Effective Lecturing

What is effective lecturing?

Lectures are at their best when they stimulate students to become active learners in their own right. Good lectures are well organised and presented clearly and enthusiastically with variation and student involvement. There is however, no single formula for giving effective lectures, and there is no single ‘right way’ to give lectures that are high quality learning experiences for students. Having said that, there are some critical elements of lecturing that apply in any discipline context and that, when attended to, will increase teaching and learning effectiveness. Ultimately, the criterion for judging effectiveness is not performance per se but outcome; and the outcome that counts in higher education is the quality of the student learning that occurs. This guide provides some suggestions toward ensuring the quality of that learning.

A five-point plan for effective teaching

1. Use the principles of good teaching
2. Have clear purpose(s)
3. Plan thoroughly
4. Manage problems strategically
5. Reflect, evaluate and renew

1. **Use the principles of good teaching**

The first step in the five-point plan for effective lecturing is to underpin lectures with principles of good teaching and learning. The University of Melbourne has developed statements on the scholarship of teaching and learning in a research-led university and suggestions about good practice in these areas. These are encompassed in the document, Nine Principles Guiding Teaching and Learning in The University of Melbourne. This document provides the basis for the following six principles, which are specifically relevant to lecturing.

i. **Provide intellectual excitement and experimentation**

Intellectual excitement is a powerful motivating force for student learning. According to University of Melbourne graduates, lecturers who are passionate and enthusiastic about ideas create such excitement. In addition, intellectual excitement and experimentation can be fostered in lectures through:
• Presenting knowledge in terms of broader contexts to help students understand the significance of what they are studying.

• Helping students to relate their knowledge in lectures to their own experiences.

• Assisting students to make discoveries for themselves through providing support to try out ideas without fear.

The ways in which individual lecturers might attempt to implement strategies such as these are many and varied but do not necessarily have to be complicated. For example, in order to help students relate lecture material to their own experiences, a lecturer might simply pause for a minute or two and ask students to consider in what ways the concept under consideration relates to their lives. A small number of responses might then be sought from the students. Specifically, the lecturer could ask something like:

“We’ve been talking for some time this lecture about X. I’d like to stop for a minute and ask you to think about how this concept applies to your everyday life. When you’ve thought of an example of this application, put your hand up and I’ll ask a few of you to share your thoughts”.

ii. Ensure research enhances teaching

The University of Melbourne prides itself on being a research-led university. But what does this mean for lecturers in their daily work? Some of the ways in which the distinctive character of education in a research-led university can be realised by lecturers are through:

• Demonstrating an understanding of and respect for existing knowledge and the traditions of scholarship in their lectures.

• Making students aware of the provisional nature of this knowledge.

• Helping students become familiar with the processes involved in the ongoing creation of new knowledge.

This can be achieved to a lesser or greater extent in all disciplines through the use of a wide variety of examples and illustrations.

iii. Facilitate an appropriate learning environment

Educational research demonstrates that when students reflect on their university learning experiences, they invariably focus, among a number of other factors, on the respect they are shown by staff and the availability, approachability and personal integrity of staff (Marsh and Roche, 1994). In the lecture context, such qualities can be demonstrated by the way in which staff relate to students as active participants in the learning process rather than as passive recipients of information. Students should be
encouraged by lecturers to be involved in thinking critically about the lecture material and pre-readings, to ask and answer questions and to apply the concepts being discussed to the ‘real world’ outside the classroom.

An important aspect of such student involvement is the opportunity to experience an international and culturally diverse curriculum. In this way, students are exposed to a wide and complex range of perspectives, encouraged to examine and question their beliefs and supported in the development of their ability to think critically.

