

Faculty Support—eLearning

Module 2

Giving a lecture

What you need to know to succeed in AO's online course for Faculty.



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For best use...

The “Giving a lecture” module consists of this booklet and an online course.

Booklet:

Designed to provide a practical guide about the characteristics of a good lecture and when we should use lecturing as a teaching tool.

Online component:

- Interactive video exercise
- Knowledge check
- Summary

Learning outcomes

After completion of this module, you should be able to:

- Describe the principles of giving a lecture
- Identify tips and tricks for using PowerPoint, video, and other resources
- Evaluate a lecture in terms of good and bad practice
- Giving and receiving constructive feedback

There are five modules, which complement each other. Together they give a thorough and up-to-date overview of the most relevant aspects of teaching others.

Module 1: How people learn

Module 2: Giving a lecture

Module 3: Running a practical exercise

Module 4: Facilitating small group discussions

Module 5: Moderating and debating

Crosslinks:



Booklet
refers from online exercise to booklets



Action plan



Knowledge check



Online exercise



Summary

What is a lecture?



“Talking and eloquence are not the same: to speak and to speak well are two things. A fool may talk, but a wise man speaks.”

Heinrich Heine;
(1797–1856)
German essayist and poet

A lecture is an apparently one-way process of presenting information in which the learner is confined to the passive role of being a listener—that’s how most people would define a lecture. But is it true?

Let’s first break down a definition of lecturing, then consider how it is put to best use. The British researcher and author Donald A Bligh defines a lecture as follows.

*“A lecture is a more or less continuous **exposition** by a speaker who wants the audience to **learn** something.”*

If we think about two key terms here we get a better understanding of what a lecture is and is not:

Exposition

An exposition provides a learning experience which can include any of the following: exhibition, show, explanation, description, account, elucidation, and clarification. It does not necessarily mean that the learner has to be passive; in fact audience participation is often an important part of the whole experience.

Learn

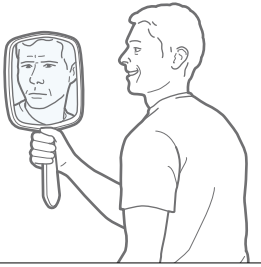
The key expression—giving a lecture—means more than simply presenting information; one also needs to enable learning. How can one make sure that learners remember and know when to apply newly acquired knowledge?

The 7 principles of teaching—as covered in module 1 “How people learn”—apply to all means and methods. Also your lectures have to be...

- Motivating
- Meaningful
- Actively involving
- Outcome driven
- Based on capacity to learn
- Incorporating reflection
- Using feedback

A lecture should not simply be an alternative to a book, or a website for transmitting information. A lecture gives the opportunity to structure and personalize the contents for a specific audience, so it becomes engaging, involving, and meaningful.

What is a lecture?



Remember this...

The audience perceives you differently than you do. You can try to see the lecture from their perspective by...

- ...videotaping it beforehand
- ...recording just your voice
- ...have a friend listening in
- ...practising in front of a mirror
- ...have a rehearsal with a small test audience



Lecture styles

A lecture can be delivered in a lot of different ways. The most widely used styles are:

Classical

The lecture is structured into parts which follow the line of reasoning behind the topic. It provides detailed, up-to-date, and evidence based information.

Principle or outline

The lecturer outlines general principles only. He does not attempt the level of detail as in the classical lecture format.

Introductory/debrief

The lecture is used in combination with other teaching methods. Either to introduce a topic, explain the learning process or to reflect on and summarize the learning outcomes.

Thesis

The lecturer takes a position on an issue and argues it.

Comparative

The lecturer presents and compares different schools of thoughts.

Technology aided

The lecturer uses technical equipment such as notebook, beamer, overhead projector, often in conjunction with video, DVD's, sound, PowerPoint, and animations.

Why a lecture?



“True eloquence consists in saying all that should be said, and that only.”

Francois de la Rochefoucauld;
(1613–1680)
French author and moralist

A lecture is just one of many tools in a toolbox—you have to know how to use it, otherwise it doesn’t fulfill its purpose. You also have to know the other tools, so you won’t just use the same one all the time. As with any teaching method, the choice of whether to lecture or not should be a strategic one.

