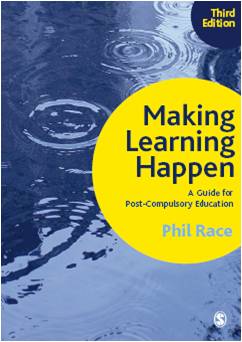
# Phil’s latest stuff on large-group teaching!

This ‘chunky’ download from my website contains much of Chapter 6 from my latest edition of ‘Making Learning Happen’ and Chapter 3 of ‘The Lecturer’s Toolkit’, and is made available here as accompanying material for workshops I run on ‘Making Lecturing Inspiring’ and similar themes. More importantly, I hope this compendium may be useful to anyone who works with students in large groups, rather than just those who happen to be able to be at my workshops. The two chapters overlap in linking what happens in lectures to the factors underpinning learning that I’ve written about in both books, but also tackle different dimensions of the large-group teaching context. You could say the chapters represent ‘two bites at the same cherry’!

# Extracts from ‘Making Learning Happen: 3rd edition: (2014)’: London: Sage, Phil Race

**Chapter 6: Making Lectures Inspiring**

# How have things changed in the lecture room?

You may remember lectures quite differently from the way present-day students actually experience them. You may have been inspired in some lectures, bored stiff in others. You may have scribbled down pages of notes in each lecture, or just sat and thought. The lectures may have been the backbone of what you needed to learn, and what you needed to give back in exams or assignments. The course *was* the lectures, you may have thought. Here are some differences between the lecture context now and formerly.

* Now many – even most – students arrive at lectures without a pen, and without anything to write on. That just didn’t happen in an earlier era of lectures.
* Many students now bring their laptops, tablets or smart phones to any lecture, and use them. They may use them really relevantly and productively if we’ve got them hooked on a topic, or they may (and do) use them frivolously if we haven’t.
* Now, students expect that most of the content of a lecture will be made available to them electronically, including the slides lecturers use, and other supporting material which used to be given to them on paper, as handouts.
* Students now expect that if they miss a lecture, they can still download the slides and supporting resources, and of course, they do this.
* They may (as in most of the UK now) be paying (or borrowing) ‘tuition fees’, and have higher expectations of lectures than formerly. This, they think, is the ‘tuition’ they’re buying.
* They may be expecting the standard of many ‘TED Talks’ they can quickly find on the web, and expecting that their own lecturer’s performance will continue to be available to them, recorded in this quality.

If in doubt (for example) that students don’t want to use pens or bits of paper in lecture nowadays, just look at some of the audience shots in TED Talks. And why, when resources such as TED Talks (and the lecture element of MOOCs) are free, easily available, and (mostly) quite excellent in quality, should today’s students bother to get out of bed for a lecture, we may ask?

**Bringing lectures to life**

What are lectures for? Long gone are the days where students came to lectures to boringly write notes to study and learn, and give back boringly in exams. In our digital age, the best content in the world is free, online – but there’s so much of it. Many of the world’s best lecturers in any subject can be watched free online – often with wonderful visual backup. With today’s free massive open online courses (MOOCs), all this is available to anyone. So why do we need lectures in universities and colleges? Do we need them at all?

When we get it right, it’s about *being* there. It is quite different being in the same room, at the same time, as fellow-students, and indeed the lecturer. But the agenda is no longer just the subject content. It’s now the processes that are important to students. The questions in their minds include:

* Why should I get out of bed for this lecture?
* What’s really important amid all this subject content?
* Does what I already know about the topic count?
* What exactly am I going to be required to show?
* What does a good answer to an exam question look like?
* What does a good essay or report or dissertation or portfolio look like?
* How do the minds work, of those who’re going to assess my learning?
* How best do I get my own particular head around this stuff?
* What are the important questions and issues I should think about?
* Who’s worth reading up on?
* When and how should I start getting my act together to show I’ve mastered this stuff?
* Why not just get this essay written and catch up on that lecture from a mate?

Countless students have already found that it’s just no good copying the notes from someone who was there. They’ve only caught bits of it. It doesn’t work just downloading the slides and handouts from the web. It’s not even much good watching a podcast of the event, it’s just not the same as being there, breathing the same air, sharing the same excitements (and frustrations) of a live lecture. The podcast might, however, be a good aide-memoire for someone who *was* there, giving reminders about the thoughts going on during the occasion, the un-asked questions, and so on. But you’ve got the be there in the first place for that to happen.

So what can we lecturers do? Don’t ‘lecture’ for a start. Don’t use up valuable time getting students to write down things we say or things we put on our slides. Instead, use every minute of the time addressing how human beings really learn.

1. Arouse the *want* to learn – get them excited, curious, fascinated.
2. Clarify what they *need* to learn, and what they need to become able to do with the subject.
3. Keep them ‘*doing’* – asking questions, arguing with each other, probing and questioning ‘what *else*?’, ‘why *else*?’, ‘how *else*?’ and so on.
4. Help them find out where they’re at, getting *feedback* from the fellow-students beside them behind them, in front of them – each student needs to know how he or she is doing right there and then.
5. Get them *making* *sense* of the key bits there and then, so that the learning has already been substantially started right there in the lecture room.
6. Get *them* talking to each other, explaining things to each other, arguing with each other, helping them to get their heads around the subject.
7. Above all, get them *making* *judgements* – making decisions, assessing their own thinking and each others’ thinking, assessing your thinking, helping them to get their heads around how assessment works, long before their learning will be assessed. Now and then, give them stuff in lectures to assess – good and bad reports, good and bad essays, good and bad exam answers. More learning happens from assessing a *range* of examples – not just from seeing exemplars.

A successful lecture isn’t a ‘lecture’ at all in the traditional sense. It’s a busy event – everyone is busy. It’s a noisy event, at times everyone is talking, arguing, probing, questioning, practising, and above all *thinking*. Time flies, for them and for us. It’s unmissable. If you weren’t there, you’ve lost it. We need to use all the tricks in the book to make lectures work in the age of MOOCs.

Set yourself the challenge of watching how 20 colleagues do it, and taking on board from each ‘two things that really worked with their students’ and avoiding ‘two things that just didn’t work’. Trial and error rules, but it’s less of a trial to learn a lot every week from others’ errors. Watch the students’ faces in other people’s lectures. Watch their body language. Watch what works, and what doesn’t. That’s the most important learning *we* can all do in lectures.

# Why, nowadays, have learners in large groups?

There are many reasons why large-group teaching remains important in post-compulsory education, but we need to bear in mind all the time the question ‘what can *we* do for students that can’t be achieved by a TED Talk or any other online lecture?’. Among the reasons for striving to make lectures work effectively for students, is that there are many more learners in our systems than before, and with more pressures on institutional finances, it is clearly cost-effective to try to work with them in large groups for at least some of the time. Also, learners *expect* lectures. But perhaps the most significant reasons for making good use of large-group teaching is to give whole cohorts of learners shared experiences, so that each learner feels part of the group and knows what is expected of them. Feedback from students on their experience of higher education (including that gathered annually since 2005 in the National Student Survey in the UK) shows that students want more contact with lecturers. Making the most of such contact in large-group contexts is a very significant way we can enhance students’ perceptions of the quality of our higher education provision – when, of course, we succeed at making lectures inspiring.

What are the differences between the kinds of learning which happen best in a large group and those which go on in all the other facets of higher education, such as tutorials, seminars, laboratories or problem classes? In some subject disciplines, subject coverage is split carefully between large-group sessions and various kinds of small-group sessions. Probably the most important features of the learning which we should strive to engender in large groups are:

* giving students a sense of ‘belonging’ to a course or module cohort, and making the large-group experience so positive that they feel valued and cared for
* helping learners to see the big picture, including exactly where tutorials, seminars and other teaching–learning elements contribute to the overall context
* giving the whole group shared experiences – for example, developing attitudes and feelings towards the subject matter and the various sources and resources available to deepen the learning experience
* providing the overall information map – for example, using handouts, downloadable files from the intranet, reading lists, specific references and so on
* helping learners to set their sights regarding the real meaning of the intended learning outcomes, what forms the expected evidence of achievement of these outcomes should take, and the ways in which learners’ evidence of achievement will be assessed in due course
* sharing expectations about what learners are required to do on their own, so all members of the whole group are aware of the expected scope of reading around the subject they are intended to do
* providing an opportunity for clarification, so that collectively learners can have their questions answered
* helping learners to gain a real sense of identity in the cohort and to see the links between the different subject areas they are studying
* linking learners’ experience of lectures to all the other things they can now access at any time, Ted Talks, online lectures, and all sorts of things in the digital world outside
* inspiring learners – arousing their curiosity and interest in a subject, and motivating them to do a lot of reading and studying – starting them off and keeping them going on making learning happen.

Tutorials, seminars and other small-group learning contexts are necessarily not identical learning experiences for different sub-groups of the whole cohort, so large-group sessions need to address all the things that *all* members of the whole group need to share, particularly explanations about the evidence of achievement students are required to meet to reach the targets specified in assessment criteria.

# What do students think of lectures?

In the UK National Student Survey, as used from 2005-16, the whole of the first section of the survey (the first four statements) links to large-group teaching. The section is called ‘The teaching on my course’, and students are asked to make judgements as follows: ‘definitely agree’, ‘mostly agree’, ‘neither agree nor disagree’, ‘mostly disagree’, ‘definitely disagree’, or ‘not applicable’ on each of the following statements:

1 Staff are good at explaining things.

2 Staff have made the subject interesting.

3 Staff are enthusiastic about what they are teaching.

4 The course is intellectually stimulating.

Now in 2017, one of these statements has been replaced, as follows…

1. Staff are good at explaining things.
2. Staff have made the subject interesting.
3. The course is intellectually stimulating.
4. My course has challenged me to achieve my best work.

These statements apply not just to large-group teaching, but to all the other aspects of a course. However, I am sure that when most students make their judgements on statements ‘1’ to ‘4’ above in the survey, the first thing to cross their minds is the most public form of teaching – lectures. Where students are paying tuition fees for higher education, one of the first things that comes to their minds in the ‘value for money’ stakes is their experience in the lecture theatre. And perhaps the second thing to come to mind might be the answers to questions 1-4 that would be given by audience members at a good TED talk?

Back to our lectures. The first four NSS statements link in turn to how well we have managed to address the factors underpinning successful learning. Students are likely to think we’re good at explaining things if we have made it straightforward for them to make sense of difficult concepts and get their heads around fundamental principles. Students are likely to think we have made the subject interesting if we have kept them actively engaged in their learning, including in large-group contexts. Conversely, if we have bored them in lectures, we are unlikely to get a vote of confidence on statement ‘2’.

In particular, large-group contexts are probably our most important occasions to demonstrate our enthusiasm about what we’re teaching. If *we* look bored with what we’re teaching, we can hardly expect to enthuse our students about it. It’s not just enthusiasm about the subject matter we need – it’s also enthusiasm about *students.* If we give the impression of being really pleased to be there with them in lectures, and we’re really keen to ensure that they succeed, we’re more likely to convey our enthusiasm. Moreover, if we really show that we care that our students succeed, that vote of confidence will be enhanced. That’s where helping students to get a real grip on what we’re looking for as *evidence of achievement* of the learning outcomes comes in. Similarly, if we do everything in our power to help students *learn by assessing* right there in the lecture room, so that in due course they can prepare successfully for assessment, we’re winning.

Statement ‘3’ is rather more complex. What do we mean by ‘intellectually stimulating’? Naturally, if we’ve got ourselves into the position of giving lectures on a topic, we might be expected to find it intellectually stimulating ourselves. But in the UK’s National Student Survey, statement ‘3’ is about whether *students* find the subjects intellectually stimulating. And this extends to ‘what can we do to *be* intellectually stimulating?’ – a much tougher nut to crack.

Furthermore, later in the Survey, under the title ‘Academic Support’, statements 12 and 13 (in the 2-17 survey) are:

12 I have been able to contact staff when I needed to.

13 I have received sufficient support and guidance in relation to my course.

When students respond to these statements, they are likely to think of their lecturers, and at least some of the support and advice students receive should link to large-group teaching. Students are also likely to think of whether their lecturers were sufficiently available for contact when needed too, even though when groups are very large, it may be intended that they contact other staff (for example, teaching assistants and personal tutors) rather than lecturers for most things.

There is plenty of evidence nowadays that students are becoming more choosy regarding which lectures they attend – and yet the evidence also shows strong links between non-attendance at lectures and failure or drop-out. A student recently explained to me ‘we go to the first couple of lectures to see how they go, and if we don’t think much of them we tend to skip the lectures and get the slides and other information from the web later, or from mates who were there, instead of turning up’. With lectures, we may not have any second chance to make a good first impression.

# Making learning happen in large groups

There is no ‘best’ way of working effectively with a large group of learners. There is no best way of lecturing – though lecturing in the traditional sense is unlikely to be the best way of making learning happen, when the learning will in due course be measured and accredited. Furthermore, if all lecturers did the same things in lectures, it would be very boring for students. Indeed, the most common criticism students make about the lectures they find least useful is summed up in one dreaded word in their feedback to us – ‘boring’!

