

Improve your lecturing

Lecturing remains the mainstay of many university courses and conference programmes and when done well it can be an extremely effective large group teaching technique.

This article introduces teaching large groups through lecturing, considers how lecturing can be planned and structured, explores techniques teachers can use to maximize learning and suggests how to avoid common pitfalls. It also considers ways to ensure that the learning environment is conducive to learning.

What is lecturing?

Lecture: 15th century from Latin *lectus* past participle of *legere* – to read a discourse given to an audience or class for instruction. The origin of the lecture is thought to pre-date the printing press by centuries. Books were scarce and valuable, making the lecturer the gatekeeper of knowledge, which the student had to commit to memory (Brown, 2002). Lecturing is still a widely used teaching method in higher education, particularly in relation to conveying information to large numbers of students. Many of the principles underpinning a good lecture also underpin a good conference presentation.

Why lecture?

Lectures are generally used to teach new knowledge and skills, promote reflection and stimulate further learning. If the context is appropriate and they are done well, lectures are an effective means of teaching. The main benefits of lectures are that they:

- Are an effective way of providing information not easily available from other sources

- Are cost effective for transmitting factual information to a large audience
- Provide background information and ideas, basic concepts and methods, to be developed later in small group activities or individual study
- Can highlight similarities and differences between key concepts
- Can usefully demonstrate processes (Bligh, 2000).

However, lectures also have some disadvantages:

- The audience is usually passive and may therefore be unengaged
- Note-taking often crowds out time to reflect, question or analyse
- They may be ineffective at changing attitudes or encouraging higher-order thinking
- Lecturing reproduces a power differential where the lecturer is the gatekeeper of knowledge and the audience receives whatever is chosen to be conveyed
- Lectures are not suitable for a wide diversity of ability.

When to lecture?

There are numerous sound reasons for choosing to lecture, among them (starting with the most pragmatic):

- When there is no alternative because of the size of group or venue
- When the programme stipulates it
- When part of the purpose is to set guidelines for assignments or exams

- When the aim is to illustrate process and/or problem-solving strategies
- When you want to model academic practice you wish to encourage
- When you are invited!

A good lecture at the right time facilitates learning of the key principles of the subject and, building on previous learning, fits coherently into an overall programme of instruction. One hopes that the lecture may also stimulate further thought.

We often assume that lecturing is the only way to teach a large group, and equally rule out the possibility of lecturing to a small group, but neither is always the case. There are various effective methods of teaching large groups, and a skilled lecturer can also adapt to accommodate smaller groups. Lecturing is often seen as the main method for enabling large groups to learn effectively, but small group techniques can be used effectively in contexts where the lecture might seem to be the default choice. *Table 1* considers different group sizes in relation to the role of the teacher and considers activities or materials that might be helpful in each context.

What makes a good lecturer?

There is some mythology about lecturing, the most persistent being that some people have an extraordinary flair for lecturing, and if you are not among the fortunate few, then the best you can hope for is to

Mr Sam Held is Palliative Care Project Coordinator, Waitemata District Health Board, New Zealand and **Professor Judy McKimm** is Visiting Professor of Healthcare Education and Leadership, University of Bedfordshire; Honorary Professor, Swansea University and Senior Lecturer in Interprofessional Education in the Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand

Correspondence to: Professor J McKimm

Group size	Examples	Role of teacher or instructor
Large groups	Conventional lectures and expositions, workshops, conferences, lab classes, distance and online learning, conferencing, teleconferencing	Traditional role: controller of the process. Some interaction is possible but requires careful planning
Small group learning	Tutorials, seminars, group exercises and projects, games and simulations, role play, self-help groups, discussions	Organizer and facilitator
Individualized instruction	Directed study (reading books, handouts, discovery learning), open learning, distance learning, programmed learning, mediated self-instruction, computer/web-based learning, e-learning, one to one, work shadowing, mentoring	Producer or manager of learning resources, tutor and guide

Adapted from Ellington and Race (1993)

get through your material with little drama and few problems. Clearly some people are more comfortable presenting to large groups than others, but lectures are primarily to facilitate learning, not for entertainment. A performance might be more relevant at a conference to engage your audience and make your talk memorable. Effective lecturing is more about skill than charisma although some techniques will make your lectures more enjoyable for the audience.

The main characteristics of a good lecturer are that he/she:

- Presents material in a clear and logical sequence
- Makes it accessible, intelligible and meaningful
- Covers the subject matter adequately
- Is constructive and helpful in criticism
- Demonstrates an expert (and authoritarian) knowledge in the subject
- Paces the lecture appropriately
- Is concise
- Illustrates practical applications of the theory presented
- Shows enthusiasm for the subject
- Generates curiosity early in the lecture.

