or activities. Strategies for making the middle part of lecture interactive are:^[6]

- **Pause and clarify:** The lecturer poses an open-ended question and pauses for 2 min to strike up a conversation about the understanding of a concept (e.g., Why do you think syphilis has been called the great mimicker? The teacher can then discuss the varying clinical presentation of syphilis)
- **Think-pair and share:** The teacher poses a question to the students who jot down the points and then turn to the neighbour to discuss and compare their answers. Students can be picked randomly and asked to share their answers (e.g., Clinical presentation of scabies in children compared to adults).
- **Debate format:** Putting up a clinical image and asking about the diagnosis. Students with one diagnosis form a group and share their points
- **Demonstration:** This can be used for the application of knowledge
- **Crossword:** A short crossword can be presented (e.g., the various named signs in psoriasis)
- **Point of the day:** Students can be asked to write one main point or learning of the session
- **Muddiest point:** Students can write about the difficult areas, in which they could not understand. These can be used as feedback for the teacher
- **Open ended questions:** Can be used to promote understanding. However, the question should be pre-planned
- **Audience response systems (ARS):** These are classroom polling techniques that allow the instructor to pose questions and gather students' responses during a lecture (e.g., kahoot). ARS technology consists of handheld devices (called clickers) connected to software which enables collection and display of student responses in the classroom through the teacher's computer.^[7] Teacher can display a multiple-choice question in the Powerpoint presentation and students can use their clicker devices (mobile phones) to select their answer. The system collects the responses and displays them in graphic format. These can be used for assessment, attendance, as well as feedback while preserving anonymity. Students' inability to maintain attention is a major cause of lecturalgia (painful lectures) and ARS is a great tool to deal with it.
- **Flipped classroom teaching:** 'Flipped class' model of teaching is also known as the 'inverted class model' and is a collaborative learning approach that redefines in-class and out-of-class tasks for students and teachers.^[8,9] In this model, the content is provided in advance to the students using various web-based learning resources. The students can review these at their own pace. The

teacher can allot one clinical image to a student or group of students using online modules. The student can present this in class and others can participate giving their views. The discussion is moderated by the teacher. Thus, classroom time can be utilised to practice higher order skills like critical thinking.^[10] Before choosing the flipped classroom method, the educator should first identify whether the topic chosen is well suited for this method. Typically, the method works well for lectures with low attendance and for topics that require mastery of cognitive and procedural skills.

The last 10–15 min of lecture can be used to summarise the learning points and revisit learning objectives. Few quiz questions can be displayed to check the understanding of the audience.

The strategies described above are helpful, however there are numerous challenges in implementation:

- Implementation of the above strategies is a problem due to non-availability of resources and lack of faculty development. Faculty development training and workshops should be carried out by the universities and regulatory bodies for implementation
- Teaching is an art and art needs practice. Rehearsal and practice are needed to refine the teaching skills. The teachers can imbibe these strategies into their teaching using these regularly
- Managing student behaviour in a large group can be an issue, especially when using these interactive strategies. Teachers should not take misbehaviours personally. Non-verbal clues can be used to indicate disapproval. Students should be addressed with their names to develop a personal connect
- Whether the strategies utilised are effective or not can be assessed using a student feedback questionnaire (e.g., was the lecture clear, interesting, what two things about the session would you like to improve)

To conclude, lectures, despite being criticised as a mode of teaching, are here to stay. Hence, all efforts should be made by the teacher to make lectures interactive and encourage active learning. The strategies described above can be used to increase participation of students and improve critical thinking and attention.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Karthikeyan K, Prarthana M. Competency based medical education in dermatology: Undergraduate curriculum-a cauldron of commendations, contradictions and controversies. *Indian J Dermatol Venereol Leprol* 2022;88:282-5.
2. Prince M. Does active learning work? A review of the research. *J Eng Educ* 2004;93:223-31.
3. Thomas EJ. The variation of memory with time for information appearing during a lecture. *Stud Adult Educ* 1972;4:57-62.
4. Lenz PH, Mccallister JW, Luks AM, Le TT, Fessler HE. Practical strategies for effective lectures. *Ann Am Thorac Soc* 2015;12:561-6.
5. Ko LN, Rana J, Burgin S. Teaching and learning tips 5: Making lectures more “active”. *Int J Dermatol* 2018;57:351-4.
6. Singh T, Gupta P, Singh D. *Principles of Medical Education*. New Delhi: Jaypee Brothers Medical Publishers; 2020.
7. Denkewicz R. Pros and cons of audience response systems in the education of health professionals. *MedEdPublish* 2019;8:182.
8. Tolks D, Schäfer C, Raupach T, Kruse L, Sarikas A, Gerhardt-Szép S, *et al*. An introduction to the inverted/flipped classroom model in education and advanced training in medicine and in the healthcare professions. *GMS J Med Educ* 2016;33:Doc46.
9. Prober CG, Khan S. Medical education reimaged: A call to action. *Acad Med* 2013;88:1407-10.
10. Shi CR, Rana J, Burgin S. Teaching and learning tips 6: The flipped classroom. *Int J Dermatol* 2018;57:463-6.

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