There are as many ways of working excellently with large groups as there are skilled lecturers. Many of them do it successfully in their own ways, and others trying to imitate them just can’t do it – it’s a very personal thing, excellence in teaching large groups. We can, however, improve what we do in large groups through two main approaches:

* observing how many, many colleagues go about it, and noting things to try to emulate and, particularly, things to avoid doing ourselves;
* paying attention to the *learning* which is happening in large-group contexts, and consciously addressing the factors underpinning successful learning outlined in Chapter 2 of this book.

In the discussion which follows, I will address each of these factors in turn.

## 1 Wanting to learn

What can we do to enhance the *want* to learn in large groups?Ideally, each large-group session should result in as many as possible of the group members going away fired up to continue their learning. Different lecturers achieve this in completely different ways. Probably the most important common factor is enthusiasm. If we seem bored with a subject, there’s not much chance we will inspire others to go and learn more about it. But it’s not just enthusiasm for the subject that matters. Learners are quick to pick up the vibrations of our enthusiasm for *themselves as people.* Lecturers who come across as really *liking* learners – and respecting them and treating them accordingly – do much to inspire learners to learn. If we enhance the *wanting to learn* dimension, attendance at large-group sessions improves, students look forward to our lectures, and try not to miss them.

One factor we can play with is students’ *curiosity.* If they’re curious about the topic, they want to learn it – they want to find out answers to the questions about the topic which are in their minds. It’s therefore very useful to us to find out what questions students want to explore. Even with hundreds of learners in a lecture theatre, in just a few minutes we can ask everyone to jot down on a post-it ‘What I really want to find out about is…’. We can count up the number of times the most popular questions occur and make slides containing these questions. We can then confidently proceed to address these, knowing that many members of the audience wanted to find out more about these aspects of the topic.

Another aspect worth addressing is the *learning incomes* of the students. Another post-it scenario: ask everyone to jot down their response to the statement ‘The most important thing I already know about “x” is…’. Students often surprise themselves (and indeed surprise us too) with how much a large group collectively knows about a topic before we’ve even started a lecture on it. Students are more likely to come to a large-group session if they know that we’ll take into account and build upon what they already know about the topic, rather than them having to sit there being told things they already know.

## 2 Ownership of the *need* to learn

How best can we clarify the need to learn in large groups – sharing the standards we expect regarding students’ evidence of achievement, putting the intended learning outcomes to work? Large-group teaching contexts are our best shot at clarifying the need to learn, not least because it is the *fairest* context in which to give learners information about exactly what we expect of them. This is the context where it is fair to tell everyone at once about the assessment standards which underpin the achievement of the intended learning outcomes. Large-group sessions are occasions when we can give cues and clues about the sorts of exam questions which would be reasonable ways to measure learners’ achievement of the intended outcomes – much better than giving such clues to only *some* of the learners in particular small-group tutorials or in response to individual questions privately. We can collect learners’ individual enquiries about the standards expected of them from all sorts of contexts, but the best chance to clarify our expectations is when *all* the learners in a cohort are present. Indeed, if we make a habit of using large-group contexts to let learners into the fine detail of our expectations, large-group session attendance is improved.

It’s useful to start each and every large-group session by going through the intended learning outcomes for that particular session. There are normally only three or four of these. It helps further to illustrate what kinds of evidence of achievement we’re expecting students to furnish in due course, for assessment. It is also useful to remind students of what they should already be able to do as a result of past lectures. Where possible, arrange that the intended learning outcomes remain visible for the whole of the lecture – for example, by showing them on an overhead projector continuously, while doing other visual things on PowerPoint slides. This allows us to make it quite clear now and then through the session exactly which outcome we’re addressing, and it helps students to keep the overall picture of the session in mind throughout.

## 3 Learning by doing in large groups

What do learners *do* in lectures? What would we *like* them to do? Which of the things they do have high learning payoff? And which things have little to do with learning?The thing to think about, however, is which of these learner actions really link to learning, and how can we make their experience of your lectures a good one?

## What can *we* do in large groups?

As already said, there is no one best way of running a successful large-group teaching session – different people do it well in quite different ways. Asking workshop participants to identify the most important large-group teaching behaviours gives a wide range of responses, all of which have their place. But each works best for different people in different ways.

All these processes can be regarded as contributing to making learning happen in large groups. Note how many of these actions go well beyond just ‘lecturing’ or ‘telling learners things’. The more different things we can include in any large-group session, the less likely it is that it will be found to be boring by learners.

## The point is that even if for much of the time you’re standing, and talking, and listening, there are a lot of different ways you can cause learning to happen.

## 4 Learning through feedback in large groups

How best can we make use of large groups as a feedback-rich environment? Too often, the value of lectures as feedback-receiving opportunities is underused. We can give each and every learner in even the largest group feedback, but only if we have got them to do something – decision-making, problem-solving, and so on. Feedback only really works after action.

### How not to do it (1)

* **Lecturer**: asks class a question. Waits seven seconds. Then answers own question.
* **Students**: sit there thinking ‘Just been asked another question. I’ll hang on for seven seconds, then he’ll answer it, and I’ll write down the answer.’

I’ve seen somewhere a figure for how long the average lecturer waits after posing a question before proceeding to answer it – 1.8 seconds!

### How not to do it (2)

* **Lecturer**: asks class a question. Waits seven seconds. Picks a student to try to answer the question.
* **Students**: sit there thinking ‘He’s just asked another question. I’ll keep my head down, avoid eye contact. With a bit of luck, he’ll pick someone else to answer the question, and if they get it right, I’ll write down their answer.’

### How to do it?

* **Lecturer**: asks class a question, showing it on a slide so students don’t forget what was said. Then he/she says ‘Everyone jot down privately your own answer to the question.’
* **Most students**: jot down their answers (if they have pens with them – or on their laptops or smartphones).
* **Some students**: do nothing.
* **Lecturer**: ‘Hands up anyone who is sitting *next to* someone who hasn’t jotted down their answer.’
* **Many students raise hands.** (But all students have now had the feedback of seeing others’ answers.)
* **Lecturer**: ‘OK, nothing more happens until you’ve all jotted down your answer to the question.’
* **Remaining students**: shamed into jotting down their answers to the question.
* **Lecturer**: ‘Many of you will have written down a good answer to this question. Volunteer to share your answer?’ (Picks volunteer, who reads out answer.)
* **Lecturer**: ‘Well done – that’s great. How many of you wrote down a similar answer?’
* **Several students raise hands.** (All students have received feedback now – those whose answers were correct and those whose were not.)

We can get much more feedback to each member of a large group if we include buzz-group episodes, and get them arguing, debating, speculating, practising, explaining things to each other, and so on *during* the large-group session. It is worth remembering how valuable it is for each learner not just to receive feedback, but to give it to fellow learners. Both processes link strongly to making sense of what is being covered.

We can pave the way towards making optimum use of the feedback-rich environment of large groups by taking away the perceived pressure we often feel, that we must use the precious time to cover as much as possible of the syllabus content prescribed. We can make time to use in feedback by using a VLE or handouts to provide learners with the information they need, rather than allowing them to simply gather it from us in a one-way process, or wasting their time merely copying down the information from our slides or from what we say. We can then get learners working individually or collectively *processing* the information in their handout materials, making sense of it as they proceed.

## 5 Making sense in large groups

How can we help learners to get their heads around things in large-group contexts? Ideally, we need to make learning happen *in* large groups, not just some time later when learners revise the contents of a session for exams or assignments. The more we succeed in making large-group sessions occasions where learners feel that they’re making sense of the subject matter, the better the attendance will be – in all senses of the word. The case study above of getting them to jot down their own answers to questions, then compare, then volunteer, helps to allow everyone in a large group to get feedback on their own thinking, helping them to make sense of the question and its answer. Helping learners to get their heads round ideas and concepts *during* large-group sessions is best done by making sure that there are plenty of learning-by-doing episodes during the session, each followed by feedback (from fellow learners and from us) so that each learner has the opportunity to find out how much making sense has so far occurred. Just as important, it’s worth learners finding out which parts of the light ‘haven’t dawned *yet’*.

Our best chance to help learners to make sense of things is when they have us with them, with all the extra dimensions of tone of voice, body language, eye contact, gesture, repetition, emphasis, and so on. Many of these things we can use in a lecture are not at all the same on a screen, for example in a lecture on a MOOC, or in a webinar. Few of the ‘live’ dimensions of a lecture can be taken away by learners from the session itself, unless they have distilled these into their notes. And it is worth thinking about the power of pauses. A short silence can cause students to think, in a way they’d have missed out on if we’d just carried on talking. It has to feel like a purposeful silence of course, and not just where we’re having a rest (even if we are). Pauses in speaking are something different to what happens when students sit and read something. It is indeed *possible* to pause and think while reading something, but it tends not to happen often enough.

We can cause further making sense to occur by setting tasks for learners to do between one session and the next, so that they engage in further learning by doing, practice, trial and error, and so on. This is made all the better if we can arrange that they get feedback as quickly as possible – for example, by encouraging them to do some of the tasks in small groups with discussion. Alternatively, we can, for example, issue a problems sheet (physically, or online) at the end of the session, with a marking scheme and model answers made available, perhaps a few days later. If we’re lucky, few learners will fall into the temptation of waiting for the model answers before they have a go at the problems. The feedback they get when they do their self-marking and compare their work to the model answers is much more rapid than if they had to wait until the next teaching session. We can put some pressure, where necessary, on learners to make sure that they actually *do* the between-sessions work by quizzing the whole group about the work in the opening minutes of the forthcoming session, choosing names at random to shame any learners who have not got round to the task. That said, we’ve got to be really careful not to shame any learners too much – otherwise next time they haven’t done the task, they won’t come to the lecture to avoid the risk of humiliation.

## 6 Learning through verbalising orally – explaining

At first sight, we can be forgiven for thinking that the explaining is *our* job in large-group contexts. Indeed, we might feel under pressure to do most of the talking in such contexts. However, we can reverse the situation, allowing learners to deepen their learning, for example by explaining things to each other. For example, suppose you’ve just gone through a rather complex explanation of a difficult concept with a large lecture group. You might then ask ‘How many of you are still with me at this point? Raise your hand if you reckon you’ve made sense of what we’ve just been thinking about.’ Suppose a third of the class raise their hands. You can now invite them to get into threes or fours, each cluster containing one student who has mastered the concept. Then ask that person in each group to spend a few minutes explaining the concept to those who haven’t yet ‘got it’, until they have all made sense of it. This has enormous benefits for the ‘explainers’. The act of explaining something about which the ‘light has just dawned’ is a very memorable activity, and the explainers retain it strongly. Those being explained to are also advantaged, as this time the concept is being explained by someone who remembers the light dawning. Lecturers may have known the concept so long that they can’t remember the feeling of the light dawning.

‘But what about using my precious time in this way?’, lecturers may ask. ‘It is well worth it in terms of students’ learning pay-off’ is my response. Students remember what *they* *do* in large groups much more than they might remember what *we* *say*. We can go further than this, and actively encourage learners to spend time out of the lecture context discussing the content with each other. Some institutions go as far as to have ‘supplemental instruction’ or ‘peer teaching’ provision, where (for example) third-year students are given the responsibility of supporting first-year students in chosen aspects of the curriculum. As before, the greatest value of this is to the ‘explainers’. The third-year students develop a strong mastery of the fundamentals they are teaching to the first-year students, who in turn feel more relaxed learning difficult concepts from a fellow-student than from a lecturer, and are more willing to ask questions as necessary until the ‘making sense’ has been achieved.

## 7 Learning through assessing – making informed judgements

This is one of the most powerful things we can do in large-group teaching contexts. Shortly, I will discuss ‘the rise and fall of handouts’ in lectures, and their use becoming restricted to when they serve an important purpose. The example outlined below is one such case, where a whole large-group session can be used as follows.

1. Give everyone in the room three handouts on different colours of paper, for example of an essay or report or assignment, or examples of an answer to a past exam question. Make one of them an excellent example, one a poor example and one an intermediate one. Ensure that the three examples don’t immediately *look* excellent, poor and intermediate, but that they need to be studied quite carefully before it becomes apparent which is which.

2. Ask everyone in the class to work independently for a few minutes, looking through the three examples, and deciding which is the excellent one, which is the poor one and which is the intermediate one.

3. Get the class to vote – for example, ‘Hands up those who think the pink handout is the poor one’, and so on.

4. Then get students into clusters, to work out *why* the yellow one is better than the blue one, and why the blue one is better than the pink one.

5. Ask different clusters for the *criteria* that distinguish the excellent one from the intermediate one, and so on, writing up these criteria (in the students’ own words) on to a slide, board or chart.

6. Now show students a marking scheme for the piece of work they have been judging, and ask the clusters to apply the marking scheme to the three examples. The students are now *making informed judgements* on the pieces of work they are examining. Moreover, they are making these judgements in the same ways that will be used for their own work in due course – they are getting their heads around the assessment culture in which they are studying.

7. Finally, remind the class about how the same sort of criteria will be used to judge the students’ own work on a forthcoming assignment or exam answer.

A whole lecture period spent in this way has a really high learning pay-off, and the paper-based handouts help things to happen which could not have occurred without them. It is a way of using a whole-group session to:

A. Show students details of the *evidence of achievement* which in due course will be expected of them.

B. Illustrate what the related *learning outcomes* actually mean in practice, and how they link to forthcoming assessment.

C. Help students to see the *standards* expected of them so that they take increased ownership of the need to achieve the learning outcomes and produce suitable evidence to demonstrate this.

