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An Introduction

LARGE GROUP TEACHING

ANAESTHETISTS as EDUCATORS



**The Royal College
of Anaesthetists**



LARGE GROUP TEACHING

Aims

We all remember from medical school the good and not so good lectures. Some lecturers captivated, informed and amused with seeming ease and style. For most, delivering a lecture often provokes anxiety and apprehension. However, by following a few simple rules, you can deliver a structured, informative teaching episode, which may even include some audience participation.

The purpose of this chapter is to increase your understanding of the use of lecturing and build confidence in preparation and presentation skills when faced with teaching large audiences.

Intended learning outcomes

At the end of this chapter, you should be able to:

1. Define the role and benefit of a lecture, and appreciate the limitations (TM_HK_05).
2. Understand the underlying educational principles of preparing and delivering an effective lecture style presentation (TM_HK_05).
3. Plan and deliver an effective lecture using multi-media equipment (TM_IS_03, TM_BS_06, TM_HS_06).
4. Obtain and reflect on constructive feedback (TM_BS_07).

Activity

Basic – Consider the strengths and challenges of delivering a lecture? What specifically concerns you most about delivering a lecture? How might you overcome these issues?

Intermediate – Think of an example of a really good lecture you attended and one that didn't seem to work as well. Compare and contrast the speakers, but also think about the role the learners played. Did the subject matter have any bearing on the outcome of the presentation, and if so, why?

Higher - Write a 200 word reflection on a lecture you have previously given. How might you improve it for next time? How might you engage the audience more? How could you maintain or re-establish concentration levels during a lecture? Are there any ways you could consider integrating technology further into your presentation?

History

The noun 'lecture' dates from the 14th century latin '*lectus*' and its accompanying verb '*legere*' means 'action of reading that which is read' (Harper 2012).

No single *learning* style suits every individual, in the same way as no *teaching* method benefits every learner. One criticism of lecturing is that it only offers one-way communication, from teacher to learner and that it does not encourage audience participation. However, lectures are an effective and efficient method of introducing new subject matter to large numbers of students and delivered by a talented and enthusiastic speaker can be highly engaging and stimulate further enquiry.

Characteristics of a successful lecturer

- Knows the target audience and their existing level of knowledge
- Shows authority, knowledge and enthusiasm for the subject
- Includes material not readily accessible in textbooks
- Presents the material in a clear, concise and logical sequence
- Makes the material accessible, intelligible and meaningful
- Illustrates the practical applications of the theory presented
- Generates curiosity about the lecture material

Benefits of a lecture

With the advent of virtual learning environments (VLE), teleconferencing and podcasts, information is readily available at the touch of a screen. However, prior to this technology, the only effective way to disseminate up to date, verbal information to a large number of people, was through lectures. When successfully delivered, a presentation can provide; background concepts, current opinion and new ideas, all of which can be developed further by the learners during private study or in small group discussions.

A successful lecture:

- Is relevant, well presented and holds the audience's attention
- Is logical, stimulating and inspiring
- Supports and builds on previous learning
- Facilitates learning of key principles
- Fits appropriately into the overall teaching programme

(Bligh 1998)

Disadvantages of a Lecture

- Tendency for audience to be passive, for example, busy taking notes but little time to reflect, question or analyse ideas
- Not effective method for inspiring changing attitudes or promoting critical appraisal
- Not suitable for a wide range of abilities
- Does not encourage the audience to move beyond memorising information presented
- Long-term retention of information may be poor

(Bligh 1998)

Task

Access a short “lecture” of your choice from TED at www.ted.com/talks. Under the following sub-headings, critique the lecture:

- Set - how is the room/stage/seating set out
- Dialogue - how does the lecturer get his/her message across
- Closure - how is the message/learning confirmed with the audience at the end of the presentation

Planning a lecture

Abraham Lincoln, 16th President of the United States, reportedly once said:

‘If I had sixty minutes to cut down a tree, I would spend forty minutes sharpening the axe and twenty minutes cutting it down.’