Another myth about lecturing is that as long as the material is interesting it will attract and hold the audience's attention. As the lecturer you may think it fascinating, but even highly motivated learners need more than just interesting material. An effective lecture should present information that cannot be learned from simply reading up on the lecture subject, and use good teaching techniques.

How to make your lecture a success

Consider the purpose

First ask yourself what the purpose of the lecture is and what your audience is there for. Is the main purpose of the lecture to motivate the learners to appreciate the importance of the subject material, or to transmit a body of information not readily attainable elsewhere; to teach important concepts and principles, or is it a reference point in the course, consolidating learning from other contexts or revision for an assessment. If there is more than one purpose, the lecture should deal with them sequentially not concurrently. Adequate time should be allowed for each component.

Define your aims and outcomes

Defining learning outcomes is essential before preparing a lecture. What do you want people to learn? What key concepts are to be addressed? What essential knowledge and understanding should participants leave the lecture with?

Plan a coherent structure

Attention to these questions helps to define structure, content and teaching methods. If, for example, your aim is to

present new knowledge and concepts, then the 'classic' lecture structure might be the first choice (*Figure 1*). However, if the aim is to present a number of different approaches to a particular problem the method and structure could be quite different (*Figure 2*).

The technique in *Figure 2* is suited to a lecture in which the purpose is to get students or trainees to learn and model approaches to problem-solving. The opening statement of the problem may

Figure 1. 'Classic' lecture structure. From Cantillon (2003).

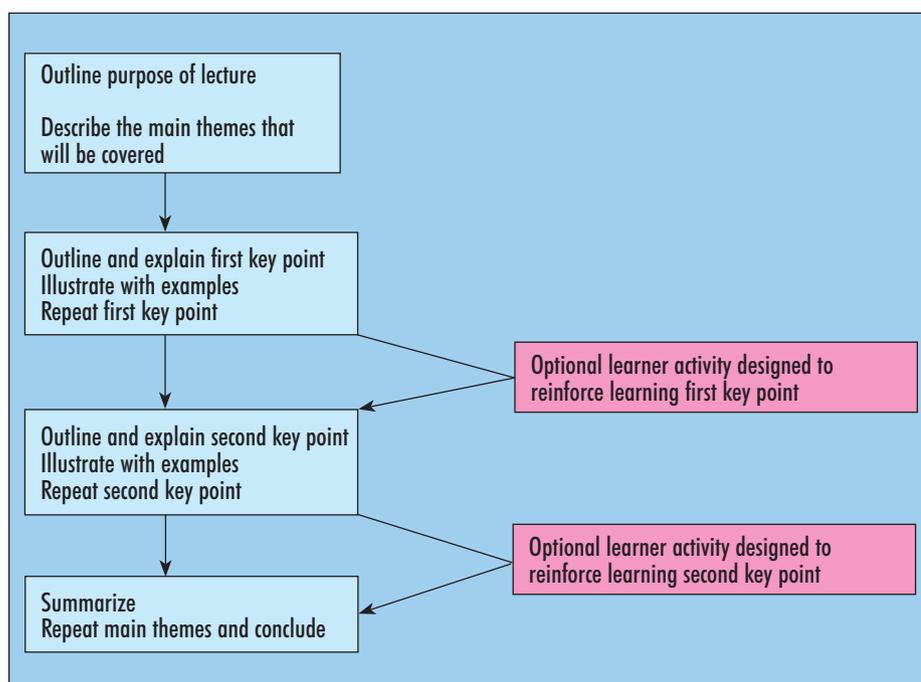
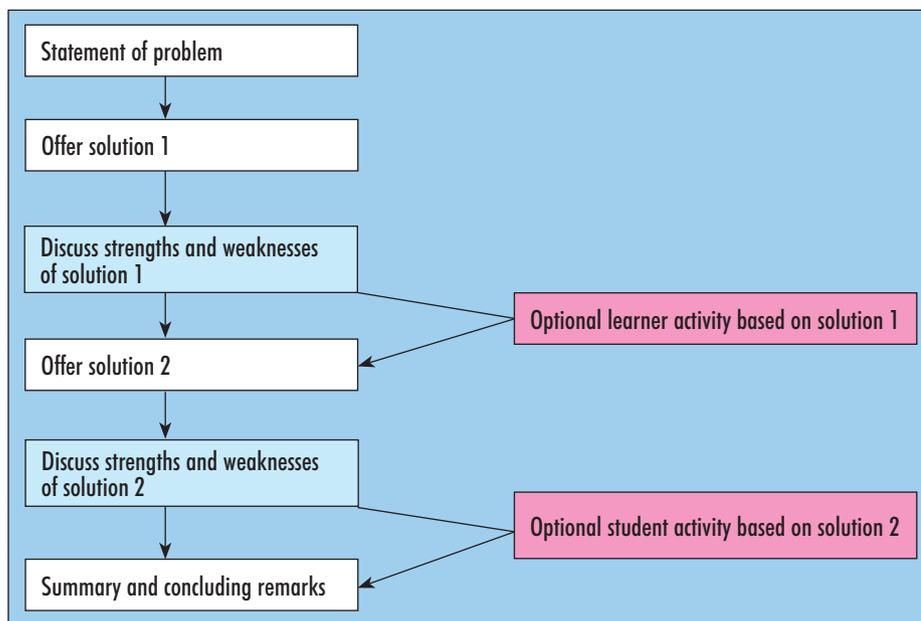


