

Faculty Development – Improve your lecturing

What is lecturing?

Lecture: 15th century, from Late Latin *lectura*, Latin *lectus* past participle of *legere* – to read.

Lecture: a discourse given before an audience or class, especially for instruction.

Discourse: a verbal interchange of ideas; formal, orderly and usually extended expression of knowledge and thought on a subject.

As the etymology suggests, the origin of the lecture is generally accepted to be found in the medieval pre–printing press era. Books were scarce and extremely valuable, which made the lecturer the absolute gatekeeper of specific knowledge, and the student had to commit what was read aloud to memory from the outset (Brown, 2002).

Remarkably little has changed over the centuries, and lecturing is still the most widely used teaching method in higher education.

Why lecture?

Though no longer used to spread the content of a single book, lectures are generally used to teach new knowledge and skills, promote reflection, and stimulate further work and learning.

In the appropriate context, and assuming a certain quality standard, the lecture is an effective means of teaching. The main benefits of lectures are that:

- they are an effective way of providing information that is not available from other sources
- they can be cost-effective for transmitting factual information to a large audience
- they provide background information and ideas, basic concepts and methods that can be developed later by private study, or in small tutor-supervised group activities
- they can be used to highlight similarities and differences between key concepts
- they can be a useful way of demonstrating processes.

(Bligh, 2000)

The main disadvantages of lectures are that:

- lecturing tends to place the audience in a passive role. People may be busy taking notes but usually have little time to reflect, question or analyse and synthesise ideas
- lectures are not an effective method for changing attitudes or encouraging higher-order thinking
- lecturing doesn't encourage the audience to move beyond memorising the information presented and long-term retention may be poor
- lecturing reproduces a power differential in which the lecturer is guardian and gatekeeper of knowledge and the audience are the recipients of whatever the lecturer chooses to reveal
- lectures are not suitable for a wide diversity of ability.

While we tend to assume that a lecture is the only way to teach a large body of people, and equally we tend to rule out the possibility of delivering a lecture to a small group, by no means is either always the case. There are a number of effective methods of teaching large groups, and a skilled lecturer can adapt the format to accommodate relatively small groups – yet it will still be recognisably a lecture.

There are a number of sound reasons for choosing the lecture, among them (starting with the most pragmatic):

- when there is no workable alternative due to size of group, venue, etc.
- when the programme stipulates it, such as at a conference or as part of an undergraduate programme

- when part of the purpose is to set guidelines for assignments, exams, etc.
- when the aim is to present broad outlines of a subject and factual information
- when the aim is to illustrate process and/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 basic principles of the subject
- fits coherently into the overall teaching programme
- is relevant, well presented and holds students's attention
- is organised into a logical structure
- supports and builds on previous learning
- is stimulating and provides food for thought.

Thinking point

What makes a good lecture? Think of a lecture you have attended that was exceptionally good. What made it work so well? Think of as many positive factors as you can – include the audience (including you), the venue, etc. You might like to draw a mind map or other graphic representation.

Large group teaching

Lecturing is often seen as the main method for enabling large groups to learn effectively. The [Small group teaching](#) module provides many examples of techniques and methods you can use to facilitate learning in small groups. You will see later in this module that many small group techniques can be used within a lecture theatre, in workshop situations or in conferences and symposia.

Elton's (1977) model classified all teaching and learning systems techniques into three broad groups:

- mass instruction
- individualised instruction
- small group learning.

In the table below we have adapted his ideas to consider large and small group teaching/learning and individual instruction. This classification can be used to indicate the role of the teacher and the types of instructional material that might be useful in each of the contexts.