D. Allow students to experience the *assessment criteria* they will in turn be judged against, and to apply these criteria to examples of essays (or reports or exam answers, and so on) so that they get their heads around exactly how their own work will in due course be assessed.

In fact, there are few ways of achieving such a high amount of learning pay-off with a large group in a single lecture period. Just giving yet another lecture would only have achieved a fraction of that learning pay-off for the students. It can be argued that getting a class to make judgements in this kind of way is one of the best things to do in whole-group contexts. Furthermore, when students see that they find out in such a lecture a great deal of useful information about how their work will be assessed, their motivation increases, and they are far less likely to risk missing a lecture in case they should miss such valuable information relating to their future assessment. At the same time, they are still learning about the topic concerned, but in a much deeper way than if they were simply being told about it in ‘lecture mode’.

# Making learning happen by *not lecturing!*

You will have seen from the discussion so far in this chapter, that large-group teaching–learning contexts can play a really vital part in making learning happen for our students – particularly if we don’t fill these sessions with the sound of our voices merely *telling* students things. We can, as you’ve seen above, purposefully address in large-group contexts each and every one of the factors underpinning successful learning as outlined in Chapter 2. Lectures are no longer just to give students information – if that’s all we want to do, we may as well give each of them a data stick full of information, or refer them to web sources, including lectures on MOOCs. Live lectures in our institutions are for helping students to get their heads around information together, and begin there and then the tasks of turning it into their own knowledge and linking it to what they already know.

This in no way detracts from the value of the old-fashioned sort of lecture as enlightenment or entertainment. Going to that sort of lecture for pure pleasure remains one of the attractions of the experience of university or college life, not least attending professorial inaugural lectures which can be entertaining as well as informative. But when there is the serious business of *learning*, followed by the even more serious business of *assessment*,we can argue that the primary purpose of a large-group session is that the students should leave the session with much more in their heads than when they entered the room, and that mere ‘lecturing’ has little part to play.

# The rise and fall of handouts

Only three or four decades ago, the use of handouts in lectures was relatively rare. Learners in lectures needed to make notes if they were to take away from the lecture the content that had been covered by the lecturer. Typically, this meant that in an hour they could only acquire a few pages worth of information. If they had just been furiously writing out all they could capture from the lecture, this information may have been mainly unprocessed when they took it away, but at least the task of going through it again and turning it into their own knowledge was manageable. Later, it became common for a great deal more information to be placed directly into learners’ hands on paper, than they could ever have written down in a lecture. So it is was not uncommon for learners to receive several pages of information around a lecture – and printed pages could contain many more words (numbers, pictures, graphs, diagrams, and so on) than could be written or drawn by any learner in an hour.

Meanwhile, where formerly learners had needed to make their own notes from books in libraries, it became more possible for them to make photocopies of the information they believed to be most relevant or important, and carry the information away with them. Cue-seeking learners were probably the best at deciding which extracts were important enough for them to make their own copies, and cue-oblivious learners ran the greatest risk of copying everything which *might* turn out to be relevant – postponing (often indefinitely) the task of getting down to making sense of the information and turning it into their own knowledge. However, nowadays students much prefer to get the material from libraries electronically, often without even going there and browsing the stocks, and download material onto their computers. This makes it even easier, of course, just to collect masses of material, and not get round to really using much of it for study.

For a while, handouts became increasingly important in the context of large-group teaching, and were important not only to learners, but as elements of the evidence used to assess the quality of post-compulsory education. More recently, however, the number of handouts issued has decreased dramatically, and unless there is a really good reason for learners to use something directly on paper during the lecture, they are rarely issued nowadays. Reasons for the demise of handouts include:

* Handouts were costly to produce, and groups are often much larger these days than they used to be.
* It was onerous for lecturers to organize the production of handouts in time for a given session, and tedious to carry around large bundles of these for big classes.
* It has become much easier to put up the equivalent of handout materials on an intranet or on the web, and they can be put their just before the lecture, with the request that students look at them as preparation, or even print them and bring copies to the lecture to annotate during the session (though students seem increasingly reluctant to do this, not least because of the costs and nuisance of printing).
* Lecturers can annotate the material made available electronically immediately after the lecture (usually quite quickly) before putting them up on the web, for example adjusting material which may have been pre-issued before a lecture to include issues which emerged during the actual session.
* Students can be impressed that a spontaneous discussion which took place in the lecture has been summarized shortly afterwards in the web-based material – ‘I was part of this’, they may think.

Nevertheless, the accompanying resource materials remain an important aspect of large-group teaching, even when no paper is involved. I have reflected the importance of resource materials by discussing their use in some detail below, linking them to the factors underpinning successful learning quite overtly.

While feedback may be considered to be the lifeblood of making learning happen in post-compulsory education, resources supplementing lectures can be thought of as the arteries controlling the flow of information to learners’ hands. However, perhaps such resources are not an entirely successful means of getting the information processed in students’ brains. Returning to Einstein’s idea that ‘learning is experience, everything else is just information’, it is easy to see that the main danger associated with resources supplied electronically is that they give learners information which is not, in due course, processed by them to become their own knowledge.

## Some problems with digitised resources

* Some learners take the view ‘I don’t need to go to the class, I can simply get the stuff from the web. It is true that learners can get the *information* in this way,but with an element of good teaching, just having the information does not equate to actually *being there.* Learners who miss out on the tone of voice, body language, facial expression, emphasis, clarification and often *inspiration* of participating in a class are seriously disadvantaged. But frequently they do not realize this until too late, thinking that they’ve ‘got it all’ in their downloaded files. Indeed, in many an effective face-to-face session, a downloaded resource is more of an *adjunct* to the intended learning than a summary of it.
* ‘I don’t need to pay attention now. I’ve already got the information so I can sit back and switch off now.’ This can be the view of learners sitting in a class with their own copies of material safely in their possession. True, they may already have got the *information*,but they are then missing out on the best chance to turn that information into the beginnings of their own *making sense* of that information, using tone of voice and so on as cues and clues.
* ‘What am I expected to *do* with this material – read it now, revise from it later, do things with it now and soon after now, just file it, collect stuff until I’ve got all of it and *then* do something with it…?’ This list is endless. In fact, all such reactions to resources can be regarded as study avoidance tactics – excuses for putting off doing some *real* learning until later.

## Using digital resources to make learning happen in lectures

How, then, can we make best use weblinks and electronic files for learners to view on-screen or print out for themselves, to maximize the associated learning pay-off learners derive from them?

### 1  Wanting to learn

For a start, if digital resources *look* interesting, there’s more chance that they will be used and not just filed away. Making materials look interesting can be done in several ways, including:

* Arousing curiosity, making the subject matter seem irresistible to study
* Selecting or making materials which are *digestible* rather than dry and forbidding
* Bringing visual learning into play, using images to capture diagrams, graphs, pictures, and so on to bring to life the ideas concerned
* Selecting or developing *interactive* materials, which prompt learners to make decisions, choose options, add their own ideas and so on.

However, the most important way of ensuring that digital resources associated with lectures enhance learners’ *want* to learn is to make sure that learners find them really *useful.* This can be partly achieved by paying attention to the content of the materials, and helping learners to feel that at least some of the work of acquiring the information involved has already been done for them. By narrowing down the subject content so that everything on the chosen resources can already be regarded as important, learners will be encouraged to invest time and energy following up the subject matters.

### 2 Taking ownership of the need to learn

Perhaps the most direct way that available resource materials can help learners to take ownership of their need to learn is linking them (prominently) to the relevant intended learning outcomes and, where necessary, translating these into language which learners can readily relate to. In other words, it is useful to give learners some guidance about what in due course they need to become able to *do* with the content of the resource materials – how learners will be expected to become able to *evidence* their achievement of the intended learning outcomes.

This does not assume that all the intended outcomes can be achieved just by studying the information using the prescribed or suggested resources. The intended outcomes can range outward and link to guidance about how best to approach each individual source. Rather than, for example, suggest ‘Now read Chapter 4 of Smith and Jones’, a handout is much more useful if it suggests ‘Consult Chapter 4, particularly sections 3 and 5, looking for answers to the following questions…’. In addition, including a self-assessment exercise will help learners to focus their work on the source so that they do indeed get the most important things out of the handout. This sort of guidance can also include advice such as ‘You don’t need to bother with sections 2 or 7 unless you really want to – these are not directly relevant to your own particular intended learning outcomes relating to this source’.

### 3 Learning by doing

Throughout this book I have stressed the importance of learning by doing – particularly practice, repetition of relevant activities, and learning by trial and error. When resource materials are chosen or designed quite overtly as learning-by-doing devices, the chances of them just being filed away are dramatically reduced. Resources which contain several recommended tasks and exercises are likely to be used, not just stored. If it is made clear that the activities contained in a particular resource relate directly to the achievement of relevant aspects of the intended learning outcomes, learners are all the more likely to engage with the material. If it is also made very clear that *doing* these activities will relate well to the sorts of *doing* which will in due course be assessed (exam questions, assignments, essays, essay plans, and so on), learners become much more aware that they need to engage with the activities in resource materials accompanying a lecture.

Cue-seeking learners are in their element here, of course, but cue-conscious learners find this way of identifying what is important (and what isn’t) useful too, and cue-oblivious learners are still able to benefit to the extent that the things they *do* using the resources are already designed to be relevant and important, saving them perhaps from spending too much time or energy going off on tangents, or straying too far away from the intended learning outcomes which will form the basis of their assessment further down the line.

### 4 Making sense of what is learned

There are several things we can do to choose and use resources which help learners to get their heads round ideas and concepts. As indicated above, we can design in relevant learning by doing, so that learners get the chance to apply their minds to the information and process it as part of the journey towards building their own knowledge using the resources. Also as noted above, careful use of intended learning outcomes can assist learners in finding out *what exactly* they should be trying to make sense of, and alerting them to the ways in which they will need to become able to demonstrate that they have made sense of the material addressed by the resources.

Moreover, study guides can be really useful, referencing a wide range of print-based and web-based sources and resources, helping learners to see exactly which parts of these sources are most relevant to them, and how they can use these sources to evidence their own achievement of the intended learning outcomes.

### 5  Learning through feedback

When the primary intention of resource material is to give learners feedback on things they have already done, they can be particularly useful in making learning happen. For example, when learners have struggled with something, a resource showing them how best to go about it may be eagerly used. However, one of the best ways of coupling learning by doing with feedback is to include in resource materials self-assessment exercises of one kind or another, where learners can have a go at a task or problem, then find elsewhere in the resource the means to judge their own efforts. In this way, they find out the extent to which they ‘got it right’, and, more importantly, they address the ‘if not, why not?’ question. Clearly, there are disadvantages in making the feedback *too* easy to find. If learners can see it at the same time as seeing the tasks themselves, the temptation for eyes to stray towards the answers remains great. Only the most conscientious learners will resist looking straight at the solutions. Other learners who skip having a go at the problems may *feel* that looking immediately at the solutions is good enough, but we all know that being able to do something is not the same as *feeling* that one can do it correctly.

### 6 Verbalising orally, explaining, coaching, teaching

One of the dangers with resource materials linking to a lecture is that learners tend to study them in solitary silence. We can encourage learners to explain things to each other using resources, for example by setting group tasks based on the materials involved. We can encourage learners to coach each other in the deeper points of material addressed in resources, and we can start off such processes *during* lectures, so that learners get the message that this is a valuable thing to continue doing afterwards.

### 7 Making informed judgements

This is perhaps where well chosen, or well-designed resource materials really reap the greatest rewards in terms of making learning happen. For example, when students are practising applying assessment criteria to material similar to work they will themselves do later, the process can achieve a high learning pay-off. It is again useful to start students off doing this kind of activity in the lecture room, to whet their appetites to continue doing the same sorts of things on their own – and, more importantly, in groups.

## When should I make my presentation materials available to students?

Having explored resources accompanying lectures in general terms, the following discussion is about one particular variety of resource: presentation materials, for example PowerPoint slides. Many institutions now have policies to address students’ special needs, often including the availability (in advance) of PowerPoint presentations and other resources. Learners nowadays (rightly) expect that slides they see during lectures, and web links to other materials used in the lecture will be made available to them, and they also expect not to have to scribble down as much as possible of the information which appears on a screen during a lecture. Indeed, students often expect to be able to look at – and annotate – the materials they see on screen during the actual lecture.

### Some reservations about availability of presentation materials

1. Learners are likely to switch off when they already have access to the materials being used during a lecture. They think ‘There’s no real need to pay attention now. I can look at this stuff again anytime.’
2. In practice, many learners never look at the presentation materials ever again! Students rarely file such materials in a systematic way.
3. Too often, slides are effectively just information. Learning only happens when people process information, and do things with it, apply it, argue with it, extrapolate from it, compare and contrast it, and so on. Therefore it is very unsafe to assume that just because everyone has the information, all will have learned.
4. Students *want* their own copies of the slides, but not everything that they want is good for them. This is partly because they seek the safety of ensuring that they get all the relevant information. While it is good to avoid them wasting time and energy simply copying down information from a screen in a lecture theatre, it remains important that they engage actively during lectures, and are getting their heads round information rather than just looking at it on the screen or on their own copy of what’s on the screen.
5. Making slides available in advance greatly restricts flexibility in presentations and lectures. When slides have been issued in advance, students may get dissatisfied when several slides are ‘missed’ in the session. It is good to keep the freedom to skip particular sections of a prepared presentation, and concentrate on the key issues, especially when time is taken to address questions and follow up the emergent interests or needs of the particular audience. It can therefore be better to issue the slides actually used after each lecture, giving you freedom to choose which slides to use during the event and allowing you to add slide sequences to address matters that arose in the lecture, for example questions from the audience.
6. Making copies of the slides available tempts students to miss sessions. Many lecturers have now realized that attendance drops as students just download the slides and other resources, rather than coming to the lecture. The students who miss the lecture usually fare much worse in coursework assessment or exams, and merely give back the information which was in the slides or handouts, whereas those who were present learn a lot more through the actual discussion, where communication is aided by tone of voice, body language, eye contact, emphasis in speech, repetition of important points from different perspectives, and so on. At a good lecture, human communication is more important than just the images which may have appeared on a screen.