Students also benefit from learning from each other. Brief discussion exercises within the lecture that provide for interaction among students are one simple way in which students can be offered the opportunity to benefit from collaborative learning.

iv. Demonstrate respect for student learning
Individual contact with just one staff member can be very influential for students – we can all recall an influential teacher. The personal impact that a single lecturer might have on students cannot be underestimated, even within the context of very large classes. An explicit concern for all students through the manner in which material is taught, examples are given and questions are sought and answered can have a significant personal impact. This concern is primarily one for intellectual development but may also, at times, include the personal circumstances of students and the referral to appropriate support services within the University.
Some of the specific ways in which support for individual student development may be shown in lectures are:

- Different learning styles are accommodated within the curriculum, teaching methods and support materials with, for example, the inclusion of text, graphs, pictures and/or multimedia to cater to individual student preferences.
- Provision is made, where practicable, for students to apply concepts to their own fields or disciplines of interest through offering specific examples of application or asking students to think of such examples.
- Students are challenged and stimulated through, for example, an expectation of having read key materials and by being questioned during the lectures.

Once again, there are many ways in which strategies such as those suggested above might be implemented, depending on the skills and preferences of individual lecturers.
v. Communicate clear expectations

In all learning environments, including lectures, students benefit from knowing precisely what is expected of them in terms of reading, engagement, participation and assessment. Where such expectations are made explicit and clearly explained, student understanding of the journey and destination – both of individual or sets of lectures and of the whole subject or unit – is significantly enhanced. Where subject outlines are vague or general, students may have difficulty ascertaining the objectives of the lectures. It is helpful to include these at the beginning of every lecture and to refer back to them at the end of every lecture in summary form.

When students are clear about the expectations of them, their understanding of their responsibilities as partners in the learning process is clear and the likelihood of their successful undertaking and completion of their study is increased. In lectures, the following suggestions may be helpful:

- Provide students with stated aims and objectives for each lecture, briefly outlining your purposes and intentions in terms of learning outcomes – it may be useful to use concept maps and/or advanced organisers.
- Ask students to monitor their progress during each lecture toward a stated goal, outcome or understanding and to give you feedback on this progress.
- Provide very clear instruction and explanation of difficult concepts.
- Where necessary to alleviate student confusion, use alternative methods of instruction and explanation, such as analogy, simplified schema, illustrations, examples from students themselves, or diagrams.

vi. Seek and incorporate feedback from students

Seeking feedback from students on their learning is one of the most powerful and efficient methods available to lecturers to guide their teaching. Ideally, such feedback should occur early in, and throughout, the semester and be used to shape teaching towards learners’ preferences and needs. There are numerous methods of obtaining useful feedback from students in relation to lectures, including:

- The ‘one-minute individual paper’. At the end of a lecture, students are asked to anonymously write down the three main points of the lecture and hand to you/leave for collection. Even a cursory skim of these responses will give a lecturer some indication of the general level of understanding and of any areas
of major confusion. These can then be commented on and/or addressed in the following lecture.

- The ‘what are your questions?’ technique. The lecturer stops with 10 minutes of lecture time remaining and asks students to read over their lecture notes, reflect on the lecture for a minute and then either individually, or in groups of two/three students, ask whatever questions they have about the lecture. This method indicates to students that you expect them to have questions and you are serious about these being asked and answered.

- The ‘between lectures exercise’ technique. This works particularly well for highly theoretical or conceptual lectures/subjects. At the end of the lecture, you ask students to think of or find an example or application of the theory/concept you have just discussed and to bring this to the next lecture. At the beginning of the next lecture, ask students to share these. Discussing these exercises and applications provides a practical illustration of the theory/concept as well as an effective way to review the previous lecture.

2. Have clear purpose(s) in mind

The second step in the five-point plan for effective lecturing is to have clear purpose(s) in mind. It may be tempting to think of lectures solely as efficient mechanisms for transmitting information. While they may provide such efficiencies, unless the transmission is accompanied by some reception on the part of the students (beyond furious notetaking), lectures are likely to have limited effectiveness in facilitating student learning.