Class of techniques	Examples	Role of teacher, instructor, trainer
Large groups	Conventional lectures and expository lessons, workshops, conferences, symposia, lab classes, distance and online learning conferencing, teleconferencing, television and DVD/video, films	Traditional expository role; controller of instruction process. Some interaction possible, needs careful planning and specific interventions from the teacher/facilitator
Individualised 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 teaching, work shadowing, sitting by Nelly, mentoring	Producer/manager of learning resources, tutor and guide
Small group learning	Tutorials, seminars, group exercises and projects, games and simulations, role	Organiser and facilitator

(Ellington and Race, 1993)

Winston (2008) suggests that beginning lecturers or presenters need to realize that the nature of an audience changes with its size. With fewer than 20 people, discussion is possible. With more than 50, a performance is expected, and an audience can turn vicious if it does not get one. Start your career teaching to small classes. In this module we will look at techniques to break a very large group into smaller groups, and other ways in which you can avoid the (thankfully rare) viciousness to which he alludes.

What makes a good lecturer?

There is a certain amount of mythology about lecturing, one of the most persistent myths being that some people are born with an extraordinary flair for lecturing and if you are not one of the fortunate few, then perhaps the best you can hope for is to get through the material you've prepared with little drama and few problems. Of course some people are more outgoing and comfortable presenting to groups than others, but the desired outcome of a lecture is that people learn, not that they are entertained.

You might look for more of a performance if you are presenting at a conference or symposium, so as to engage the audience and make the talk memorable.

Effective lecturing is more a matter of skill than charisma, although there are some techniques that can help to make your lectures more enjoyable for those in the audience.

The main characteristics of a good lecturer are that they:

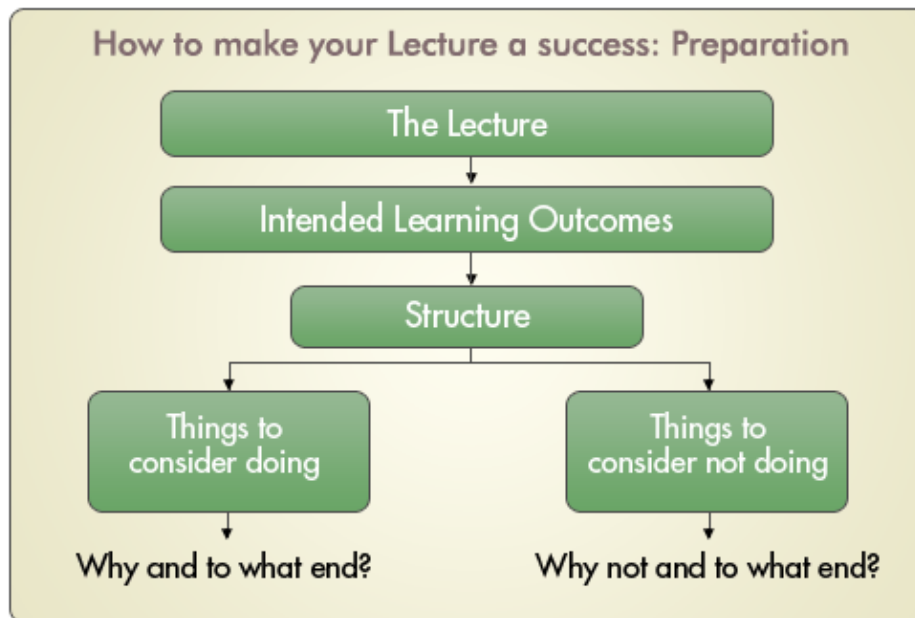
- present the material in a clear and logical sequence
- make the material accessible, intelligible and meaningful
- cover the subject matter adequately
- are constructive and helpful in their criticism
- demonstrate an expert (and authoritarian) knowledge in their subject
- pace the lecture appropriately
- include material not readily accessible in textbooks
- are concise
- illustrate the practical applications of the theory presented
- show enthusiasm for the subject
- generate curiosity about the lecture material early in the lecture.

A good lecturer presents the audience with opportunities for meaningful engagement with the subject material and with their lecturer.

Another persistent myth about lecturing is that as long as the material is interesting it will be sufficient to attract and hold the audience's attention. As lecturer, you may judge it to be fascinating, but even highly motivated learners need more than interesting material. An effective lecture should present information that the audience could not learn from simply reading up on the subject of the lecture. And a presentation at a conference or workshop should also stimulate the audience to find out more or to introduce some new research or perspective.