# Getting learners to ask us questions in lectures

In many teaching–learning contexts, not least lectures and small-group sessions, one of the most productive ways of making learning happen is to cause learners to ask questions and provide answers to their questions. When they are working out what questions to ask, they are exploring their own *need* to learn, and at the same time they are often working on what they *want* to find out. Asking questions is one kind of *learning by doing.* Receiving answers to their own questions is, of course, *learning through feedback*,as is hearing answers to other people’s questions. Ideally, all of these processes should help them to *make sense* of the topics which are the basis of the questions.

While it is relatively easy to get learners to fire their questions at us in small groups or in one-to-one contexts, it is harder to achieve this with hundreds of learners at a time. One thing that can help is to ask everyone to jot down two or three questions. Give them a couple of minutes to do so. Then ask them to compare their questions with those of their immediate neighbours. Then ask the class for some of the questions. This way, there is more chance of you being asked the questions that are more widely owned, and are thus more important. It is also a way of getting everyone to think about at least some questions, so that even the learners who don’t get answers to their questions during the session are still able to take the questions away with them. If you’d just got learners to *think* of some questions and call them out, many of the questions in their minds would have evaporated away very soon after the session.

# How can we avoid a few students dominating questioning?

How can we enable all learners to get answers to their questions in large-group sessions without the sessions being monopolized by a few vociferous learners? Following on from my response to the previous question, it remains worthwhile trying to get all the learners to write down a question or two in the first instance. However, when you know that it will be the same learners who voice their questions, possibly because they are more confident than their course mates, some alternative tactics can come in handy.

For example, pass out post-its so the whole group can have one each, and ask everyone to jot down one or two questions on their post-it. Then ask for the post-its to be passed to you and stick them on a flipchart, whiteboard, window or suitable wall. With really large groups, get the learners themselves to do this, it’s quicker. You can then scan through the questions, picking off a post-it at a time, and reading out the question so everyone knows what you’re going to be answering. Then you can answer the question, filing the post-it so you have an accurate record of which questions you have answered.

Normally it is worth concentrating on those questions which you can readily see to be relatively common ones, so that you are satisfying the needs of a reasonable cross-section of the large group. However, it is also worth taking away with you *all* the post-its, so you can look through them in your own time. You can then create an ‘FAQ’ (frequently asked questions) web page which you can post in a *frequently needed answers* bulletin on the web.

# How can you help learners to be heard in lectures?

We’ve already explored some ways to get questions from individual learners, for example, using post-its. However, it’s useful to be able to respond to spontaneous questions from learners too. When a learner asks a question its always worth trying to repeat the question back to the whole group before proceeding to answer it, as people behind the questioner may not have been able to hear the question when first posed. If the question is a long one, a complex one or an unclear one, it can be worth clarifying the question, for example, by asking ‘Is your question really about… ?’, or suggesting ‘Let’s break this question into three parts…’ and then breaking it down into a logical sequence before continuing to answer it. Repeating the question back to the whole group also gives you a little longer to mentally rehearse how you’re going to respond to it.

Sometimes, a dialogue happens between one particular learner and yourself. In such cases, if the room allows, it can improve things if you can move closer to the questioner, so that it is easier for you to interact well with this learner and so that they are better able to make sense of your responses to them. If, however, the dialogue becomes too protracted, it may be necessary to explain to the whole group that ‘I think this is a matter for the two of us to explore outside this session’, so that they don’t feel that they are being ignored.

# What do learners do that hinders learning?

We’ve already explored some learners’ actions which hinder learning – coming in late and chatting inappropriately. There are many other things they may do which get in the way of their learning. These include:

* *Taking notes rather than making notes.* At one level, this is not a problem; if they’re busy copying things down from the screen or board or writing down what you are saying to them, they’re unlikely to be disruptive in other ways. However, *taking* notes is usually very passive; *making* notes is much better for learning. *Making* notes can include making their own summaries of what has been covered in the last few minutes, or annotating a handout with the main points that you have covered which are not already presented there, and so on. It is important to help learners to make notes by building in suitable time spans (e.g. two minutes) to give them an opportunity to do this. It can also be useful to allow another minute or two for them to compare the notes they made with each other and add further ideas to their own notes. ‘Now steal your classmates’ best ideas for a minute’ is irresistible to many learners.
* *Just sitting passively.* This is all too easy. Unless we *cause* learners to be active in large-group sessions, many will just sit there waiting until they’re told to do something. They may look as though they’re listening – even quite attentively – but may have already found out that as long as they *look* as though they are there in spirit, they can switch off mentally! The answer is for us to continue to take control of what they do, so they have a variety of things to do and are less likely to sink into passivity. We can alternate between getting them to answer questions, discuss points with each other, make notes, solve problems, apply what they’ve just learned to a case study scenario, explain things to each other, make judgements on things we give them to assess, and so on. Students very rarely complain in evaluation feedback ‘I was kept too busy during lectures!’ They much more often complain of being bored.
* *Going to sleep and snoring!* This is many lecturers’ worst-case scenario of things going wrong in large groups. It has to be said that for things to get this far, they must have been passive for rather too long in the first place, and we need to look to what *we* have done – or not done – to cause them to slumber. That said, it is worth remembering that at least some learners in any large group will be in *need* of sleep. Some may have worked late or early shifts, and may be already deprived of sleep. Others may have enjoyed themselves into the early hours, to the same effect. Sitting still for a long time in a relatively warm comfortable environment, especially if the lights are dimmed for slides to be seen, fulfils fairly ideal conditions for human sleep! It does not help to make anyone who has nodded off feel seriously embarrassed – that may have the effect of causing them not to bother turning up at all next time they are tired and in danger of falling asleep. The kindest thing to do is perhaps to change the activity, for example getting *everyone* to discuss a point with their nearest neighbours – even if they have to wake up the odd neighbour in the process.

# What do lecturers do that hinders learning?

Learners themselves can tell us a lot about this. The worst, and all too frequent, comments that learners make about unsatisfactory experiences of large-group teaching feature one word – ‘boring’. Their feedback includes:

* droning on and on
* going right over our heads
* not looking at us – or ignoring us
* going too fast – or going too slow (this is a problem in any large group, with people learning at their own speeds, of course, and we need to try to vary the pace accordingly, with ‘catch-up’ time for the slower learners but also giving the faster ones something extra to think about so that they don’t become bored)
* telling us things we already know
* not linking the topic to what *we* know about it
* doing things that seem irrelevant
* forgetting to explain *why* a particular topic will be useful
* failing to make things relevant to our own experience
* not responding to our questions or giving us the chance to ask them
* not giving us anything to do.

Some of this feedback warns us to sharpen up our own act, to make things as interesting as we can, checking regularly that the large group is ‘with us’ and keeping each and every member of the large group as active as we can. However, there are many well-intentioned lecturer actions which can hinder learning too. These include:

* going off on lengthy tangents to the main purpose of the session, sometimes out of a will to make a topic more interesting
* explaining things in detail when most of the group already need no further explanation
* presenting too much information without giving learners the chance to do something with the information
* sticking too closely to the agenda for the session when all the signs are that learners need a few minutes rest from thinking about a difficult concept
* doing *anything* for too long at a time and failing to bring some variety to learners
* being too predictable!

It is helpful to us to continuously gather feedback from our learners about what they like about our large-group sessions and what they dislike. We can’t please all of them all of the time, but the more we find out about their likes and dislikes, the better we can strike a balance. It is also really useful to sit in on colleagues’ large-group sessions as often as possible. In someone else’s lecture, whatever the topic, we can usually come out with two lists:

* Things that seemed to work well for them, that I can try in my own large-group sessions.
* Things I noticed which didn’t work and which I’ll try to avoid in my sessions.

This can all be done quite informally and, where team teaching is the norm, lecturers find it very useful simply to learn informally from each others’ approaches in this way. Many institutions nowadays have systems of peer observation (more detail in Chapter 8), and it is then useful to have direct feedback from different colleagues about how they find our individual approaches to large-group teaching.

# How can we increase the *takeaway* from lectures?

I’ve already referred to the differences between *making* notes and just *taking* notes. It can be useful to help learners themselves to take ownership of the need to capture much more than just the information which is covered in large-group sessions. Remind them that even just an hour or two after a lecture, especially if they have already been in two or three other lectures, much of the fine detail will have evaporated away. Suggest that learners consciously try to capture questions which go through their minds all the way through large-group sessions, and jot these questions down in their notes (perhaps in a different colour). These questions can include things they would have liked to have asked in the lecture but didn’t, questions other learners asked, questions about things not yet understood, and so on. Even when questions are jotted down only to be followed by the answers becoming clear, it is valuable to have written down the question, and then perhaps ticked it or drawn an arrow to where the answer is now written down.

A wise and experienced colleague told me how he fell in with his institution’s policies and put all his lecture materials and PowerPoint slides on the intranet. He did this a couple of weeks ahead of each lecture, for the sake of any learners with special needs. But two things happened:

* attendance fell off at his lectures
* exam performance in due course worsened dramatically.

He analysed this. The learners who *didn’t* come to his lectures only gave him back in exam answers that which he’d given them in the materials and PowerPoint slides, nothing more. The learners who *did* attend his lectures gave back much more, from the thinking which he got them to do *during* his lectures, and the reading around the subject that he inspired them to do *after* his lectures. Yet many colleagues continue to put up all of the information for learners in similar ways, and it is often now institutional policy to do so. We need to make sure that our best efforts to respond to learners with special needs do not end up disadvantaging many more learners. In fact, many institutional policies for learners with special needs are misguided. Those who know a lot about responding to special needs emphasis that each affected learner is an expert in his or her particular needs, and ‘blanket’ solutions are usually quite inappropriate. It is worth asking each affected student ‘how best can I help you?’ and working forward individually from their responses.

# How can we use lectures to build appropriate study skills?

What kinds of briefing do learners need to help them understand how best to learn in large-group contexts? In particular, learners need guidance on what to do in lectures. Especially in first-year courses, they may feel strangely alone even in a packed lecture theatre, with no idea what they are expected to do. Write it all down? – hardly possible in a lecture full of slides and images and talk. Sit there and think about it? Try to look as intelligent as possible? Be quiet and ‘good’ and not interrupt by asking questions?

Learners need to be well briefed on the importance of intended learning outcomes as a framework for their learning and as the basis of a specifications framework laying down the standards of the evidence that they themselves need to become able to provide for their learning in the different kinds of assessment which will follow.

Left to themselves, learners often simply add any notes they make to any handouts they download, gathering together loads of information-bearing files or papers. Sometimes, it’s only when revising for exams or tests that they return to these original materials and, unsurprisingly, it is then often not at all easy to make sense of the materials. All the *extra* impact of tone of voice, emphasis, body language, repetition, clarification and so on has evaporated away from the information in the materials they may have saved. Learners often ask themselves ‘Was I actually *there* for this session? Did I copy the notes from someone who was there?’

We can advise learners how useful it is to follow up each large-group session within two or three days, to edit and improve any notes and resource materials while the memory of the session itself is still present. One way of helping learners to realize for themselves the importance of not losing the experience of large-group teaching is to get them to reflect on what they do after the average lecture. The self-assessment checklist shown below is one way of alerting learners to what we hope they will be doing after each lecture. Furthermore, if we can persuade learners to give us copies of filled-in self-assessment questionnaires of this kind, we too can find out a lot more about what they are actually doing after each large-group session. This may make our expectations rather more realistic.

# Summing up: making lectures unmissable!

Giving learners information is only part of the business of designing a lecture, so we’ve got to make sure that lectures are learning experiences and not just information distribution events. In particular that *first* lecture in any series is a make or break occasion for many a learner. It’s also make or break for us – there’s no second chance to make a good first impression! In other words, we’ve got to try to make lectures unmissable! It’s got to be worth *being* there. This chapter has been about making learning happen in large-group contexts – usually called ‘lectures’ on timetables. We’ve seen that the act of *lecturing* is rarely the best way of making learning happen, and that we need to be thinking carefully about what learners are doing while sitting in lecture theatres or large classrooms. In this final section of the chapter, I would like to condense some of my main suggestions, linking them particularly to the context of starting off a lecture series. Every new lecturer’s nightmare is getting a lecture series off to a bad start, and learner attendance falling off as the series goes on – or worse, lots of learners later failing the related exam and the blame coming back to the lecturer. This isn’t confined to new lecturers. The following suggestions may help you to make your lectures unmissable.