Suitable outcomes

To decide whether a lecture is a suitable, you first need to think about the outcomes you want to achieve:

If you are planning high-level learning goals—such as critical-thinking skills—then a lecture is not suitable. Research indicates that lecturing should be used for knowledge based learning rather than for higher-order thinking or behavioral change.

Generally the lecture is quite limited in helping learners to...

- ...retain information
- ...transfer knowledge to other situations
- ...develop behavioral skills
- ...strengthen thinking or problem solving
- ...achieve changes in attitude or values

Some of the limitations—such as lower retention rates—can be minimized if one knows how adults learn (as explained in module 1 “How people learn”) and learners are actively involved in the process.

Other limitations—not being able to teach behavioral skills for example—demand a different teaching method altogether. (A range of such alternative teaching methods will be explored in other modules of the AO eLearning course for teachers.)

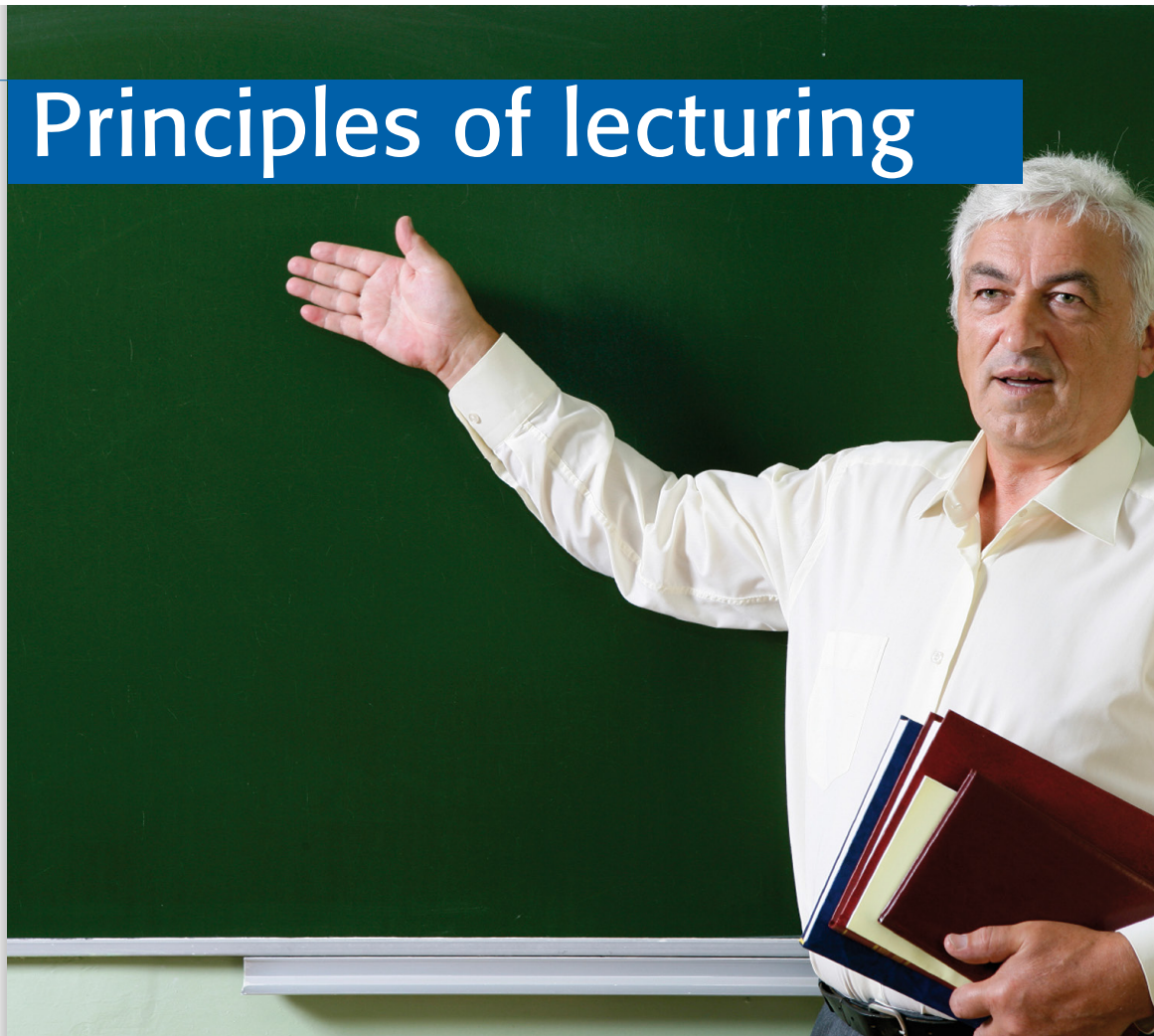


Remember this...