How to make your lecture a success

Over the next few screens we will look at how you can make your lecture a success: how to plan, set aims and objectives, and things to consider doing – and not doing – as you deliver your presentation. Though there are a number of typical lecture formats, structure and content will (and should) be unique to each lecture delivered.



Aims and learning outcomes

What is the purpose of the lecture?

- Is it to motivate the learners so that they appreciate the importance of the subject material in the overall scheme of things?
- Or is it to transmit a body of information not readily attainable elsewhere?
- Or is it to teach the learner some important concepts and principles?
- Or is it to act as a reference point in the course, for example consolidating learning from small group teaching or providing revision material for an assessment?

If the purpose of the lecture includes two or more of these, it should be structured to deal with the purposes sequentially, not concurrently, and adequate time will need to be allowed for each component.

Carefully thought-out learning outcomes are essential before preparing a lecture.

- What do you want the audience to learn?
- What are the key concepts that need to be addressed?
- What essential skills and competencies should participants have on leaving the lecture?
- How will all this be clearly communicated to the audience?

See ‘Lesson planning checklist’ in the [Teachers’ toolkit](#) for ideas on how to plan and structure a teaching session.

Careful attention to these questions will help to define the structure, content and teaching methods you choose for the lecture. If, for example, your aim is to present new knowledge and concepts, then the ‘classic’ lecture structure might be the first choice (Figure 1); alternatively, 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).

Figure 1

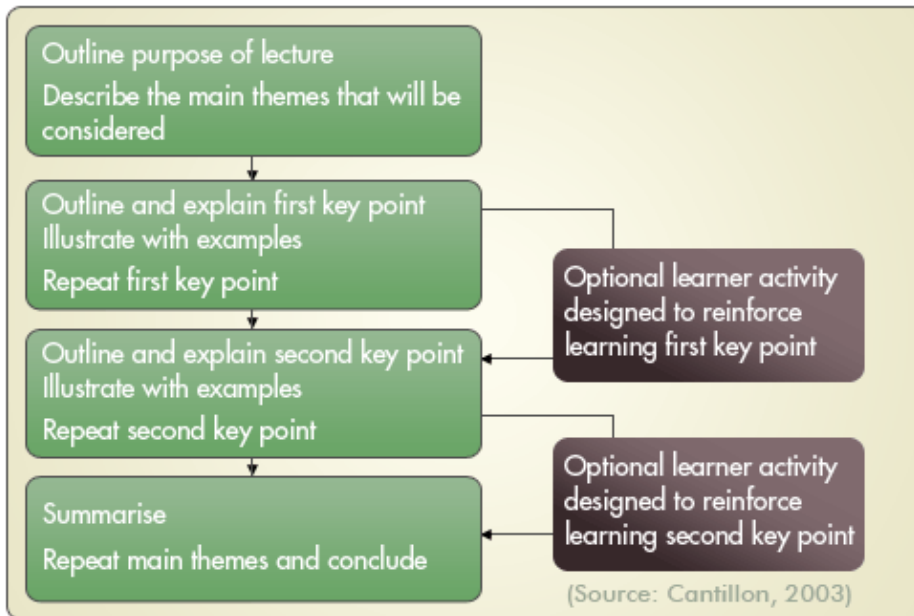
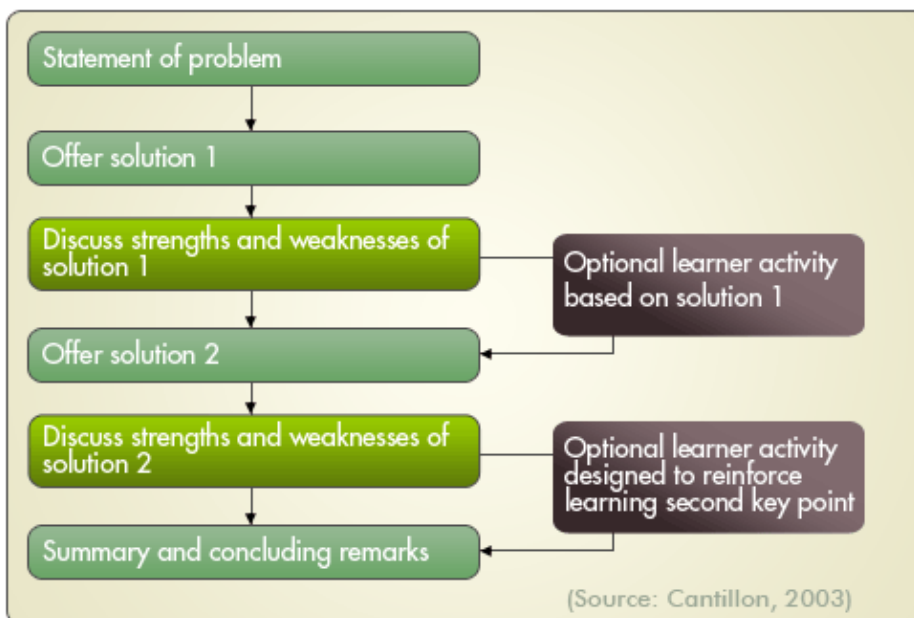