1. *Start reasonably punctually.* When most of the group is there, get started. Remind learners of some of the things they should already know but that you will discuss in more depth. Alert them to some of the things you don’t expect them to know yet too. Don’t be unkind to people drifting in late – that won’t encourage them to come to your next lecture if they are late again. Don’t punish the people who are punctual by making them wait too long for their less punctual colleagues. Gently allow the people who are coming in late to feel that they may have missed something useful.
2. *Make the most of the live occasion.* Learners may well do much of their later learning from materials they download relating to the lecture, but use tone of voice, gesture, facial expression and so on to arouse their curiosity, so that they’re looking for answers to the questions that are in their minds.
3. *Don’t put too much into the first lecture with a group.* It’s better to get learners thinking deeply about a couple of important things than to tell them about dozens of things which future lectures will address. It’s worth finding out all you can during the first lecture about what they already know. First impressions endure, so try to ensure that learners get a good first impression, about the subject, and indeed about *you.*
4. *Make good use of intended learning outcomes.* Near the start of the lecture, let learners in on what *they* should be able to do by the end of that particular lecture. Towards the end of the lecture, show the intended outcomes again, and check to what extent learners now feel that they have cracked the learning outcomes. Help them to *feel* the added value of having been there.
5. *Always link lectures to assessment*.Give learners cues and clues about how this particular lecture ‘counts’ when it comes to assessment. Whenever you say ‘You’ll need today’s material for exam questions like so-and-so’ you’ll notice learners attention increasing, many jotting something down!
6. *Make sure you can be seen and heard*.Use a microphone if it helps. Don’t just say ‘Can you hear me at the back?’ Ask someone in the back row a question and find out. And don’t dim the lights to show your slides at the expense of learners no longer being able to see *you.* Remind yourself that low lighting for too long at a time is one of the components of the natural conditions to induce human sleep!
7. *Don’t keep slides up too long*.Learners will keep looking at the screen, even when that screenful is quite finished with. Get them to look at *you* now and then. For example, when using PowerPoint, on most systems pressing ‘B’ on the keyboard makes the screen go black. Pressing ‘B’ again brings it back.
8. *Don’t just read out your slides*. Learners can read the slides themselves faster than you can talk. Talk *about* the slides. Explain now and then what’s really important. This helps learners to prioritise the content of the lecture.
9. *Ask plenty of questions*. Give learners the chance to answer them, and be encouraging even when answers aren’t good. Celebrate what they know when possible. Get them to jot down answers first, so they are better armed to share their answers with each other, and with the whole class.
10. *Avoid death by bullet point*.Make different slides *look* different. Include some charts or pictures where possible. If you’re confident with technology, put in some very short video clips now and then, and link in to web-based material you want your learners to study in more detail – but don’t be too dependent on the technology working every time – have ‘plan B’ ready for when it doesn’t work.
11. *Try to make the learners like you*.Smile. Be human. Look at them. Respond to them. If they like you, they’re more likely to come to your *next* lecture too. Remember that the feedback students will give on your course depends rather a lot on how much they actually like you.
12. *Keep thinking of what learners are intended to be* doing *during the lecture*.Don’t worry too much about what *you* will be doing, plan to get your learners’ brains engaged. Get them making decisions, guessing causes of phenomena, applying ideas, solving problems, and so on. They’ll learn more from what they *do* than from what you tell them.
13. *Help learners to capture their learning.* For example, try to get learners to jot down *their* views and ideas, and not just try to write out yours. You can give them *your* ideas on a handout to download later on the intranet.
14. *Give learners time to think.* Short silences can be very useful – and indeed welcome. From time to time, put a question up on the screen, and ask learners to ponder for (say) a minute or two.
15. *Get learners talking to each other.* Purposeful talking is useful learning. Get them talking to each other now and then, arguing, debating, explaining. This is much better than just allowing chatting to break out because of boredom. Get learners to have a go at explaining something you’ve just introduced, reminding them this is good practice for answering questions later, for example in exams.
16. *Be kind to learners’ brains*.Concentration spans are measured in minutes, not hours. Break up each lecture into at least three parts, with something lighter in between the tougher bits.
17. *Bring in some appropriate humour*.The odd funny slide, amusing anecdote or play on words can work wonders at restoring learners’ concentration levels. Then follow something funny up with an important point, while you’ve still got their full attention.
18. *But don’t use humour if it’s not working!* Watch their faces and respond accordingly. If they’re liking the funny bits, keep putting them in, but if they’re not, don’t!
19. *Flag up related sessions*.For example, if you’re lecturing to a large group and learners will be going later into tutorial sessions to follow-up the content of the lecture, show learners some of the questions which will be covered in the tutorials. This will get them started on thinking about them.
20. *Keep yourself tuned into WIIFM*.‘What’s in it for me?’ is a perfectly intelligent question for any learner to have in mind. Always make time to remind learners about *why* a topic is included and *how* it will help them in due course.
21. *Don’t be unkind to learners who missed your previous lecture*.They’re here now. Giving them a bad time won’t encourage them to come again. And at least *some* learners will have very good reasons for not having been able to be there last time – illness, crises, whatever. The more unmissable your lectures are, the more learners will try not to miss them whatever else is happening in their lives.
22. *Don’t overrun*.At least some of your learners are likely to have something else to go to after your lecture, and perhaps with not much of a margin for error. If you come to a good stopping place and there are 15 minutes left, do your closing bit and stop. Learners actually *like* lectures which finish early now and then.
23. *Pave the way towards your next lecture*.After reviewing what learners should have got out of the present lecture, show (for example) a slide with three questions which will be covered in next week’s instalment.
24. *Don’t just stop*. Bring your lecture to a definite close. Make a good final impression. Learners are more likely to follow up the lecture if they leave feeling it has been an important and interesting occasion, and well worth coming for rather than just downloading the associated links and materials.

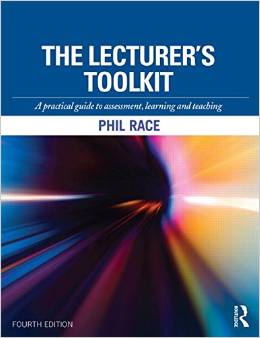
**Tips for Students: Getting the most from lectures**

1. *You’ll get a lot more from lectures if you do a little bit of thinking before you go in to class.* Think about what has been covered in session(s) before and look in the course handbook to see how this week’s work is likely to be assessed through assignments or exams. If the course documentation uses any specialist terms you haven’t come across before, check these out before the class.
2. *Keep your course handbook on hand to see what areas your lectures are due to cover.* Remember that it is indeed *your* course.It’s you who’s going to have to learn the material, not your lecturers – they’ve already done it. So make sure you have all the details of what’s on your agenda, and keep an eye what’s already been covered and what’s still to come.
3. *Consider what is the real purpose of lectures nowadays.* Now there is so much material available on the web, including TED talks, open educational resources and learning packages, the lecture is seen by most lecturers as something more than just passing on information that you could have got anyway from a book or from the web. Lectures today are likely to be as much about making you think and posing you challenges as they are about simply delivering content. Your responsibility as a learner is to be active and engaged in lectures just as much as in any other area of your studies.
4. *Look really carefully at the ‘intended learning outcomes’.* Most course documents explain what students are required to learn in the form of such outcomes. They are often expressed as statements of what students will be expected to have become able to do at the end of a unit of study. Lecturers will often include the particular intended outcomes for each lecture – watch out for these and make sure you’ve got them to remind you later of what you’re supposed to be aiming towards.
5. *Think about how you are going to retain information and your thoughts from the lectures.* Don’t just *take* notes, *make* notes. Whether you make notes with pen and paper, on a laptop, on your phone or using Twitter, the notes you make in lectures are important resources for later study. Don’t just rely on the presentation being available on the course VLE after class because it’s your thoughts on what’s being said that you need to retain. Take the view that you’re only really learning if you’re *capturing* important bits of the lecture. So get your brain working, but don’t just use it busily, use it *wisely.*
6. *Don’t just switch off, if you are given handouts in class or pointed to where the notes will be on the VLE for later use.* It’s dangerously easy to think “Ah well, I’ve got all the slides, so I don’t have to think hard about it now during the lecture – I can catch up later!” Actually, your time in class is particularly valuable as it’s your best chance to interrogate the material, whether privately or by asking questions of the lecturer or peers.
7. *Resist the temptation to excessively multitask.* It is possible to check your Facebook page and send texts and tweets in a lecture, but this is unlikely to improve your concentration unless you’re focussed on the topic in hand. But don’t be afraid to Google unknown-to-you terminology and to check you’ve accurately recorded references.
8. *If you miss a lecture, remember that any notes provided by the lecturer are no substitute for having been there.* Use any available handouts or virtual copies of the slides and other resources to enable you to catch up on what you missed to fill at least some of the inevitable gaps in your understanding of the topic. But also try to talk to some people who were actually there, and get them explaining the main points to you, or check on the course VLE to see if there is ongoing discussion of the key topics.
9. *Make sure you do something to help your concentrate in the lecture, rather than just being a passive listener.* Don’t be embarrassed to make notes even if folk around you are just sitting there doing nothing. If you find it helps you to jot down key points now and then, do it. Or maybe draw diagrams, tables or mind maps of what you are hearing and seeing, or use mind mapping software to record the ideas. It’s *your* learning which will be assessed in due course, so make a good start on it right there and then in lectures. Think about what is really *meant* by what you see and hear, and capture the meaning. This keeps you alert, and helps to stop you becoming distracted from the class.
10. *Put things into your own words rather than just writing down or audio-recording what is said.* You need to think about what you’re writing. Just sometimes you’ll need to keep detailed notes, for example if you’re expected to write down an exact definition or quotation. But for most of the time, what you should try to do is to capture for yourself the *essence* of what’s being said and shown in lectures.
11. *Keep asking yourself:* *“what am I expected to become able to do with this?”* When you’re asking this, you can deliberately and consciously record your own thoughts so that they remind you of what seems to be expected of you.
12. *Watch out for cues you are being given by your lecturer.* Lecturers give all sorts of hints during any lecture by tone of voice, emphasis, body language and repetition. Sometimes they give these clues deliberately in order to get you thinking about how the material will be assessed or what kinds of approaches you should be taking to skills development or the acquisition of knowledge. Even more often, they do it subconsciously. Either way, *you* need to know what is really important, so that you can make sure you have a firm grip on such things when assessments loom up.
13. *Write down your own questions.* Every time there’s something you can’t quite understand, turn it into a short question and note it down. When you’ve captured these questions, you can find out the answers in your own time, looking them up or asking other people, or asking the lecturer. Or you could tweet questions to fellow attendees using a hashtag. If you haven’t captured your questions in class, a few hours later you probably won’t remember what they were, and then there’s no chance at all of getting them answered.
14. *Note also your own reactions, feelings, and thoughts.* Quite often in a lecture you’ll ‘see the light dawn’ about something, but if you didn’t jot down something about what you were thinking, it might not happen again even when you look back at your notes.
15. *At the end of the lecture, take action to help you retain information.* Whatever filing and recording system you use to keep track or what you are learning (whether paper notes, blogs or sections in your ePortfolio) keep these up-to-date so you can access them easily when you need to use them again for revision or to inform your professional practice.

**Extracts from Chapter 3 of ‘The Lecturer’s Toolkit’: 4th edition**

**(Phil Race, 2014, London: Routledge)**

**Lectures in the digital age**

**Pre-quote**

Many argue that the era of lectures has passed, that it is archaic to expect students to sit physically present in the same room as the lecturer, passively listening to and noting what is said, and thereby absorbing content. If you sit at the back of the lecture theatre and watch what students are actually doing on their laptops and mobile devices, it is evident that few students nowadays simply sit and make traditional lecture notes with pens and paper. But look again and see that as well as updating their Facebook pages, students are making mind-maps of what they are hearing, following the structure of the lecture based on previously-pasted up presentations, Googling unfamiliar words or Tweeting about the subject of the lecture (although there are still students absent in all but body from the lecture as there always have been). (Sally Brown, 2015).

**Intended outcomes of this chapter**

There are more than usual intended outcomes for this chapter, as there as so many different ways in which we need to think about the most public side of our work, large-group sessions with students. When you’ve looked through this chapter, and applied the most appropriate ideas it contains to your own teaching, you should be better able to:

1. gain confidence in preparing and delivering lectures;
2. address the changing expectations of students regarding the large-group experience, and their increasing status as ‘customers’ when paying for higher education;
3. adjust your approach to lectures in the light of the changed nature of information availability in the digital age;
4. think consciously about how your students learn in lectures, and about ways you can address the principal factors underpinning successful learning in your lectures;
5. develop your work with large groups of students so that their learning is more productive in your sessions;
6. make effective use of technology in the lecture room, for example to use slides, video-clips and web-links when giving lectures;
7. link lectures to study using online resources on the internet and local intranets;
8. derive substantial benefits from having some of your lectures peer-observed, and peer-observing others’ lectures.
9. get and use feedback on your lectures from your students;
10. address the fact that large-group teaching is often the most public arena for judgements on the quality of your teaching.