Figure 2. 'Problem-oriented' approach. From Cantillon (2003).



take the form of a clinical situation or case history, then learners are asked to consider possible solutions. This method is good for encouraging audience participation.

A coherent structure will usually ensure greater retention of the material by the audience. It must provide a logical progression of material and systematically develop your main points: from general principles to specifics, building up the parts into the whole, describing a problem and outlining a solution.

Signal stages of your structure by using the following:

- Signposts – statements that indicate structure and direction (e.g. ‘I want to deal briefly with...’ ‘First, I will...’ ‘Next, we shall look into ...’)
- Frames – statements that signal the beginning and the end of a section (e.g. ‘So that ends...’ ‘And now, let us look at...’). Framing statements are vital in complex explanations that involve topics and sub-topics
- Foci – emphasize key points through repetition and highlighting statements (e.g. ‘So the main point is...’, ‘The key issue is...’, ‘This brings us to the crucial factor...’)
- Links – use explicit statements to link one part of an explanation to another (e.g. ‘But while this may be the solution, it may lead to complications’)
- Summaries – remind the students of the essential points and link themes which may have been separately discussed. Summarizing provides an opportunity to compare and contrast, point out similarities and differences (adapted from Pan, 2008).

Apply the ‘rule of threes’

In lecturing, as in speech-making, people like things to be presented in threes. From the basic trio of beginning, middle and end, to breaking the middle into three clear segments, to the end consisting of summary, check understanding and close, things seem to work best in threes.

Conveniently, concentration tails off to a low point in about 15–20 minutes, but returns after a short break or change of activity. Many lectures last around an hour, so this provides three natural divisions to plan for.

Less is more

Russell et al (1984) observed lectures in which 90%, 70% and 50% of the sentences revealed new information and established that students retained the lecture information better the lower the level of new content. The remaining time was filled by restating, reinforcing and relating the material to prior learning. It is not how much is delivered but how much is understood and retained that is most important. The lecturer should not be afraid to cut down on quantity and ensure that learning actually takes place. You might make sure material is covered by providing a handout during the lecture, giving an outline and guiding questions before the lecture or providing background information and further reading through e-learning.

Practice your presentation

There are lots of techniques, hints and tips to help you give a good lecture and consequently enjoy its delivery. Good presentation hinges on being:

- Clear – ensure you can be seen and heard and use simple, explicit language
- Knowledgeable – know your subject, be authoritative
- Interesting – make eye contact, show enthusiasm and establish a relationship with your audience.

Presentation style is important. Your job is not to entertain – but try not to be boring. Use your voice for emphasis, contrast or negation and use key words for impact, e.g. ‘vital’ rather than ‘important’. Everyone in the room should be able to hear you clearly. Avoid speaking in a monotone, using ‘fillers’ like ‘you know’ or ‘okay’ and distracting gestures like fiddling with jewellery.

Get off to a good start

Decide how you intend to start the lecture before you begin speaking. Introduce yourself and describe the lecture’s aims, objectives and learning objectives or outcomes. Tell your audience what you are about to do, how you will do it and what you expect from them. The beginning of your lecture should engage, encourage curiosity and create expectations. The first 5 minutes are your ‘golden window’ to establish a meaningful link with your students. Try not to be predictable.

Keep them with you

Throughout your presentation, summarize the main points covered in each section at the end of each section. Vary the format of the lecture, i.e. give students a break or a change every 10–15 minutes. Involve the audience: build in small group discussions, or ‘turn to your neighbour for 3 minutes and discuss ...’. Your audience will also be more engaged if you avoid reading the full text of your lecture, or read from endless lists of PowerPoint bullet points. Engage the audience throughout with humour, stories and real-life examples.