Figure 2



This technique is suited to a lecture in which the purpose is to get students/trainees to learn and model approaches to problem solving. The opening statement of the problem may take the form of a real-life clinical situation or case history. Students/trainees are led through a consideration of a variety of possible solutions. This method is good for encouraging audience participation.

Thinking points

- How does a recent talk or lecture you have attended fit into these

models?

- What about your own teaching, have you consciously or unconsciously used a structure like this?

Structure

A well thought-out structure will usually ensure greater retention of the material by the audience. It must be clear and logical, and ensure systematic development of your main points. It should provide a logical progression of material: general principle to specifics; build up from the parts to the whole; describe a problem and illustrate or outline solution.

Don't be tempted to skip parts because you assume that the audience is familiar with it.

Signal stages of your structure by using the following.

- Signposts: statements that indicate the structure and direction of an explanation (e.g. 'I want to deal briefly with... First, I will outline... Next, we shall look into these points in greater detail...').
- Frames: statements that signal the beginning and the end of a section (e.g. 'So that ends my discussion of... And now, let us look at...'). Framing statements are particularly important in complex explanations that may involve topics and sub-topics.
- Foci: direct attention to key points by emphasis, repetition and through the use of statements that highlight key points (e.g. 'So the main point is...', 'The key issue here is...', 'This brings us to the crucial factor...').
- Links: words, phrases or statements that link one part of an explanation to another (e.g. 'But while this may be the solution, it may lead to several complications and objections not directly related to it...').
- Summaries: these serve to remind students of the essential points and to link topics and themes that may have been separately discussed. Summarising provides an opportunity to compare and contrast, point to similarities and differences, advantages and disadvantages, etc.

(Adapted from Learning to Teach, Teaching to Learn: a handbook for NUS Teachers)

Thinking points

Consider a recent teaching session you have run.

- Have you used any of these techniques and how did they work?
- What do you think is the impact on learning for the audience?

The 'Rule of Threes'

There is a general and long-standing acceptance that in presenting or lecturing, as in speech-making and classical oratory, people like things to be presented in threes.

From the initial and (essential) trio of beginning, middle and end, to breaking the middle into three distinct parts, right to the end consisting of summary, check understanding and close, things seem to work best when they occur in threes.

In the same vein, learner concentration tails off to a low point in a period of about 15 to 20 minutes, and it returns to its early high level after a short break or change of activity. Most lectures last around an hour, so this provides three natural divisions to plan for. Having said that, you can subdivide your three natural divisions to include different activities or a change of pace.

See How to encourage active learning below for ways to exploit the three natural divisions.

Content

Less is more

A 1984 study by Russell et al. observed lectures in which 90%, 70% and 50% of the sentences revealed new information, and it was found that students learned and retained the lecture information better the lower the level of new content. In each case the remaining time was filled by restating, reinforcing and relating the material to the students' prior learning. It is not how much is delivered but how much is understood and retained that is most important, and the lecturer should not be afraid to cut down on quantity and focus on making sure that principles and concepts are understood, and that learning actually takes place.