That is, lectures can be time efficient but they can simultaneously be an ineffective use of time. The ultimate purpose of a lecture is (or should be) to facilitate student engagement and active learning and, therefore, not student passivity. The latter is more likely when students are ‘talked at’ by a lecturer aiming to transmit as much information as possible in the given time.

In addition to providing opportunities to incorporate the principles and practices outlined above, lectures provide valuable opportunities for:

- Setting a framework for dealing with material from texts, small group discussions and practical work.
- Activating students’ prior knowledge about a subject or topic.
- Facilitating student understanding of the lecture material by careful explanation related to the experiences students bring with them.
- Modelling ways of thinking relevant to the discipline.
- Demonstrating procedures, where applicable.
• Outlining problem-solving methods and outcomes, where applicable.
• Motivating students to want to know things they otherwise might not have explored.

The content, direction and outcomes of lectures are determined by their purposes. It is for this reason that the purposes of a lecture be clear to a lecturer before detailed planning begins. It may be helpful to ask yourself what the purpose(s) of each lecture are and to write these down. These points then become the basis for your objectives for each class. For example:

“The purpose of this lecture is to teach the principles of pricing policy, pricing decisions and pricing strategy. The objectives of this lecture are that by the end, students will:

a. Understand the three major principles behind pricing policy
b. Understand how pricing decisions are made
c. Understand the role of pricing strategy”

All content would then be linked to one of these three objectives.

3. Plan thoroughly
The third step in the five-point plan for effective lecturing is to plan thoroughly. Once the purposes are determined, careful and thorough planning will ensure an effective lecture. Ideas and suggestions for seven specific areas for planning follow. You will need to plan:

• The introduction
• The content
• The order and structure
• Examples
• Student and activities and ‘breathers’
• Stage directions for yourself
• The summary

i. Plan the introduction
The introduction must communicate clearly to the students the goals and objectives of the lecture. An indication that student engagement and activity is expected should be given (and, later, opportunities for such student engagement must also be planned – see section 3.5). Ground rules should be introduced or reviewed, as appropriate. In preparing the introduction to a lecture, it will be wise to focus on:

• Stimulating the interest of the audience to gain their attention.
• Establishing a relationship with the group.
• Outlining the content and structure of the lecture.
• One way to start is to greet the students warmly and make a comment related to how pleased you are to see so many of them in attendance. You might choose to share your enthusiasm for the topic:

“I’m delighted we’ll be talking about shareholder value today as it’s one of the most interesting areas in this subject.”

You might put up a slide with an overview of the lecture that indicates the major areas of consideration. Some more experienced lecturers start with an anecdote that relates to the objectives of the lecture. You could ask your more experienced colleagues if they have any anecdotes you could use.

ii. Plan the content
The amount of content is difficult to judge, especially for those new to lecturing. Keep in mind the adage:

Cover less to uncover more. The less you cover, the more students are likely to learn. With opportunities for student activity and questions added, running out of material is very unlikely. However, with less experience in lecturing, it might be useful initially to have supplementary material prepared.

Most students can only absorb three or four main points or concepts in 50 minutes, regardless of the subject being taught (Lowman, 1988). One of the most common mistakes new lecturers make is to include too much material. This causes them to rush and deliver the material poorly. Try to focus on three to four key concepts, with illustrative examples, rather than on covering everything. Establish a framework for student understanding of material and, where appropriate, sacrifice detail.

iii. Plan the order and structure
Will the order be logical – from simple to complex? Will the lecture start with a case study or example, which serves as an illustration for the principles to be taught?
Will principles be discussed first and examples given at the end?
Will examples be interspersed? Where will student activities come in the order?

Students sometimes find it difficult to discriminate between central issues, examples and asides in lectures. It is important to make explicit the shifts in levels of explanation in lectures. Providing structural cues to students improves ratings of clarity and the quality of note-taking (Brown and Atkins, 1988).
standard advice for oral presentations of most kinds is: Tell them what you are going to tell them. Then tell them. Then tell them what you have told them. This is good basic advice for structuring a lecture.