End it well

Lectures should have a planned ending so avoid abrupt stops. It is usual to include a summary of the main points including a recapitulation of the key questions posed and/or answered. End with a ‘take home message’ with which you would like learners to leave, and keep to time.

Lecture notes

Reading out lecture notes is not advisable but preparing them helps you plan your delivery. Extemporaneous delivery needs a prepared outline to create the impression of spontaneity. Using this style, you will make better eye contact and be likely to use better non-verbal communication. If you use this approach, your lecture notes may be bullet points, slides, a diagram or prompt cards, depending on your style. If you plan to move around the lecture theatre make sure you are happy with using the microphone and remote controls.

Audio-visual aids and handouts

Audio-visual aids, such as PowerPoint slides or video, will not transform a lecture on their own and can be distracting. Audio-visual resources should enhance the lecture and clarify the material. Avoid complicated ‘busy’ slides, reading from slides and addressing the screen. Always plan for a fallback position just in case the technology fails.

Learners are not always fully prepared and may not have the necessary prior knowledge, learning skills or motivation to follow your lecture. Good handouts can compensate for this without spoon-feeding learners. Appropriate handouts provide:

- An outline to help learners follow the lecture, letting them concentrate on processing the information as they hear it
- Essential diagrams so learners are engaging, not drawing pictures
- Materials that are difficult to obtain elsewhere
- Tasks to encourage reflection
- A supplementary reading list.

How to encourage 'active learning'

Without attention to the processes by which memory functions a lecturer may overwhelm listeners, providing too much unsituated information free from context and real world connections. To be meaningful, it must be put into memory and later be retrievable. Information is acquired through experiences stored in episodic

memory, or through propositional knowledge stored in semantic memory. The learner must be able to make connections with previous knowledge and restructure it in the light of new information. Introducing new information without adequate consolidation or reflection can interfere with memory input and storage and learners fail to commit the information to memory (Bligh, 2000). The lecturer must ensure that learners can engage actively, make connections and restructure previous learning.

Conclusions

For all its antiquity and somewhat dowdy image, the place of the lecture in medical education is assured. This partly relates to convenience, when a course requires that large groups be formally taught large bodies of material, but lecturing can also be an

effective way to approach transmitting information and/or approaches to problem-solving.

Like all teaching and learning, lecturing requires its own skill set which can be learned and refined through practice and reflection. The most important element of an effective lecture is that it should be a meaningful engagement for the audience and speakers alike, providing relevant learning that cannot readily be accessed by other means and ensuring that learners leave the lecture theatre or classroom better informed (or at least more challenged) than when they entered. **BJHM**

Conflict of interest: Professor McKimm was commissioned by the London Deanery to lead on the development of the suite of e-learning modules from which these articles have been derived.

Bligh D (2000) *What's the Use of Lectures?* Jossey Bass, San Francisco

Brown S (2002) *Lecturing: a Practical Guide.* Routledge, London

Cantillon P (2003) Teaching large groups. In: Cantillon P, Hutchinson L, Wood D, eds. *BMJ ABC of Learning and Teaching in Medicine.* BMJ Publishing Group, London: 15–18

Ellington H, Race P (1993) *Producing Teaching Materials: a Handbook for Teachers and Trainers.* Kogan Page, London

Pan D (2008) Lectures: a good lecture - the basics. In: *Learning to Teach, Teaching to Learn: A handbook for NUS Teachers.* 5th edn. www.cdtl.nus.edu.sg/handbook/lecture/basics.htm (accessed 12 June 2009)

Russell IJ, Hendricson WD, Herbert RJ (1984) Effects of lecture information density on medical student achievement. *J Med Educ* 59: 881–9

KEY POINTS

- Lecturing is an effective large group teaching technique.
- Lectures need to be well planned and structured.
- Lectures are not simply about delivering large amounts of information to a passive audience.
- Learners will learn more if you break up the lecture with signposts, activities and changes of pace.
- Appropriate use of handouts, audiovisual materials and clinical illustrations will enhance your lectures.

London Deanery

This series of articles for clinical teachers was originally commissioned as a suite of e-learning modules for the London Deanery. Both the series and e-learning modules were designed and edited by Judy McKimm and Tim Swanwick.

The London Deanery e-learning modules for clinical teachers are open access and available at www.londondeanery.ac.uk/facultydevelopment

Each module takes 30–60 minutes to complete and proof of completion is available in the form of a printed certificate.

Forthcoming articles in this series include:

Facilitating learning in the workplace

Teaching clinical skills

Careers support

Interprofessional education

Diversity, equal opportunities and human rights

Curriculum design and development

Appraisal

Small group teaching

Involving patients in clinical teaching

Managing poor performance

Introduction to educational research

Simulation