A lecture is probably the one occasion when you as the educator will have the luxury of ample time - use it well. Peyton and colleagues (Harris 1998) have described a method for planning a teaching event based around a triad of concepts:

- **Set:** what you need to think about beforehand
- **Dialogue:** what happens during the event
- **Closure:** how you finish off

We will use these sub-headings to illustrate how to effectively plan a lecture.

Set

Prior Preparation Prevents Poor Performance (Defence 2012).

- **Environment:** Make sure your audience can hear you and see your visual aids, and optimise the heating and lighting to ensure an alert, visible audience. Although this may well be inflexible, make sure the room layout is appropriate, for example, with the chairs arranged in an informal or formal seating style and offering the ability to take notes.
- **Aim:** Be explicit about what you require the participants to take away from your session, for example, increased knowledge, a better understanding of current controversies, or possibly even the realisation that there is a lot to learn for an exam.
- **Learning Outcomes:** Outline your expectations of the audience, for example the level of interaction. Set clear, specific learning outcomes, which are achievable in the allotted time. Pitch the information at the correct level for the audience and make it relevant to current level and clinical practice. This will help to maintain interest.

Dialogue

Tell the audience what you are going to tell them, tell them it, and then ask them something that shows you they understand (Stanford 2012).

- **Content:** This is usually prescribed by a syllabus, curriculum or guideline. The key is not to overload the audience with too much new information but take time to ensure principles and concepts are understood and use illustrations, analogies and explanations to encourage understanding and recall.
- **Delivery:** Introduce yourself and provide a short biography (not an entire CV) will provide context and credibility to those you are “lecturing” and will help them to engage with you as a credible source.

Engage your audience with well-placed humour (if you are good at it) and tailored

anecdotes or stories. Varying your teaching method if the session lasts longer than 20 minutes will increase learner recall, as this is the average attention span for adult learners.

The importance of eye contact and body language should not be underestimated and pace your delivery. It can be useful to pause purposefully every 20-30 minutes to allow the audience to: take notes, consolidate information and ask clarifying questions.

- **Encourage Active Learning:** There is a misconception that lectures cannot be interactive. However, in truth the relationship between the teacher and learner is crucial. Value the audience, monitor reactions and seek contributions because they are an integral part of your lecture.

Promote participation with role-play, quizzes and data interpretation, or break up longer sessions by asking the audience to work in small groups for short periods. Look at 'The Flipped Classroom' for a fresh take on the traditional model (Kachka 2012).

- **Handouts:** The use of handouts is a personal preference. Determine in advance when to give them out, if you choose to use them. This decision will help you to tailor your handouts for optimum benefit. Examples include:
 - A 'PowerPoint handout' of your slides (3 or 6 slides per page)
 - Partially completed lists and diagrams to complete during or after lecture
 - Summary notes with main take-home messages highlighted
 - Key references or a useful journal paper for further reading
- **Questions:** Encourage interaction and check understanding by asking well-placed questions. Invite a response from the whole audience or direct a more specific question to an individual. Answers should be received with positive signals to the whole audience. Positive verbal and non-verbal cues will encourage further participation and a sense of *safety*.

Care must be taken not to demoralise the group with questions that are too difficult or obtuse, or by leaving an individual 'stranded', unable to respond. Techniques for reframing questions or diverting attention to another candidate should be practiced. Allow the learner time to think about and frame an answer (Sometimes it is useful to count to ten in your head – silence is golden).

- **Keep to time:** Know how long you have and how long your material will last. Leave enough time for questions both during and towards the end of the session.

Closure

How the session is terminated.

(It is important to get the sequence of the *close* right for the most impact).