Some ways to reduce quantity but make sure the material is covered

- Provide readings to cover the module, with questions to help identify the key aspects (but bear in mind the points made in the section on handouts later in this module).
- Give an outline and some guiding questions before a lecture.
- Provide background information and further reading on the web.
- Use an online discussion forum for further discussion.

Delivery

Having given much thought to the structure and content of your lecture or presentation, the delivery is worth a similar degree of consideration. There are lots of techniques, hints and tips to help you provide a good lecture experience for your audience, and a more rewarding experience for yourself.

Returning to the ‘Rule of Threes’, the following three imperatives underpin a good lecture(r).

Be clear

State the purpose and structure of the lecture. Make sure that you can be heard and that you and your visual aids can be seen. Make it a rule to use simple and explicit language, unless you wish to be deliberately ambiguous to promote reflection and enquiry. Pace your delivery so that the audience can engage with the material and take notes.

Be knowledgeable

Know your subject and be willing to share your authority. As well as giving information, pose thought-provoking questions and provide signposts for learners to follow up with their own investigations.

Be interesting

Don’t read or worse still dictate. Speak to the audience not at it. Make good eye contact and establish a relationship with participants. Vary your style, vary your delivery and vary the ways in which you involve the audience.



The beginning of the lecture

- Decide how you intend to start the lecture before you start the lecture.
- Describe the aims, objectives and learning objectives/outcomes of the lecture. See the [Setting learning objectives](#) module in this series for more about defining aims, objectives and learning outcomes.
- Describe the proposed structure and list the subjects to be covered. Back this up with your handouts.
- Outline your expectations of the audience.

During the lecture

- Give plenty of examples of the points made.
- Explain new concepts in terms of familiar ones, by using analogies.
- Frequently refer back to the lecture outline so that students can review the information already covered, note key points and see how the lecture is progressing. Summarise the main points covered in each section.
- Vary the format of the lecture – give students a break and/or significantly change the teaching technique. See ‘How to encourage active learning’ below.
- Exhibit enthusiasm and imagination, and inspire and motivate your audience to learn.
- Use your voice effectively to transmit information and emphasise key points.
- Try not to read from the full text of your lecture, just use key points or be guided by the overhead transparencies or slides.

Lecture notes – scripts or prompts?

While reading out a lecture will probably be boring for you, and definitely so for your audience, writing it out in advance can help you clarify what and how much needs to be included, and ensure that it can be delivered in the time available.

Extemporaneous delivery is an alternative approach but it calls for a carefully prepared outline in order to create an impression of spontaneity and directness. Using this style you will be more likely to make good eye contact and monitor audience reaction. It also encourages movement and positive non-verbal communication. If you decide to adopt this approach, your lecture notes may take the form of a list of bullet points, a flow chart or diagram, or a set of prompt cards, depending on your preferred presenting style. If you plan to move around the podium or around the lecture theatre then make sure you are comfortable with the microphone and use of remote controls for moving on your slides.

Audiovisual aids

Even the most high-tech audiovisual aids will not transform a lecture. They are a very powerful teaching tool but they can be counterproductive if they are irrelevant, confusing or just distracting. AV aids should be used to enhance the lecture by offering clarification of material in the lecture, and are particularly useful for students whose preferred learning style is visual. AV also stands for Added Value.

Avoid:

- excessive detail
- complicated "busy" slides
- reading out your slides
- talking to the screen.

Remember! Technology can fail – if you are relying completely on AV aids you have no fall-back position. Your lecture plan should take this into account.

For help with preparing PowerPoint presentations and for some useful online links on presentation skills see "Using learning resources to enhance teaching and learning" in Explore around this topic.

Thinking point

How do you think using technology effectively impacts on learning?

Handouts

Another abiding misconception about lectures is that learners are adequately equipped for their task, i.e. they have the necessary prior knowledge, note-taking skills and motivation to follow the lecture. Smart use of handouts can compensate for lack of preparedness without spoon-feeding, stunting intellectual growth or substituting for attendance at the lecture.