**How important is the act of lecturing?**

When you are appointed as a ‘lecturer’, it may seem reasonable to suppose that this is the most important part of your job. This belief is increased when the main specification of your job turns out to be a timetable, with lecture-slots as the principal fixed teaching duties each week. Most people new to lecturing approach their first encounters with the process with some trepidation – some with sheer terror. Indeed, if measurements were taken of pulse rate, palm sweat, and blood pressure during the first few minutes on stage as a lecturer, the results would give every indication of quite a lot of stress. ‘But all their eyes are on me!’ new lecturers often think to themselves. If you’re naturally at home on the stage in a theatre, stage fright won’t worry you – you may even enjoy it. However, for perhaps nineteen out of twenty of us, we are not particularly comfortable being the focus of attention of so many eyes. Fortunately, there are many ways to divert students from watching us, and at the same time help them to think about the topics of our lectures. These diversion tactics include:

* using slides and excursions to the web – and even dimming the lights so that what’s on the big screen is more easily seen – and we are less visible!;
* giving students things to do during lectures – for example decisions to make about which of three options on-screen would be preferable;
* getting students to discuss an idea with their immediate neighbours for a minute or two, then sounding out the conclusions they have reached.

But it’s not enough just to look after our own comfort levels in lectures; we need to be thinking of what’s happening in the minds of each and every member of our audience. Some of the diversion tactics listed above do indeed have direct links to helping students to learn.

The history of the lecture stems from times when there were very few books, and the most efficient way of communicating information was to read it out to people, who could take notes of their own, and store it. Although it was indeed possible to communicate *information* in this way, it was soon recognised that this did not amount to communicating *knowledge.* Despite the fact that this situation is long gone, most educational systems continue to place considerable value on the lecture situation, not least because it is something that is visible and accountable, and because many lecturers enjoy lecturing! Nevertheless, Ron Barnett (2000) challenges the status of lectures as follows:

The formal lecture is a refuge for the faint-hearted, both lecturer and students. It keeps channels of communication closed, freezes hierarchy between lecturer and students and removes any responsibility on the student to respond.... students remain as voyeurs; the lecture remains a comfort zone... the students’ unsettling is held at a distance. (Barnett, p.159)

Exley and Dennick (2004) summarised the tendency (which has continued since then) to create increasingly sophisticated lecture theatres as follows:

Lecturing is the cornerstone of many undergraduate courses and is believed by many academics to be the only way their subjects can now be taught of increasing numbers of students. Many universities are spending thousands of pounds in refurbishing lecture theatres and updating the technological support and the provision of audio-visual equipment to make this form of teaching more effective. (Exley and Dennick, p.1).

The technique goes back many hundreds of years, to the monasteries of Europe before the use of printed books, where scholars would travel hundreds of miles to gain access to specific texts. In a scriptorium, a monk at a lectern would read out a book and the scholars would copy it down word for word. (Exley and Dennick, p.3)

Even many years ago, not everyone liked being in lectures. Some jaundiced views about ‘the lecture’ were included in Brown and Race (2002) as follows:

‘A talk by someone barely awake to others profoundly asleep’ (lecturer in surgery).

‘Being told something you don’t wish to know, by someone who ‘knows’ better than you’ (retired teacher).

‘Actions done by overpaid, out-of-touch, arrogant, middle-class people, living in a world where only education exists’ (a student who dropped out of higher education; Brown and Race, pp.18-19).

As long ago as 1993, in the first edition of ‘Rethinking University Teaching’, Diana Laurillard posited:

Why aren’t lectures scrapped as a teaching method? If we forget the eight hundred years of university traditions that legitimises them, and imaging starting afresh with the problem of how best to get a large percentage of the population to understand difficult and complex ideas, I doubt that lectures will immediately spring to mind as the obvious solution. .... Academics will always define the value of the ‘inspirational’ lecture as though this could clinch the argument. But how many inspirational lectures could you reasonably give in a week? How many could a student reasonably absorb? Inspirational lectures are likely to be occasional events. Academics as ‘students’ typically think little of the method. (Laurillard,1993, pp.108-9)

Bill McKeachie reminds us of a tendency few of us will have failed to notice ourselves when sitting in other people’s lectures, and goes on to suggest what we may need to aspire to, in order to overcome the problem:

One of the characteristics of a passive lecture situation in which a lecturer is using few devices to get students to think actively about the content of the lecture is that attention tends to drift. Probably all of us have had the experience of listening to a speaker and finding with a start that we have not heard the speaker for some time because our attention has drifted on to thoughts that are tangential to the lecturer’s theme. McKeachie Pp.56-7

Effective lecturers combine the talents of a scholar, writer, producer, comedian, showman and teacher in ways that contribute to student learning. Nevertheless, it is also true that few college professors combine these talents in optimal ways and that even the best lecturers are not always on top form McKeachie, p.53

Nowadays, as you will have seen from just a few of the many thoughts about large-group teaching in the literature, quite a lot of doubt hangs over the effectiveness of lectures as a means of helping students to learn, but this is mainly because some lecturers continue to regard lectures as occasions when they perform, and believe this is all that is necessary for their students to learn. Now that all kinds of information technology based curriculum delivery approaches are available, the central role of lectures is even more in doubt.

That said, giving lectures remains one of the most public sides of the work of most higher education lecturers, and attending lectures is part of the life of most campus-based higher education students. However, Hunt *et al* (2012) rightly draw attention to the possibility of at least some lectures remaining really valuable:

It might be argued that a dazzling presentation of well-organised material from a lecturer who is passionate about the subject may be worth a multitude of small-group discussions between students who have yet to gain mastery of the subject matter (Hunt *et al,* p.28)

Harland (2012) acknowledges the problem, and wisely suggests that the way forward is to use large-group contexts for what they can do best:

The lecture continues to be important in the modern university, despite consistent reports that it is an anachronism from a bygone age. It is a method of teaching that attracts a lot of debate, and opinions about the educational effectiveness of the lecture are often polarised. .. I have a suspicion that what underpins most arguments ore the past experiences of sitting through lectures that were either enjoyed or endured. (Harland, p.32).

Less lecturing is an easy lesson but a hard one to implement in practice. Nevertheless, academia should consider this idea because at their worst, lectures can end up as nothing more than an exercise in passing on huge amounts of basic factual information that adds little to what is already in a textbook, or could be summarised in a handout. Less lecturing would happen if lectures were only used for what they can do best. (Harland, p.42).

Although some parts of this chapter are specifically about lecturing, most of the suggestions apply to the processes of working with large groups of students. Suggestions in this chapter include ways to help large-group sessions deliver increased learning payoff to students. In effect, I explore many of the ways in which the principles of active, interactive learning can be brought into the lecture theatre or large-group classroom. Some time ago, Ken Bain (2004) suggested that really effective lectures seem to be built on the following approach:

Lectures from highly effective teachers nearly always have the same five features of critical learning... They begin with a question (sometimes embedded in a story), continue with some attempt to help student understand the significance of the question (connecting it to larger questions, raising it in provocative ways, noting its implications), stimulate students to engage the question critically, making an argument about how to answer that question (complete with evidence, reasoning and conclusion), and end with conclusions. The only exceptions? Sometimes the best teachers leave out their own answers whereas less successful lecturers often only include that element, an answer to a question that no one has raised. (Bain, p.107).

Later in the chapter, attention is turned to some of the technologies used by most lecturers, particularly slides Hunt *et al* suggest that technology can be used to promote interactive learning in many ways, not least as follows:

The use of technology in lectures can increase student engagement and support learning in large classes in a number of ways. For example, some teachers use clickers (classroom response systems) to gain immediate audience response during lectures. Clickers can be used to provide the teacher and the students with immediate feedback on in-class quizzes, to poll opinions and to gauge students’ understanding of a topic in a non-threatening and engaging way. Clickers are specific-purpose instruments, but mobile phones can also be used in a similar way in conjunction with open-access software. (Hunt *et al,* p.29).

**If lecturing is such a bad idea, why is it still happening so widely?**

Sally Brown (2015), a quote from whom opened this chapter, sums up five of the pressures to maintain a status quo that is far from sensible, as follows:

1. The existence within most universities’ estates of large rooms designed to accommodate this mode of teaching, which adapt poorly to more discursive modes of learning, particularly when these take the form of raked lecture theatres with fixed rows of teaching in which students are penned immovably for the duration of the lecture. These are normally designed to maximise sight lines for the students looking at the lecturer and to enable students to hear what the lecturer says rather than vice versa;
2. Rigidity in the working methods of those who run timetabling within a university that rely on fixed blocks of time (often an hour) and fixed delivery frequencies (e.g. once a week, once a fortnight etc). Block delivery, immersive learning, blended experiences and so on are all very difficult to timetable and so sometimes get blocked;
3. A static and seemingly immovable academic timetable (at least in the UK) that requires students to start their studies at fixed points in the year, for assessments to take place within examination periods, and that make activities like field trips outside term/semester time problematic;
4. The existence within some academics minds of similarly fixed models of learning, based on how they themselves were taught. Some academics really relish the control a lecture theatre gives them over students who are required to listen to what they are saying, and some don’t have the confidence to relinquish this power;
5. The existence within some university managers’ minds of a risk-averse view of curriculum delivery, that enables them to feel confident that as long as material is covered in lectures, they will not be open to charges of having failed to teach students what they need to know. (Brown, 2015).

Despite the reservations I have already expressed about lecturing in the traditional sense, in this chapter, I will explore how large-group sessions can in fact be made very productive in terms of students’ learning, by making optimum use of occasions when students are together. Meanwhile, let’s continue our exploration of how to survive as a lecturer by exploring, then hopefully exploding, some more of the myths about lectures.

**Why have lectures?**

There has been quite a lot written about how ineffective the traditional lecture can be in terms of learning payoff to students. However, we’re stuck with slots with large groups on our timetables, so it’s worth thinking about how we can make best use of such time. Long ago, the beginning of the culture of giving lectures was probably due to the fact that only the ‘lecturer’ had the books. When books had to be copied by hand, they were rare and valuable. Now, students can have relatively easy access to all the original books and papers, not to mention a vast amount of further material available on the Internet and online intranets, resource collections and databases. So why does the practice of giving lectures continue? There are good reasons and bad ones – let’s look at the worst ones first.

***Some bad reasons***

* to simply respond to some students’ expectations that they are going to be taught all they need to know;
* to fill up students’ timetables, so that a ‘course’ or ‘programme of study’ is seen to exist;
* to fill up your own timetable so that you’re seen to be gainfully employed;
* to keep students ‘under control’;
* because ‘that’s the way it’s always been done here’;
* because ‘that’s what happened to me when I was a student’.

***Some better reasons***

Even nowadays when students can have their own access to source material, books, and a range of online learning resources, there are still several things that can best be achieved in large-group sessions with classes. Some of the many reasons for continuing to use large-group sessions with students include the following:

* to give students a shared learning experience and provide a focus, where everyone gets together regularly;
* to whet students’ appetites, so that they go away and really want to get down to studying;
* to give students the chance to make sense of things they already know;
* to clarify intended learning outcomes, illustrate intended evidence of achievement of the outcomes, and define the standards of students’ performance which will be linked to these outcomes;
* to give students the opportunity of learning by doing, where they can get feedback from an ‘authority’ and from each other;
* to add the power of tone of voice, emphasis, facial expression, and body language to printed or on-screen words, helping students to see what’s important, and what is not;
* to provide material for later discussion, exploration and elaboration;
* to challenge students’ preconceptions, assumptions and beliefs;
* to change or develop students’ attitudes and perspectives;
* to create occasions when some at least of the students present can ‘first see the light’ on tricky concepts and ideas, and consolidate this by sharing the experience of ‘the light dawning’ with fellow students who’ve not yet seen the light;
* to give large groups of students common briefings for major assessment-related tasks which they are to undertake as they study the subject further.

Many of the above reasons for continuing to give lectures are more concerned with the broad experience of studying than with the activities which students engage in during a particular lecture. However, it is indeed possible to follow up our exploration of learning processes from Chapter 1 to set out to *cause* students to learn things *during* a lecture. This can still be achieved, even with very large student groups, by concentrating on what the students themselves actually do during such lectures, and ensuring that the processes relate to effective learning. Let’s look next at some ways of achieving this.

**Some things students do in lectures**

I’ve asked many hundreds of lecturers what they believe their students do during lectures, and many thousands of students what they *really* do. As you may expect, many of the things students do during lectures are far from connected to the content of the lectures. Some of the most common things students do in lectures are listed below:

* copying down things from the screen (though nowadays students expect to be able to download what’s on the screen onto their own laptops or tablet);
* jotting down verbatim things said by the lecturer (though today’s students are loathe to put pen to paper, and may prefer recording the lecture);
* attempting to summarise things discussed by the lecturer;
* gazing out of the windows (if there are any);
* texting, Tweeting, and looking up things on laptops or mobile phones;
* looking at other students, and what’s on their laptop or tablet screens;
* worrying because they can’t understand what is being talked about;
* watching the clock – waiting for lunchtime, for example;
* doodling, yawning, fidgeting, shuffling, daydreaming – even sleeping;
* reading things that have nothing to do with the lecture;
* listening to or watching the match on a mobile device;
* thinking about coursework soon to be handed in for *other* subjects;
* actually *doing* coursework due to be handed in for other subjects;
* worrying about accommodation problems, cash flow problems, relationships;
* feeling generally unwell – hangover, tiredness, ’flu, time of the month.

(Please continue this list if you wish!)