- **Questions:** Allow time for questions, but offer to discuss any in depth issues after the presentation (perhaps in a coffee break).
- **Summary:** The key material covered should be summarised at the very end. Leave the audience with three take home messages. Do not take any more public questions. An obscure question has the potential to detract from the salient learning points.
- **Further reading:** Direct learners to links and reference material that compliments the topics covered during the lecture.

Your 'Dialogue'

Making it accessible

Thought should be given to 3 key areas:

1. Presenting of information

- Classical – lecture is divided into sections and sub-sections, facilitated by Powerpoint™ headings that have become a standard
- Problem-centred – focused on a particular topic and working around many aspects of a clinical case for example
- Sequential – explaining how the present situation/thinking/process developed by using a historical timeline approach

2. Explanation

- Descriptive - what?
- Interpretive - how?
- Reason giving - why?

3. Structure

- Signposting - we are going to cover A, then B and finally end up with a summary of A + B
- Foci - statements highlighting key points
- Links - make explicit links between one topic and the next. This helps your audience to process and understand the material

Don't Forget

Really important information
about this topic

Task

Try 'Flipping the classroom'

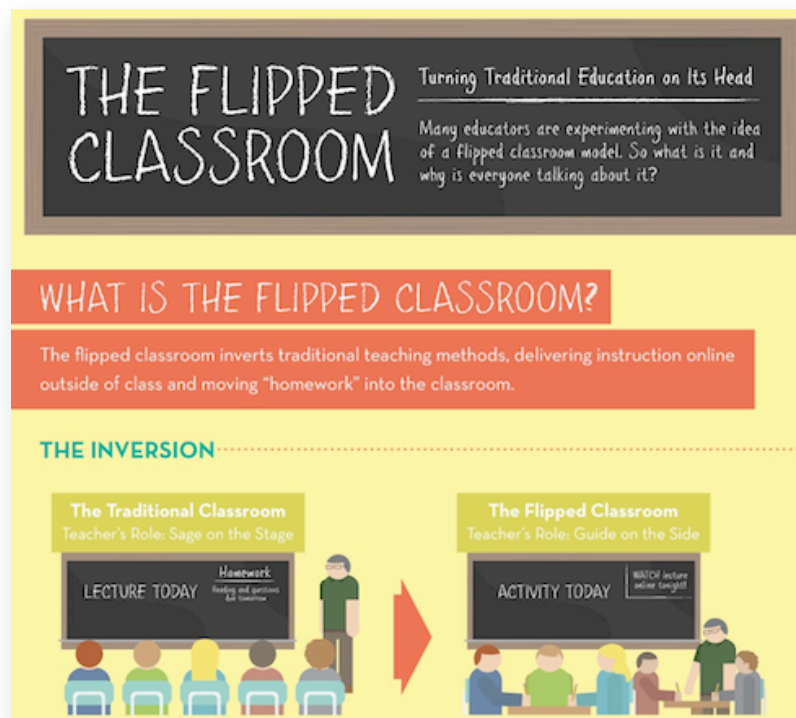


- Lecture is done for homework - usually via a video or audio file
- Classroom time is spent clarifying & applying new knowledge gained

Eric Mazur, a physicist at Harvard, has been using the method for 21 years. He calls it 'peer instruction' (Mazur 1997). With the addition of assistive technology, this process works to maximize time with the instructor and focus on higher order thinking skills rather than just taking notes and regurgitating facts.

Watch Mazur's video: <http://www.youtube.com/watch?v=hbBz9J-xVxE>, then review the Faculty Focus articles (Kachka 2012).

- Now put this concept into practice for a lecture you give regularly



Evaluation

After a lecture, it is important to investigate whether teaching has been transformed into learning and if learning outcomes have been achieved. Although often inextricably linked and equally informative, care must be taken to distinguish between evaluation of the teacher and assessment of the learner.

A. Learning: Assessment of the learner can undoubtedly offer information about the education they have received. Observing students *using* their new knowledge and understanding, in complementary small group discussions or during practical sessions, will offer a wealth of information but is often impractical to implement.