Appropriate handouts provide:

- an outline of the lecture to help learners follow it more easily and allow them to concentrate on listening and processing the information as they hear it, instead of concentrating on transcribing every word. Later, the outline will help them review their notes and reflect on the content of the lecture
- essential diagrams so learners are listening and engaging, not drawing pictures
- materials that learners may find difficult or impossible to obtain elsewhere
- questions and tasks that will encourage learners to reflect on their learning
- gaps so that learners can fill in text or complete diagrams, thus aiding the retention of knowledge
- a supplementary reading list.



How to encourage active learning

As we have seen earlier in the module, lectures are very good for transmitting information, and techniques such as ‘signposting’ and breaking up the lecture can help participants’ concentration and retention of knowledge. However, unless the lecturer pays attention to the processes by which memory functions, they may overwhelm listeners by providing too much information in an unsituated form without context and connections. For information to be meaningful, it must be put into memory, stored and able to be retrieved (recall).

Information can be acquired through experiences (where it is stored in episodic memory) or through propositional knowledge (where it is stored in semantic memory). This requires the learner to pay active attention to what is going into memory as well as being able to make connections with previous knowledge so that stored information can be restructured in the light of the new information. The key messages for the educator are to ensure that activities are set in place so that learners can engage actively as well as make connections and restructure previous learning.

Bligh (2000) points out that introducing new information without time for consolidation or reflection (for example, in successive lectures on different topics) can result in interference with the processes of memory input and storage, so that learners fail to commit the information to memory. Educators need to ensure structured repetition of topics, which serves to reinforce learning by helping learners to store and retrieve information through different routes.

Long and Lock (2008) remind us also that there are physiological limitations on the rate at which information can be processed as well as a finite capacity to the system – too much information and memory will overload. Full engagement of memory lasts for approximately 20 minutes, after which little new information can be recalled (p. 4). Again, this provides a message for lecturing, in that pacing the lecture provides learners with opportunities for inputting and storing knowledge.

The points below provide some ideas for structuring lectures to aid active learning.

Some tips and techniques

- Start by asking participants to brainstorm problems that remain unresolved from the previous lecture or raise questions from the previous lecture or reading assignment.
- Change the demands made on the audience every 10 to 15 minutes.
- Pause for a few minutes two or three times during an hour-long lecture to allow participants to consolidate notes and develop questions.
- Generate discussion.

- Pause and ask participants to work in pairs to organise their notes and discuss the key points of the lecture. Each group could be asked to develop questions based on what is still unclear, which can then be addressed at the end of the lecture or at the beginning of the next one.
- Give a demonstration, use cases and examples, give illustrations, show a film or videotape segment or use an audio recording.
- Use other types of group work similar to those used for small groups.
- Ask the audience to stop taking notes before the end of the lecture and then ask participants to reconstruct on a blank piece of paper, as much of the lecture as possible – either in outline form or diagrammatically. This forces participants to review and consolidate key points and discover points for review.
- Encourage participation through:
 - – questions and quizzes
 - – gapped handouts and diagrams
 - – data analysis and interpretation
 - – brainstorming and buzz groups
 - – problems and cases.

See the [Small group teaching](#) module in this series for more ideas on how to run small group sessions which can be used to encourage participation in large group teaching sessions.

Top tips for a tip–top lecture

Plan your overall framework carefully

- Use the ‘Rule of Threes’:
 - tell the audience what you are going to tell them
 - then tell them it
 - then ask something about it that shows you that they understand.
- Avoid making rash assumptions about knowledge retained from previous teaching.
- Don’t try to cover too much material in your lecture.

Get the beginning right

- Introduce yourself.
- Outline your expectations.
- Provide explicit learning objectives.

The beginning of your lecture should do some of the following:

- engage
- prepare
- encourage curiosity
- challenge
- create expectations.

The first five minutes of attention form the ‘Golden Window’; use it well.

This is where you build rapport and make a meaningful link with your students. Depending on your personal style, some of the following may help you ‘catch’ the audience.