When preparing a lecture, do not make too many assumptions about your audience, just figure out the basics:

- Demographics (age, ethnicity, nationalities)
- Level of education and experience
- Knowledge of the subject
- Predisposition (curiosity, level of interest)
- Expectations

Principles of lecturing



Remember this...

Stay away from predictable openings such as "Good morning..."; "Today I am here to talk about..."

Instead, begin with an idea, interesting case anecdote, or current event and how it relates to your lecture.

You can also ask the audience a provocative question or set up a problem where the answer will be given later.

So how can we improve our lectures and make sure that they are effective learning experiences?

First of all, consider that we are only trying to achieve three key goals:

Connect with the audience
Capture their attention
Promote understanding

Common pitfalls

- Trying to cover too much information
- Failing to prepare adequately
- Being perceived as disorganized
- Encouraging passivity
- Ignoring learner's feedback
- Failing to use good examples
- Poor delivery

Think about each of these pitfalls—how can they be avoided?

The key is to plan and prepare only two main areas:

Content

- What are the learning outcomes?
- What information needs to be covered?
- How will the learning be structured?
- What resources are needed?

Delivery

- How is the learner going to be involved?
- What body language is appropriate?
- What presentation style?
- How will you respond to the audience and how will you get and offer feedback?

Principles of lecturing

A six-step preparation manual

You can improve your lecture by following the six steps described below:

1. Define learning outcomes

What do you want the learners to know, be, do, or feel at the end of your lecture?

2. Create closure

What learners hear last, they will remember. How will you express your summary or take-home message?

3. Design a structure

Set: How will you start the lecture? You only have between 7 and 20 seconds to engage your audience. If you haven't managed it by this time, you will "lose" them.

Dialogue: How will you structure the learning information into distinct steps and activities? It's best to stick to no more than 3 to 5 major learning points and get the learners actively involved!

Closure: At the end of your lecture close with a take home-message. Check that everything in your lecture leads to this.

4. Edit it

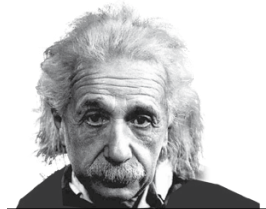
You have to prune and edit your lecture. Add interesting cases or anecdotes. Take away anything not needed to get your message across. Remember, less is more!

5. Prepare resources

What slides, handouts, aids are required?

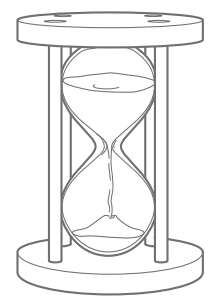
6. Practice

Work on your presentation skills and timing.



"I never teach my pupils; I only attempt to provide the conditions in which they can learn."

Albert Einstein;
(1879–1955)
German born theoretical physicist, and inventor of the theory of relativity

**Remember this...**

- ...the first 7 to 20 seconds are crucial
- ...less is more
- ...keep to time
- ...structure the lecture
- ...concentrate on the audience not yourself

Improving your presentation skills



"All the great speakers were bad speakers at first."

Ralph Waldo Emerson;
(1803–1882)
American essayist,
philosopher and leader
of the transcendentalist
movement

Although no one denies that personal qualities and charisma will impact the "performance" of a lecture, you don't have to be a "showman". Nevertheless, how you say something is also important, not only what you say—poor delivery is contraproductive because it can distract from the content of your lecture.

Take a look at our "Presentation Skills" mnemonic (memory aid) for some tips on how to get your delivery right:

LECTURER =

L—Language
E—Eye contact
C—Comedy
T—Talking
U—Unexpected
R—Rehearse
E—Engage
R—Respond

L is for language (specifically body language)

The American psychologist Albert Mehrabian calculated that only about 7% of understanding comes from what is actually said, 38% coming from the tone of voice, and 55% from nonverbal cues. You can use his findings for your lecture by paying attention to your...