Further, you need to indicate to students when you are:

- Outlining the direction of the lecture (“Today I want to examine four aspects of...”).
- Beginning and ending a topic (“That completes the section on...Let’s look now at...”).
- Emphasising key points (“Overall, the basic principle to be remembered here is...”).
- Linking the sections of the lecture and/or linking to students’ previous knowledge (“Remember how.../ “Many of you will be familiar with...”).

iv. Plan examples
Not only will examples and illustrations break up a single presentation mode, they are a powerful method of illustrating concepts and principles. Plan examples to which students can relate and update these as often as possible. Plan to ask students for examples of concepts (and have some prepared in case of student reluctance or non-response).

v. Plan student activities and breathers
In order to allow students time to absorb and think about material, plan short, frequent ‘thinking pauses’: “I’m just going to stop for a moment and let you think about that.” Such ‘breathers’ are usefully followed up with questions to the students. Questions need to be carefully constructed so that they assist rather than confuse student understanding. Plan how you might, for example:

- Incorporate a group problem solving exercise.
- Ask students to participate in a group brainstorm.
- Ask students to read over their notes from the lecture so far and offer a precis of one point covered.
- Ask for an example from students’ lives of the concept under consideration.
- Use an excerpt from a video or an audio tape and seek student responses to it.

vi. Plan stage directions
Many academics new to lecturing find it helpful to include ‘stage directions’ among their lecture notes or plan. These are notes
vii. Plan the summary
Every lecture should have a summary that contains the three to four main points of the lecture. The summary is more important than new content that may have had to be dropped if time runs out. The summary offers students an opportunity to check their understanding and to fill in gaps they may have in their notes or thinking.

While lecturers may not think summaries are necessary, this may be because of their familiarity with the material in the lecture. On the other hand, many students have just heard the material for the first time and appreciate the opportunity to have it repeated concisely.

A clear, well-rounded ending leaves students in a positive frame of mind about the lecture and the material. Ideally, it should both let them know what they have learned in the lecture and stimulate them to want to know more.

viii. A final note on planning
It is sometimes useful to plan the first and last 10 minutes and then fill in the middle. However, while this may work for some, it will not work for others. There is no one correct or right way to plan a lecture. It may take some trial and error in order to determine the method(s) that work best for you.