Most resort to more immediate techniques designed to assess recall, understanding, or application. For example, it has become popular to offer multiple-choice questions (MCQs) at the end of a session intended for Continued Professional Development (CPD). The mark attained is then offered as 'proof of learning', replacing the much loved 'certificate of attendance' which really only served as proof of *attendance*. However, with so many other factors affecting an individual's *learning*, assessment of the learner using answers from a *test*, may not elicit the truly useful information of when, why and how learning occurred.

Reflection

Think about a lecture that you attended where the subject matter was difficult to digest. What did you think of the teaching? How did you eventually learn the material? Now think about an *entertaining* lecture you attended. How did you evaluate this lecture?

Reflect on how each session promoted your learning.

B. Teaching: Evaluating the *teaching* often involves some form of questionnaire at the end of the session, however, these invariably focus more on critiquing the lecturer as a *performer*, rather than on finding out about the learning experience. A lecture may be very entertaining, and elegantly delivered, which students favour, but this does not necessarily promote learning (Economist 2012).

The composition of a questionnaire is a compromise between making it straightforward enough to complete, so that the learner will fill in at the end of a lecture, whilst still obtaining enough information for effective evaluation.

Limit the length of a questionnaire to one side of A4 and try to make the questions unambiguous. For easy of use, offer some sections that rapidly grade particular aspects of the lecture, but also ask more open questions to encourage free-text comments.

Anonymising answer-sheets or questionnaires will *protect* the learners from feeling individually scrutinised but should still offer information about whether the session promoted learning.

Reflection

Personal thoughts: As soon after the session as possible, take time to critically reflect on what you thought went well and what could be improved for next time. It can be useful to write down your thoughts; these notes can be added to your education portfolio.

Peer observation: Ask a colleague to observe your teaching and provide feedback but try to be specific about what you are asking them to focus on. Sit down together after the session and have a reflective conversation about your teaching and how you interacted with the learners (Dahlgren 2006).

Video: With the consent of the learners, record yourself giving a lecture. This can then be viewed privately or with a colleague. Watching yourself on video can be a very uncomfortable, but also enlightening experience, be critical about your teaching skills, but try not to be *too* hard on yourself.

Key thoughts

Lectures are still a common teaching method in both undergraduate and postgraduate medical education. Popularity continues because a lecture provides an effective and efficient means of teaching essential information and concepts. However, a lecturer should not be too frightened to play around with the 'standard' format. Periodically splitting up larger groups and using some of the methods described in the chapter on small group teaching will help to promote interaction and ensure learning.

Evidence of progression

Basic level

- Plan a 45 minute lecture using the structure of: set, dialogue and closure, suggested above. This presentation could be for a departmental teaching session or an external event.

Intermediate level

- Design and use an evaluation questionnaire for a lecture. Collate and reflect on the feedback you receive from your students.

Higher level

- Ask a colleague to observe a lecture you deliver. Then have a feedback session where you both critique your teaching skills. Now write a 300 word reflective piece on what you have learnt from this conversation.

Further reading

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Mazur, E. (1997). Peer instruction: Getting students to think in class. American Institute of Physics Conference Proceedings, Springer. 399: 981.

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RCoA 2010 Syllabus Key

- TM_BS_06** Delivers a lecture or audio-visual presentation using appropriate multimedia devices & techniques.
- TM_BS_07** Obtains feedback on presentations and tutorials they have delivered [in written format].
- TM_IS_03** Plans and conducts a teaching session e.g. lectures workshop, tutorial, and seeks written feedback on their performance from participants.
- TM_HK_05** Understands the educational principles underlying the preparation of effective lessons and presentations.
- TM_HS_05** Demonstrates effective lecture, presentation, small group and bedside teaching sessions.
- TM_HS_06** Makes appropriate use of teaching aids and visuals to enhance formal teaching.
- TM_HS_11** Is able to lead departmental teaching programmes, including journal clubs.