Only one of the things mentioned so far is a useful learning process in its own right: ‘summarising’. This involves processing the content of the lecture, making decisions about the relative importance of different things, and generally making sense of the content of the lecture.

Most of the remainder of the things in the list above are neither productive in terms of learning payoff, nor are they linked to achieving the intended learning outcomes. In particular, *copying* things down (whether from the screen, or from what has been said) is far from being as useful as people think it is. Most students will admit having been to lectures where they’d copied all sorts of things down (even transcribed verbatim dictated episodes), but without actually thinking about the material at all at the time. They confirm that if they were to be quizzed about the notes they had just copied out, their answer would have to be along the lines, ‘sorry, I haven’t actually *read* it yet – ask me again later!’. However, this problem is fading away, as students tend not even to try to capture information with a pen nowadays.

In other words, the fact that a large group of students may look very busy writing during a lecture is in itself no indication that any deep learning is occurring then and there. It is true that students will often get down to learning what they have copied *later,* but that does not alter the fact that during the lecture itself they were in effect wasting their time and energy on processes with no direct learning payoff.

It used to be thought been better to actually *give* students the relevant material as a handout. However, there were problems with handouts, in particular the danger that students believed that they had then already captured the content of the lecture, and could think that they may safely switch off mentally altogether. Now, the expectation is that students should be able to download relevant resource materials, before or after the actual lecture – but the problem remains that they think ‘I’ve got it’ when all they have is the information – which all too often remains unprocessed.

**Some productive lecture processes**

A number of further activities that students can engage in during lectures can be productive in terms of learning. As we saw in Chapter 1, overlapping processes which underpin successful learning are:

* wanting to learn – motivation, interest, enthusiasm;
* needing to learn – seeing the reason for putting in some hard work, gaining a sense of ownership of the intended learning outcomes;
* learning by doing – practising, trial and error, learning from mistakes;
* getting feedback on how the learning is going – other people’s reactions, comments, seeing tangible evidence for one’s achievements using what has been learned;
* making sense of what has been learned – getting one’s head round it.
* deepening learning by putting things into spoken words – talking to each other in the lecture.
* getting a real grip on the subject concerned by making judgements, assessing things.

Below I have tried to link some productive student actions to these central processes.

* becoming excited about the subject, and enthused (wanting);
* wishing to find out more about things discussed (wanting);
* building on what’s already known about the topic (wanting, identifying the need)
* seeing *why* something is important (needing);
* solving problems (learning by doing);
* trying out theoretical principles in practice-based examples (learning by doing);
* making decisions (learning by doing, also assessing);
* explaining things to fellow students sitting nearby (doing, making sense, feedback, verbalising);
* asking questions (verbalising, seeking feedback);
* working out questions to find out the answers to later (preparing to seek feedback);
* prioritising issues and information (making sense, making judgements);
* summarising (making sense, prioritising);
* answering questions (learning by doing, verbalising, getting feedback).

As you read the discussion below, think further how you can construct your lectures in ways that directly address these active processes (and help to avoid the occurrence of some of the unproductive processes mentioned earlier).

**Causing learning to happen in lecture contexts**

To summarise our thinking on how we can use large-group sessions with students to maximise the learning payoff they derive from them, I would like you to think once again about the practical model of learning introduced in Chapter 1, and the underpinning processes: wanting, needing, doing, making sense, feedback, deepening learning by verbalising (speaking) and making judgements (assessing). Next, let’s take each of these in turn, and remind ourselves of some of the ways that they can be embraced within the lecture situation. I will explore below some general factors, which I hope will help you think of your own subject-specific ideas for turning your lectures into interactive learning experiences.

***Lectures and wanting to learn***

Lectures can be a very effective way of arousing curiosity and even creating the want to learn. Lectures can be occasions where the want is rekindled or amplified. Even if this were the *only* result of a particular lecture, it would be a useful one. Some ways we can attempt to develop students’ want to learn and arouse their curiosity include:

* radiating infectious enthusiasm and passion for the subject;
* posing interesting questions which excite students’ curiosity;
* helping students to see how much they can already do, increasing their confidence;
* helping students to see ‘what’s in it for them’ – how the material will help them both towards gaining the qualification for which they’re studying, and in their later careers and professions;
* illustrating to students that complex problems can often be solved one step at a time;
* clarifying targets, performance standards and intended learning outcomes, so that students can see exactly what they’re aiming for;
* helping students to see the big picture by identify the difference between what they *need to know,* and those things that are simply *nice to know;*
* relating materials to be learned intended learning outcomes and assessment criteria, (establishing the *need to know* dimension).

***Lectures and needing to learn***

While as hinted at above, wanting to learn is a much happier driving force for the learning process than needing to learn, the latter is much better than nothing. We can use the shared, large-group situation to help our students to see exactly what is entailed in the expected learning outcomes associated with each topic or theme. We can illustrate the kinds of evidence of achievement of these outcomes which will link strongly to forthcoming coursework and exams. Some of the approaches with which we can help students to take ownership of their particular learning needs include:

* explaining exactly the sorts of things students may be required to do to demonstrate their learning of the topics covered by the lecture;
* helping students to see the purpose of the intended learning relating to the lecture, and alerting them to good reasons for working towards becoming competent in particular aspects of the material covered;
* allowing students to see that some parts of the subject content are expected to be hard, but that it will be worthwhile spending an appropriate amount of energy on these parts.

***Lectures and learning by doing***

I’ve already suggested that simply writing down what is heard or seen during a lecture is not a particularly useful kind of ‘doing’. However, there are many other activities that can be used even with hundreds of students sitting tightly in rows, which all connect to ‘learning by doing’. Here are some possibilities. Students can be helped to:

* make judgements and decisions – for example picking the best option from several alternatives shown on the screen, and working out why other options are less good or even incorrect;
* solve problems – using information given to them verbally or on the screen, or on websites visited live in the lecture;
* think creatively, for example by working out what the most important issues or questions are, using information given by the lecturer, or from their own experience;
* deepen their learning by speaking to each other: engaging in mini-brainstorms for a few minutes with their immediate neighbours, for example working out what they think may be the main issues that need to be addressed in a scenario or case study;
* place given factors in order of importance, prior to a class discussion which shows them whether their prioritising was effective.

***Lectures and learning through feedback***

The old-fashioned sort of lecture where students were seen and not heard offered little opportunity for learning through feedback. However, the potential which can be derived from feedback in modern large-group learning environments is in fact very high, by facilitating student actions including getting students to:

* compare thoughts with each other regarding decisions they made individually when given options to choose;
* work together in small clusters of two or three, to make decisions, or solve problems, or prioritise the importance of issues, or formulate questions, and so on;
* find out where they stand compared to each other, for example in ‘show of hands’ episodes where the positions or views of all the members of even the largest group can be surveyed in seconds;
* put things into spoken words, deepening their thinking by explaining things to each other, or arguing with each other;
* attend to feedback from the lecturer on work which has just been assessed, or on past students’ efforts at coursework assignments and exam answers;
* receive feedback from the lecturer, on decisions they have reached or options they have selected;
* make judgements on their own learning, for example by doing self-assessment exercises (at their own pace and in their own way), then turning using feedback briefings and responses designed to let them see how well they had tackled the exercises.

***Lectures and making sense of what is being learned***

This is perhaps one of the strongest parts of the rationale for having large groups of students together in one place at a given time. The more we can help students to get their heads around key ideas and concepts while they are together, the more worthwhile it is for students to turn up for a lecture. In the lecture, as well as the information on the screen, they have the richness of everything else the lecturer brings to the occasion to help students make sense of things, including tone of voice, body language, emphasis on particular words, pauses for thinking, and ‘saying things again in a different way’ when it is noticeable that some students haven’t yet ‘got it’. When the making sense process really works well in a large-group session, it means that the relevant learning is already firmly under way. For anyone missing such a lecture, just catching up from the online resources is a very poor substitute for an active learning occasion. Just some of the things we can try to do in lectures to get their sense-making under way include:

* giving students the chance to explain things to each other – the act of putting an idea into words is often the fastest way to get a real grip on the idea – especially when coupled with feedback;
* helping students to see the big picture – in other words to make sense of what they have already learned, and to see how it links to the things they will study next;
* helping students to find out how successful their learning has been so far – and where the black spots are;
* giving students tasks where they apply what they have learned from previous lectures in the series to new data or scenarios;
* helping students to find out where they stand, for example letting them see how their views and beliefs compare with those of the rest of the group by show of hands episodes in a lecture.

***Lectures and learning by verbalising***

You will already seen in the discussion so far that I suggest that students do not simply sit silently through a lecture, but can gain a great deal to deepen their learning by talking – putting things into spoken words – as a means to deepen their thinking. Indeed, people *need* to talk. If there aren’t opportunities for students to speak, and especially if the subject is rather boring or quite difficult, ‘chatter’ tends to break out anyway. It is therefore best to *cause* students to talk, and give them the chance every so often to contribute to the proceeding, particularly by talking to those sitting close to them, but also from time to time by asking questions of the lecturer, and answering questions from the lecturer and from each other.

***Lectures and learning by making judgements***

This is perhaps where large-groups of students can be at their most powerful in terms of learning payoff. This is where students can get their heads around the assessment culture which they need to master to succeed. There are all sorts of things we can get students to do in lectures including:

* applying assessment criteria to examples of essays and exam answers, as a way of helping them to make sense both of the subject matter itself *and* the criteria which will be used in due course to assess their own learning;
* allowing students to be talked through self-assessment of drafts of their own work which they bring to the lecture, to alert them to strengths and weaknesses in their learning;
* helping students to peer-assess each other’s work, allowing them to gain feedback from each other’s successes and weaknesses, and to improve their own future work on the basis of such feedback;
* asking students to make decisions on (for example) which of several options displayed on the screen is best in a case-study scenario presented by the lecturer, and then gain feedback on the pros and cons of each of the options.

These kinds of activity go far deeper than merely trying to capture what is being shown or said in traditional lectures.

**Beginnings , middles and endings**

It has been (wryly!) said that a good lecture should involve three stages:

1 tell them what you’re going to tell them;

2 tell them it;

3 remind them what you’ve told them.

Linked to the student-centred model of learning we’re now looking at, however, it might be wiser to rephrase this along the following lines:

1 alert students to what they’re going to be doing (create the want or the perceived need – explain the intended learning outcomes of the session);

2 help students get down to learning by doing – practising, experiencing, talking, judging, and learning by trial and error – and receiving quick feedback on their learning in progress;

3 help students to make sense of what they’ve gained from their experience of the session, and the feedback they’ve derived (such as by reminding them of the intended learning outcomes and asking them to self-assess the extent to which they feel they’re achieved them during the lecture).

We’ve already explored stage 2 of the above processes, but it’s perhaps worth saying a little more about beginnings and endings.

***Beginnings***

First impressions are important. Especially at the first lecture with a group, there’s no second chance to make a good first impression. It’s worth thinking quite hard about how best to spend the first five to ten minutes of any lecture. This is where concentration levels might be relatively favourable, but also when some interruptions from late-comers may be inevitable. Some ways of getting a lecture off to a productive start include:

* expressing the intended learning outcomes for the lecture, for example using words such as:
  + - ‘by the end of this lecture you’ll be able to do the following four things’
    - ‘in this lecture, we’ll explore three ways of analysing social policy’
    - ‘during this lecture, you’ll see for yourself how a typical exam answer is marked’
    - ‘when you’ve worked through the examples we’ll discuss in this lecture, you’ll be able to use the Second Law of Thermodynamics to solve problems’
    - ‘after this lecture, you should be able to begin to formulate your own project outline’;
* including an early short task such as ‘think of what is the most important point you already know about (one topic to be covered)’, then gather a few points from volunteers;
* introducing something relevant to the topic which has happened in the last day or two;
* giving a checklist of points that will be covered in the lecture;
* asking one or two short questions based on what students should already know from previous lectures, and warmly receiving replies;
* posing a list of questions that the lecture will address;
* providing the exam questions on two or three past papers, linking to the material they are about to think about in the lecture.

In other words, it’s productive to use at least the first part of a lecture to set the agenda for that particular lecture – and also to link the agenda to things that have already been covered, and things to come later on. Human nature being what it is, however, there are good reasons for not just reciting the agenda or intended learning outcomes – it’s better if it can be seen on the screen. The reasons for putting the outcomes in print as well as speech include:

* some students may arrive late, and miss the agenda, or disturb others’ reception of the agenda;
* if it is possible to have the outcomes visible in a handout, they continue to serve as an agenda right through the session, rather than being subsumed or forgotten as time goes on;
* if the outcomes are presented on one or more slides, it can be useful to return to these from time to time during the session, so that students keep the bigger picture in mind;
* if questions and issues are planted in students’ minds, as the answers and solutions evolve during the session, students are more receptive. It’s useful to have students searching (even subconsciously) for the knowledge constituting the answers to questions.