- Posture (stand relaxed, face-forward)
- Body (communicate with your whole body)
- Gestures (be spontaneous, animated, and reinforce learning points)

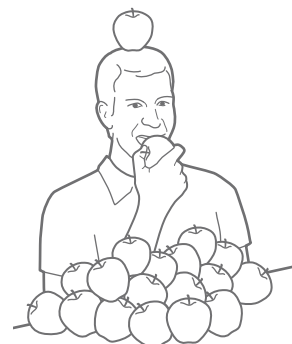
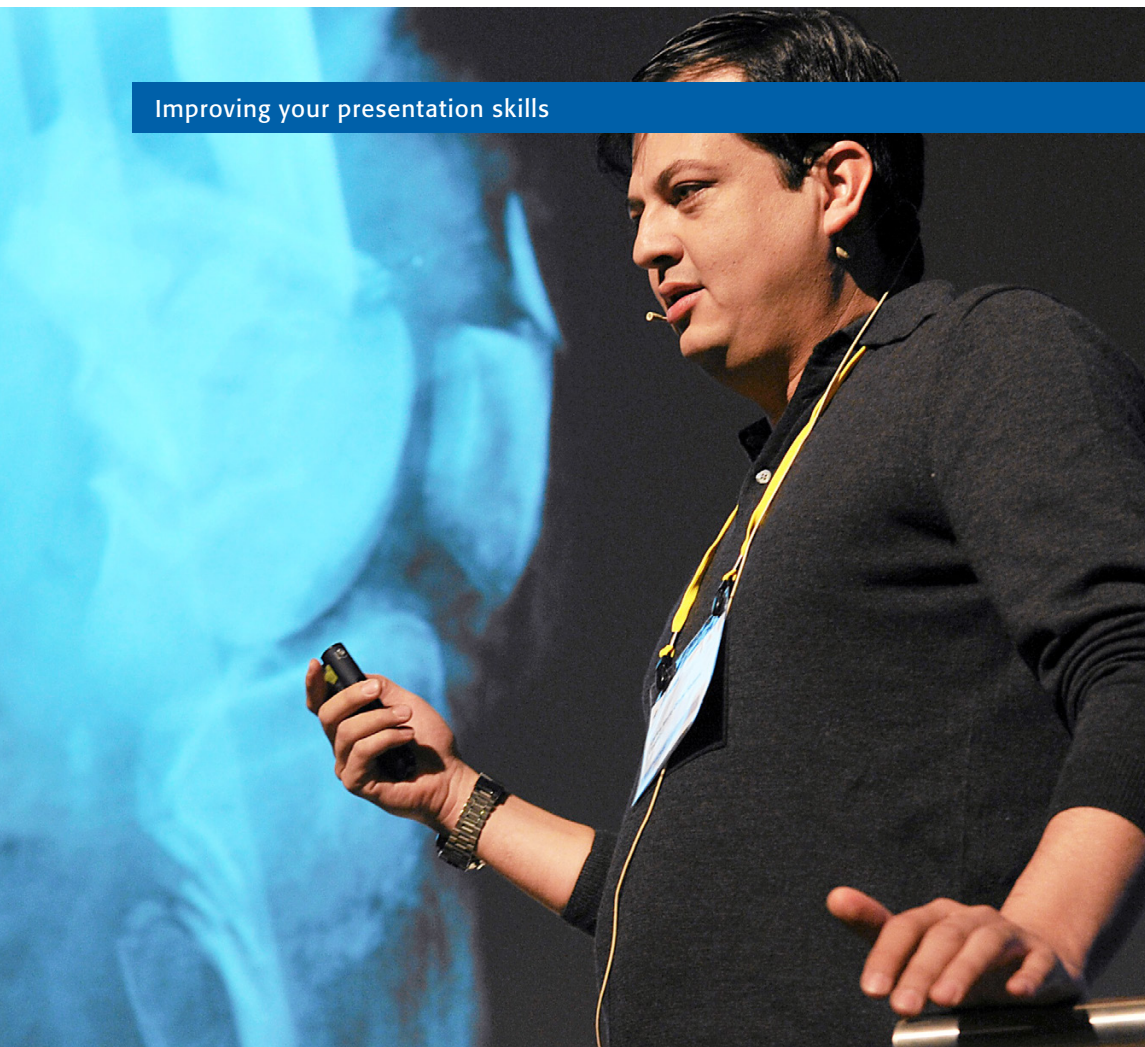
E is for eye contact

Maintain eye contact throughout your lecture. As soon as you break eye contact learners might drift off. It also gives the impression of anxiety, incompetence, lack of sincerity, and lack of credibility. (Thus it might prevent you from eliciting feedback.)