4. Manage problems strategically
The fourth step in the five-point plan for effective lecturing is to strategically manage any challenges or problems that may arise in lectures. Most new lecturers, and many experienced ones, will be faced with problems related to lectures from time to time. Some of the most common are outlined in the table below along with suggested strategies to manage each. The table is divided into four sections: student learning; student management; teaching; and technical issues.
<table>
<thead>
<tr>
<th>Issue</th>
<th>‘On the spot’ strategy</th>
<th>Other strategies</th>
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<tbody>
<tr>
<td>Student learning:</td>
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<tr>
<td>Students seem passive or unengaged</td>
<td>- Ask students to complete a quick quiz&lt;br&gt;- Ask students to share their lecture notes with their neighbour&lt;br&gt;- Ask a question to the whole group&lt;br&gt;- Take a ‘roving microphone’ out into the student body and ask questions&lt;br&gt;- Ask students for their questions/comments</td>
<td>- Plan regular activities for students in lectures</td>
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<td>Student reveals personal problem at the beginning/end of a lecture</td>
<td>- Refer to Student Counselling or other student support service as appropriate</td>
<td>- Have material on student services available at each lecture</td>
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<td>‘On the spot’ strategy</td>
<td>Other strategies</td>
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<td><strong>Student learning (cont’d):</strong></td>
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<tr>
<td>Student reveals a study related problem at the beginning/end of a</td>
<td>- If the problem is likely to be shared – for example, confusion about assessment</td>
<td>- Pre-empt this by highlighting the availability of relevant services to all</td>
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<td>lecture</td>
<td>requirements – address with the whole group during that or the next lecture</td>
<td>students early in the semester.</td>
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<td></td>
<td>- Refer individual students to academic/language support service as appropriate</td>
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<tr>
<td>A large number of students seek answers to individual specific</td>
<td>- Set up a regular question and answer session before or after lectures to deal with</td>
<td>- Make use of subject homepages to provide answers to FAQs</td>
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<td>questions at the end of lectures</td>
<td>such questions</td>
<td>- Seek advice from subject/course coordinator on student management policies</td>
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<td>- Ask students to make appointments to see you individually</td>
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<td></td>
<td>- Make a time to see a group of students</td>
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<td></td>
<td>- Refer students to tutors, as appropriate</td>
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<tr>
<td>Student has a disability and a related difficulty with his/her work</td>
<td>- You may not have to do anything – check with the student</td>
<td>- Seek advice from Disability Support Office where necessary</td>
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<td></td>
<td>- If appropriate, refer the student to the Disability Support Office</td>
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<tr>
<td><strong>Student learning (cont’d):</strong></td>
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<tr>
<td>There is a ‘bimodal distribution’ within the group - students with very strong and very weak backgrounds in the area</td>
<td>- Monitor student non-verbal and verbal feedback while lecturing and respond, where necessary, to review material and/or point to additional resources</td>
<td>- Communicate to the whole class that there are students with differing backgrounds in the class and offer extension resources/activities for those who want them. - Ask senior colleagues for advice on managing this challenge</td>
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<tr>
<td><strong>Student</strong></td>
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<tr>
<td>‘Crowd control’ is needed</td>
<td>- Stop the lecture until students are quiet/behave appropriately - Ask student(s) to stop disrupting their fellow students</td>
<td>- Make ‘mature, responsible behaviour’ and ‘paying attention’ two of the initial ground rules at the start of semester</td>
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<tr>
<td>Mobile phone rings</td>
<td>- Stop the lecture and calmly and politely ask all students to turn their phones off</td>
<td>- Make turning phones off a ground rule at the start of semester</td>
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5. **Reflect, evaluate and renew**

The final suggestion in the five-point plan for effective lecturing is to be reflective and to act on your reflections. A key characteristic of effective lecturers is their ability and willingness to continually evaluate how effectively their teaching is enabling student learning and to make adjustments where necessary. There are many methods of gathering data on which to reflect. One of the most valuable for new lecturers is self-reflection. Using a checklist such as the one at the end of this guide is one way to reflect on one’s lecturing. Equally, mentally reviewing a selection of lectures, listening to an audio tape of key lectures and/or viewing a video tape of a single lecture can be powerful means through which to review one’s lecturing. It is vital, in any such reflection, to keep the ultimate question central in one’s mind – How does my lecturing affect student learning?

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<tr>
<td><strong>Your Teaching</strong></td>
<td>- Skip the last couple of points and go</td>
<td>- In future, earmark an expendable section of the lecture with a ‘stage direction’ or reminder note such as, “use this only if there is time”</td>
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<td>The lecture time is about to run out and you are not finished the material you set out to cover</td>
<td>- Straight to a summary to consolidate the key concepts and principles you are aiming to get across. Ensure that you make links to the next lecture</td>
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<tr>
<td><strong>Technical</strong></td>
<td>- Use the whiteboard instead</td>
<td>- Arrive early and check equipment</td>
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<td>Overhead projector bulb blows / projector doesn’t work</td>
<td>- Borrow an OHP from a nearby room</td>
<td>- Carry a spare bulb</td>
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<td>- Call technical assistance</td>
<td>- Carry the phone number for technical assistance</td>
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<tr>
<td>PowerPoint won’t work</td>
<td>- Use the whiteboard instead</td>
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<td></td>
<td>- Use the OHT instead</td>
<td>- Bring ‘back up’ overhead</td>
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<td></td>
<td>- Ask students to follow notes provided previously on the web</td>
<td>- Transparencies and whiteboard markers</td>
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<tr>
<td></td>
<td>- Ask students to take notes</td>
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<td></td>
<td>- Bring ‘back up’ overhead</td>
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Frequently Asked Questions

**How much material should I include in lectures?**
The short answer is: less is more. Three/four key concepts with several examples of each and opportunities for students to test their understanding of each will be ample material.