- Start with a story from personal experience.
- Use humour – a joke or cartoon on the screen (not too many and take care over the sort of humour you select).
- Set a challenge.
- Give a two–minute test or quiz.
- Don’t be predictable.

Work on your presentation style

- Your job is not to entertain – but you don’t have to be boring.
- Think about how you use your voice for emphasis, contrast, exaggeration, negation, etc. Your voice is a tool for gaining and holding attention.
- Participants in any part of the room should be able to hear you clearly. Avoid:
 - speaking in a monotone

- looking or sounding bored
- using vocalised pauses (‘you know’, ‘okay’, etc.)
- distracting gestures such as fiddling with glasses or jewelry.

Engage with the audience

- The brain is an analog processor (Sylwester, 1995) – liberally sprinkle your lecture with analogy and metaphor.
- Value the audience: monitor reactions, seek contributions – they are an integral part of your lecture.
- Use impact language to ‘headline’ your key points, e.g. ‘the vital factor’ rather than ‘the important factor’.

Leave them with a message

Lectures should have a planned ending – not just a last word for that day (or worse, just running out of time). Your ending should include:

- a summary of the main points
- a recap of the key questions posed/answered
- the ‘exit thought’ you would like your students to take with them
- a signpost.

To sum up

For all its antiquity and somewhat dowdy image, the place of the lecture in clinical teaching is assured now and in the future. This is partly a matter of its sheer convenience when the curriculum requires that large groups be taught large bodies of material in a formal setting, but often it is because it is the most effective way to approach transmitting information and/or problem solving.

Like most techniques in teaching and learning, lecturing requires its own set of skills, which can all be learned and refined through practice and reflection, but the single most important element of an effective lecture is that it should be a meaningful engagement for the audience and speaker alike. The key purpose behind a lecture is to ensure learners are offered learning relevant to their course that they cannot readily access by other means. If they participate in a meaningful engagement it will drastically increase the possibility of this occurring, thereby ensuring that they leave the lecture theatre or classroom better informed (or at least more challenged) than when they came in.

Congratulations

You have now reached the end of the module. Provided you have entered something into your log you can now print your certificate. To generate your certificate please go to [my area](#); and click on [complete](#); in the course status column. Please note, you will not be able to print your certificate unless you have entered something in your [reflections area](#);

Please now take a moment to evaluate the course and enter your comments below.

Further Information

This module was written by Sam Held, Visiting Lecturer at Bedfordshire and Hertfordshire Postgraduate Medical School, and Judy McKimm, Visiting Professor of Healthcare Education and Leadership, University of Bedfordshire. The module relates to areas 2 and 3 of the Professional Development Framework for Supervisors in the London Deanery.

Teachers' toolkit

[Lesson planning checklist](#)

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Further reading

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Course Glossary

Learning Activities

Select one or more of the activities below to develop your skills in lecturing and presentations skills.

If you are registered on the site, you can write up your reflections in the 'reflections area'. Click on the 'my area' link at the top of the page to access your personal pages. Please note you must be logged in to do this.

Activity 1

You have been invited to give a lecture on a clinical topic to 50 final year medical students. Identify a topic (without too much deliberation) and then list your aims and up to three learning outcomes or objectives.

Activity 2

Prepare an outline lecture plan for the subject you identified in activity 1. Use the lesson plan in the Teachers' toolbox to help structure the session.

Pay particular attention to how you propose to structure the lecture and how you plan to engage the students in activities to encourage active learning

Alternative activity

If you are actually required to deliver a lecture or presentation (e.g. for a case review or clinical presentation) in the near future, carry out activities 1 and 2 for your lecture.

Using the PLAN – REVIEW – REFLECT – ACT cycle, list the changes you would make after running the session and observing the impact on the learners/audience.

What worked well?

What could have been improved?

Activity 3

Actively observe some teaching sessions with a view to considering how AV and multimedia resources are used by the teachers and what the impact is on learning.

Identify your own staff development and learning needs in this area and find out about training sessions available in your organisation. Or get a colleague to give you some honest and constructive feedback on your use of technology and how you might improve your skills.