C is for comedy

People like to laugh—but humor needs to be used with restraint. It is very easy to offend with a joke not everybody thinks is funny. Also certain types of humor do not well translate into a different language or culture. Having a positive and enthusiastic approach is more valuable.

Improving your presentation skills

**Remember this...**

Not facts, credibility, energy, and commitment will “move” your audience. For this...

- ...use your own sense of comfort and confidence presenting material
- ...show enthusiasm and interest in teaching
- ...do your own research and study
- ...relate your personal experience, ideas, and feelings
- ...demonstrate true passion for your subject

T is for talking (how you use your voice)

Learners need to hear clearly what you say, understand every word of and also have the time to think about it:

Pace—slow down and pause to allow listeners to process and reflect on what you are saying.

Tone—avoid mumbling and using a monotonous voice.

Vocabulary—use short and simple phrases, avoid abbreviations and too colloquial language (you are bound to offend).

U is for unexpected

Keep your delivery fresh by providing novelty and variety—a dramatic or unusual event will be remembered far longer and in more detail than any routine experience.

R is for rehearsal (preparing the learning environment)

Practice—prepare notes with key words/messages (not a script) and keep to the allocated time.

Environment—before you start, check venue, lighting, and equipment.

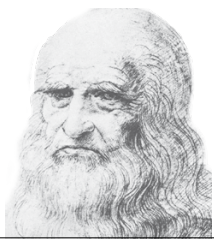
E is for engage

Engage the listeners with “interactive” sessions where they can participate. This ensures attention and active involvement. Use also visual aids and prompts to illustrate key messages.

R is for responding to the audience (getting or giving feedback)

Yes, you can always stop your speech and respond to your audience instead. Remember, no book or video responds to the specific reactions of an audience the way a good speaker does. It can also be useful to build in more formal feedback mechanisms, such as:

- Questionnaires
- Show of hands
(traffic light cards: green=I understand, amber=I partly understand, red=I’m lost)
- Audience Response System (ARS)
Touchpad technology that allows content specific feedback and interaction (for further details refer to module 5).



**"Simplicity is
the ultimate
sophistication."**

Leonardo da Vinci;
(1452–1519)
Italian inventor, artist,
and writer



Remember this...

Think about making your handouts "interactive". For example, include in your handouts tasks for students to do (individually or in twos or threes), with space for them to write down their ideas.

When students have put some of their own ideas into a handout, they value it a lot more than a printed piece that has been given to them.

The power of handouts



If half the audience is frantically scribbling down what you are saying they will not be thinking about the key messages delivered or the questions you are asking.

So what do you do? Give them a handout with everything you're going to say? No, there would be a danger of "mental switchoff"—why should learners listen if they've got it all written down in front of them?

However, if handouts are carefully designed they can be used to summarize the main points. The lecturer can then build on these points with additional information or references for further reading.

Design considerations

- Include plenty of blank space if handouts are to be given at the beginning of the lecture. This way learners can add their own notes.
- Clearly structure the topic—in any handout highlight headings and main points.
- Key graphics and charts should be incorporated in a handout because they are often difficult to copy down from a screen.
- Keep length to a minimum—include rather well-documented references than pages of text.

Also, bear in mind that distributing handouts to a large audience is not trivial and can cause considerable disruption. Have either piles of handouts for people to collect on their way in or out, or distribute smaller sets on cue.

Different types of handouts

There exist different type of handouts try a variety to help people with different learning styles:

- Gapped handout—a prestructure of the session with headings, graphics, and space for learners to make notes.
- Interactive handout—includes tasks for the learners to do (individually or in twos or threes) during the lecture, leaving space for their answers and ideas.
- Worksheets— include exercises that learners can complete. These "activities" or "self-assessment questions" may then form the start of a follow-on teaching session.
- Reading list—not only references, but further reading suggestions like book chapters, journal articles, and online sources.
- Primary source—brief excerpts or quotations from authors to be discussed during the session; also pictures, photographs, charts, etc. (*Copyright regulations!*).