**How do I engage the students?**
Using examples and illustrations that are meaningful to students – remember as you get older, they get younger! – will help engage their interest and understanding. Present day examples are often the best bet. And as often as possible, demonstrate your respect for students, for their learning and for the background knowledge they bring to learning.

**Should I put the notes on the web before the lecture?**
It is up to you to decide whether having the notes prior to lectures will be helpful for students or not. Many students expect such provision, use the notes to help prepare for the lecture as well as to make their own notes on during the lecture and as a basis for revision following the lecture. Some students will use lecture notes as a substitute for turning up to lectures. To minimise this, you should ensure that your lectures add value by including additional examples, quick, useful exercises for the students and the like. You might like to consider the level of detail that would be most useful in lecture notes for your particular students.

**Should I use handouts?**
Handouts concern many lecturers. Some find it difficult to strike a balance in terms of the amount of information they provide to students. If handouts are too long and detailed it is difficult to see why students should bother attending lectures. Lengthy handouts given before a lecture tend to distract students and this can become a source of frustration for the lecturer. If handouts are used, they should provide a concise outline only, perhaps with some key terms defined and key references. Lecture notes that provide a skeleton outline with spaces for students to add their own notes provide the opportunity for both a summary of main points and the personalisation of that summary. In some circumstances it may be appropriate to provide handouts after the lecture.

**Should I use multimedia and audiovisual aids?**
The effectiveness of multimedia and/or audiovisual aids depends on the quality of the aids as well as on why and how they are used. The point of introducing slides, video or other media is not to entertain or merely to break up a verbal presentation, but to enhance learning. They should focus attention on aspects of the material, improve the clarity of explanation, and provide strong visual...
reinforcement of concepts. It is not enough to show a diagram or video and assume that the meaning is self-evident. Students should be directed to look for particular things relevant to the topic. Posing questions before the use of such aids and providing an opportunity for student response immediately after their use can be most effective.

**How do I know the students understand the lecture?**
When lecturing, as well as seeking feedback as suggested earlier, it is helpful to be guided by the living audience. The best planned lecture can go awry if you have made erroneous assumptions about student backgrounds or if a concept is more complex for students than you imagined it would be. Keep your eyes on the audience. Pause occasionally to informally assess the impact you are making. Ask questions:

“Can you see that clearly?”
Watch for signs of confusion and puzzlement and respond to them directly:
“I can see some people are puzzled by that. Let me just emphasise the main point...”

Acknowledge that the material may be difficult and ask students to direct you to the most confusing parts so that you can re-explain them.

**How can I get feedback on the quality of my lectures?**
The best method is to ask the students for brief, specific feedback throughout the semester and to incorporate this in incremental changes and improvements. Listening to your lectures on audiotape or watching a videotape of yourself teaching are challenging but useful options. You might consider soliciting the assistance from a critical friend, preferably a colleague whom you judge to be a very good lecturer, to watch you lecture and provide critical and constructive feedback.

**A final word**
Research into university student learning consistently shows that students respond to, engage with and value enthusiasm in their lecturers. The lecturers who have the deepest and most lasting impact on students and graduates are those who are passionate about their subject, about teaching and about student learning. From the student point of view, lecturers certainly have significant potential to be “…the lifeblood of universities…” (Stevens, in Race, 2001).

One quick suggestion that comes from expert Phil Race is to hand out a post-it-note to each student. Ask them to divide the post-it-
note into three sections, labelled ‘stop’, ‘start’ and ‘continue’. Ask
students to indicate one thing they would like you to stop doing in
lectures, one thing they would like you to start doing and at least
one thing they would like you to continue doing. This will give you
excellent feedback on your teaching.
References and Further Readings