Using technology



Remember this...

Reveal visual information gradually rather than all at once. This keeps learners focusing on your oral development of each point, instead of rushing to copy down the material.

Alternately, you could show all the points, then hide them and go back to explain each one separately.

Good visual aids will contribute immensely to any well prepared lecture. Surgeons can choose between many different types of visual aids:

- Clinical photographs
- X-rays
- Illustrations
- Bone models
- Computer graphics
- Video clips
- Computer animations

PowerPoint

Technological advances mean that almost everyone can now create their own overhead projection slides, often as part of a PowerPoint presentation. This has resulted in greater possibilities for lecturers, but there is also a higher risk that inappropriate content and formats might be used which could lessen the learning experience.

A cluttered, busy slide with wrong colors and graphics is impossible to read whereas a neat, well designed slide can communicate far more.

To check whether your PowerPoint presentations are “up to scratch” use the checklist on page 13.

PowerPoint tips

Slide after slide of bullet-pointed lists is unlikely to engage the audience—but is almost guaranteed to put them to sleep.

Think carefully about the slides you use:

- No more than 10–15 slides for a 20-minute lecture.
- Show visual aids only when you are talking about them.
- A picture paints a thousand words—and can be much more thought provoking.
- Employ variety—slide after slide of bullet-pointed lists are boring.
- Use charts and illustrations to show what you are saying—keep them simple and only use text if necessary.
- Use also illustrations to make your key messages “sticky”.

“Sticky” messages are the ones that your audience is going to remember, and they have six key attributes:

Simplicity
Unexpectedness
Concreteness
Credibility
Emotions
Stories

Video

Video clips can also be a useful lecture resource. Meaningful live-footage of a surgical procedure or a functional outcome can be used very effectively and engagingly.

Tips for including video clips in your presentation:

- PowerPoint works best with AVI files.
- Orientate the frame horizontally for video, it cannot be rotated.
- Short clips are best, especially to show steps of an operation.
- Check in advance that the video clip works at the venue.

There can be extra challenges when using technology such as PowerPoint and video in your lectures. For more detail about this, see the “trouble shooting” section of module 6—Using multimedia tools for teaching.



“Before you become too entranced with gorgeous gadgets and mesmerizing video displays, let me remind you that information is not knowledge, knowledge is not wisdom, and wisdom is not foresight. Each grows out of the other, and we need them all.”

Arthur C. Clarke;
 (1917–2008)
 British science fiction writer

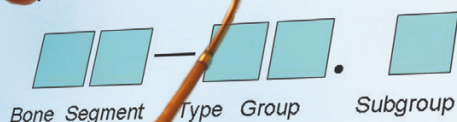
PowerPoint checklist

Learning outcomes

- Explain the rationale and process of the comprehensive classification of fractures and how it can be used in clinical decision making

...to provide a detailed guide to implementation

...is limited to bones, segments, types, and which is what is normally needed for every day clinical application and communication



Do your slides...



...have a consistent format, font, and layout?	
...have one basic point per visual?	
...present figures as diagrams or graphs?	
...hide the identity of any patients?	
...use large text for visibility: 20–36 point, up to 60 point for titles?	
...use simple fonts that are easy to read? (eg, Arial, Helvetica, and Verdana)	
...use no more than two font types per slide?	
...use lower case (not UPPER CASE)?	
...have no more than 6 lines of 6 words per slide?	
...contain no spelling mistakes? (use a spell-check)	
...make use of lists and bullet points?	
...use indents and bullets only one level down?	
...start with an “action” word and avoid full sentences?	
...avoid punctuation marks, unless it is a quote?	
...avoid irrelevant/personal images to fill spaces?	
...avoid unnecessary animation? (slide transition, etc)	



Remember this...

KISS: keep it short & simple!

AO Foundation vision and mission

Our vision is excellence in the surgical management of trauma and disorders of the musculoskeletal system. Our mission is to foster and expand our network of health care professionals in education, research, development and clinical investigation to achieve more effective patient care worldwide.