***Endings***

There’s no second chance to make a *last* good impression either! The last thing you want if for the last impressions you create at lectures to be any of the following:

* ‘obviously lost it towards the end, rushing to try and get through the material’
* ‘I hate is when lecturer over-runs, and I have to rush to the next one only to be late there’
* ‘didn’t get through what was promised at the beginning’
* ‘looked more and more flustered as the time ran out’
* ‘just seemed to stop. No conclusion, no ending’

It’s so easy for time to run out, so that we feel our only option is to stop the lecture in mid flow – not a good idea at all. Saving the last five or even ten minutes for a purposeful ending phase for a lecture pays dividends. For a start, any observer (or appraiser) will then recognise the signs of a structured approach to using lecture situations. Even when time does run out, it’s far more important to have a good ending than to ‘get through’ all of the agenda that has been presented. In other words, cut short some of the middle, and leave room for the ending. This is in fact quite easy to do, when the middle has been centred round student-centred activities that we explored under the ‘learning by doing’ and ‘learning through feedback’ headings earlier – simply miss out an activity, or cut one a little. And indeed if you’re doing a series of lectures, you don’t have to ‘get through it all’ or even ‘get through all of the things you promised at the beginning’, particularly if something really vital and interesting came up in the middle of the lecture – perhaps sparked off by an important question from a student. In such circumstances, it’s well worth explaining towards the end of the lecture ‘We’ll catch up next time with a couple of things outstanding, as it was really useful to spend some time on (whatever it was)’.

Some ways of coming to a robust, recognisable conclusion include using one or two (not more) of the following:

* go back to the agenda of intended learning outcomes, re-showing a slide containing them, and briefly summarise how each has been addressed (this helps students with the making sense stage of their learning);
* giving students a minute or so, ask all students to jot down the most important thing they wish to carry forward from the lecture. Then ask them to compare with near neighbours. Finally, ask for one or two volunteers to share the thing they’d chosen.
* pick out any unfinished business from the agenda, to be included in a future lecture, or to be diverted to tutorial sessions for in-depth exploration (note that this allows you to turn occasions when time runs out on you into what seems like an intentional strategy);
* formulate a new agenda for the next lecture, to whet students’ appetites for what is to come next, and to give them the opportunity to do some preparation for the next lecture;
* set a task for all students to complete before the next lecture, or for them to bring along to forthcoming tutorial sessions;
* present in advance the intended learning outcomes for the next lecture, giving students the opportunity to add focus to their preparatory work or reading.

Any of these techniques is better than simply having an ‘any questions?’ episode right at the end of a lecture. An open-ended offer to take questions can lead to the majority of students with no particular questions feeling that for them the lecture is over, and the group gradually dissolving into shuffling and movement. Regularly ending by giving students something to do is a useful ploy – it helps to reduce the fidgeting that so often occurs when a lecture is obviously about to wind up – closing of books, rustling of papers, shifting of chairs, and so on. When students need to listen carefully so that they know exactly what a task is, such fidgeting is almost completely avoided.

**Planning 50 minutes for learning: an example for discussion**

Timetables are usually developed around one-hour slots (even though concentration spans are measured in seconds and minutes, rather than hours). In practice, that boils down to just around 50 minutes by the time entry and exit are taken into account. The possibility of giving a 60-minute lecture (or even of *facilitating* a 60-minute learning experience) is remote! Suppose you’ve got a lecture scheduled from 1000–1100. Students will often have to be in some other lecture or tutorial in the next slot, starting at 1100 – and many may have already been at something else scheduled from 0900–1000. If your lecture goes on past 1100, there may be hundreds of students (and a frustrated colleague) milling around outside the lecture room waiting to get in. Therefore, it’s clear that there are advantages in ‘reasonable punctuality’ – both regarding starting and finishing. Here are some suggestions. Let me say at once, however, that I’m not suggesting an inflexible regime for conducting large-group sessions, merely a frame of reference to apply and customise as the occasion demands.

If you still wish to talk to a few students until 1100, do it *outside* the room, so that the next class can (if punctual) walk straight in before 1100. Where students do wish to see you individually, the end of a lecture is rarely the best time, and it can be better to have a few slots reserved for students to come and see you. One way of helping students to be punctual in appointments to see you individually is to advertise an ‘open hour’ when you will be pleased to see them in your room, and to post a ‘make your own appointment’ sheet (maybe in five-minute intervals) on your door. This gives you the further advantage that you will often be armed with the names of students intending to call to see you – a luxury when dealing with large groups of students where it can otherwise be quite impossible to link names to faces.

* **1000 (or earlier, if the room is empty)**: arrive on the dot – punctuality and professionalism are closely connected in many people’s minds. Get your slides ready, especially a title slide for the lecture (so students coming in will know they’re at the right place if unsure) and a slide containing your agenda (or list of questions to be considered during the lecture, or intended learning outcomes for the lecture) ready. Check the projector if you’re going to use it, clean a board if necessary, and so on. If you’re using anything complex, such as simultaneous web links to other venues, audio-visual materials in addition to normal slides, or giving a practical demonstration, and so on, it’s worth booking the room from 0900 (or even earlier) if possible, and doing all this without time pressure. If you can’t book the room from 0900, and have a lot of setting up to do, you can often arrange to do it before 0900, and arrange with whoever is using the room from 0900–1000 that your preparations will be guarded.
* **1001:** Perhaps (if *you* are quite ready to start) chat with some of the students who arrive first – make them feel good about being punctual. Smile at those who are already there – they often smile back. Try to avoid looking increasingly irritated as students continue to arrive – some will not have been able to arrive any earlier.
* **1005:** If more than half of the class is there, make a definite start. For example, do the ‘beginnings’ bits. Reveal the agenda of intended learning outcomes relating to the next 40-odd minutes, and discuss it. Remind the class of the important things they should have remembered from last time. Or tell an anecdote or joke. Ignore as best you can stragglers who arrive late. Leave it to the punctual students to make any noisily arriving latecomers feel resented!
* **1010:** Enter the ‘middle’ phase – preferably with a student-centred activity rather than a direct input from you. You can give your input *in response* to the results of the student-centred activity soon enough. Continue activities, buzz-group discussions, open discussions, and short inputs from you, with no single thing taking more than 10–15 minutes, until about 1040.
* **1040**: Take control again, for example by asking for general questions – or if none are forthcoming, asking questions yourself and putting one or two students on the spot (but not unkindly).
* **1045:** Start doing the ‘winding up’ bits – go briefly through the intended outcomes again, perhaps this time elaborating on how these are linked to forthcoming assessment criteria; set a task, and so on. Aim to finish at around 1050.
* **1050 Finish!** This is best done ‘visually’ for example by disconnecting your laptop or taking your memory stick out of the fixed computer or logging off, replacing your papers into your case or bag, switching off the projector, cleaning a board if necessary, and so on. However, there are still five more minutes available, if there are pressing questions from the class, and if you want to deal with them at this stage. However, surprising as it may seem, few students are seriously disappointed when a lecture finishes a few minutes early!
* **1055:** If you’ve not managed to do so already, *definitely finish* and **walk out!** Especially with large groups, it can easily take five minutes for one group of students to leave and another to take their places. This may mean choosing phrases on your way out such as ‘Sorry, but I really must go now’; ‘Do email me with any problems or questions’, ‘I’ll take this up next week’; ‘We’ll look further into this on Thursday at the tutorials’; ‘Anyone who wants some further help on this, please come along to my room this afternoon after four’.

**Using technologies – old and new**

Decades ago, the only equipment to be found in most lecture rooms was a lectern, and perhaps a blackboard. Nowadays, some lecture theatres abound with technology. The simplest technologies still include blackboards (or whiteboards), but most lecture theatres are equipped at least with a networked computer and data projector, and a place to connect your own laptop. Most also have a lectern microphone or a roving one, and controls for the lighting. In this section of the chapter, I’ll present various tips on using each of a range of technological tools, all with two main aims in mind: to help you to

1. keep your cool when using technology;
2. design your usage of slides and other audio-visual materials, keeping your students’ learning from them firmly in mind.

These tips are dos and don’ts based on views gathered from countless colleagues and students. Some of these suggestions are likely to seem too obvious to deserve stating, but I hope that in each of the lists which follows you’ll find at least some which will trigger you to experiment with how you use technology in your lectures.

***Working with slides: some ‘do’s and don’ts’***

Data projectors (‘beamers’ as they’re called in some countries) are more-or-less endemic now, displacing overhead projectors and acetate transparencies which were used earlier. Two major advantages of having images on a big screen are that you can face your audience as you speak, and usually the projectors are bright enough so that you do not need to darken the room (but it often improves the visibility of slides if you can switch off the front row of lights while using slides, then switch them back on again when not using slides so that students can see your facial expression and gestures more clearly).

The following suggestions may help you to make effective use of overhead projection, whether it’s slides, or visits to website, or other visual and audio-visual materials. Many of the long list of suggestions below relate to what has become almost an endemic presentation medium in lectures, Microsoft’s ‘PowerPoint’, but apply equally to other media, including one I’ve seen often recently where someone always says afterwards ‘made me a bit seasick’ – I’ve not been tempted to use that one myself.

1. **Know your machine.** Most projectors have a focus control, on the machine itself, but usually also accessible from a remote control (if it’s not been stolen). It’s well worth your time to take steps to become familiar with the particular machine you’re going to work with. On some remotes, there’s a ‘freeze’ button which allows you to freeze the image on display at any moment, giving you the opportunity to fiddle with your computer to adjust the next slide or to locate something else you suddenly wish to include, but without your audience having to watch your efforts to do so.
2. **The medium is the message?** Good quality slides can add credibility to your messages. It’s worth investing time making your main slides look professional and believable.
3. **Experiment with fonts.** ‘Sans serif’ fonts (common ones include Arial, Calibri, Comic MS) tend to be easier to read than ‘serif’ fonts (those with ‘twiddly bits’, for example New York, Times New Roman), and some fonts look better than others on particular equipment.
4. **Don’t put too much on any slide – particularly ‘straight text’.** Font sizes usually need to be ‘24’ or larger to be easily-read anywhere in a large teaching room, with main headings considerably larger. Make sure that each slide you prepare will be visible from the back of the largest room you are likely to use, even by someone without good eyesight.
5. **Keep the number of words down.** A good slide only needs to contain the main ideas, not the details. You can add the details verbally as you discuss the main points on the slides. Your own ‘crib’ notes can then be written onto a paper copy of each slide, or even displayed for your eyes only beside each slide on your laptop display.
6. **Use the top two-thirds of the available space only on most slides.** It can be really irritating to students if they have to move their heads (or stand up) to see the final bullet point you’ve just revealed at the very bottom of a slide, or to see the labelling of the horizontal axis of a graph on a slide. As soon as you notice students having to move their head positions to see something on one of your slides, it’s worth noting down that there’s something to adjust before you use the same slide again.
7. **Try very hard not to read out your slides!** Students (and any audience) really hate this. Your students can read much faster than you can speak. People don’t like having things read out to them that they can read for themselves. ‘Why bother to come to the lecture just to have the slides I have downloaded anyway read out to me?’ they may ask.
8. **Sorry, but it *is* a competition!** Your students will no doubt see many different lecturers using slides, and they can’t help noticing the differences, and making judgements about which approaches they find most helpful. It’s a good idea, one way or another, to see how your colleagues use slides – some will gladly let you have their slides to play with, but it’s even better to see *how* different colleagues use slides for real, and how their students react to them. Peer observation really comes into its own here.
9. **Give students at least a little time to make notes if they wish.** Normally, you may make your slides available on an intranet or on the web after a lecture so that students can revisit anything they wished to see for longer, but you may need to strike a balance regarding how long you show a particular slide between (a) irritating some students by whipping away the image too quickly and (b) boring other students waiting to move on.
10. **Be prepared (if you’re brave enough) to edit and add things to your slides during lectures.** Students are impressed if an important point is added in response to one of their questions, and in practice we often notice mistakes or things missing on slides only at the instant they first appear on the lecture theatre screen!
11. **Gain confidence at linking slides to other media and to websites.** It’s fairly straightforward to use ‘action buttons’ in PowerPoint to start a short video clip, or an audio recording, or to link to a text file, all of which can be contained on your laptop or memory stick. You can also use them to go to hyperlinks to websites, where internet access is assured, and bandwidth is sufficient to allow reasonable quality of projection when so linked. However, when live links are to be used to external content, it’s best to have ‘Plan B’ for when nothing happens. What works perfectly on your own computer in rehearsal isn’t certain to work in a strange lecture theatre with hundreds of eyes watching the drama which might ensue. You’ve got to be ready to move on, quickly and unruffled, when intended happenings just don’t happen. (There’s more about this later in the chapter).
12. **Don’t cause ‘death by bullet point’!** Even though PowerPoint can introduce bullet points to slides in a variety of ways (appear, fly from left, dissolve, and much more dramatic options in recent editions of the software), bullet points can quickly become tiresome to an audience. It is worth having a good reason for building any slide step by step.
13. **Don’t overdo the special effects.** Doing the whole presentation in a single format becomes boring for your audience, but programming a random sequence of slide builds tends to be irritating for you as presenter, as you don’t know what build sequence will be produced when you move to your next slide. Similarly, don’t go overboard on the snazzy changes from one slide to the next**.**
14. **Beware of the sun!** This isn’t a problem in lecture theatres with no windows, but in many large classrooms there’s the danger of sunlight making slides difficult to see, or impossible if the sun actually shines onto the screen. Sometimes then projectors and screens can be moved, or blinds or curtains drawn, but often enough sunlight can impair the quality of a PowerPoint presentation. Also don’t forget that sunlight moves. If you’re setting up a teaching room with windows first thing in the morning, you may need to plan ahead for where any sunlight may be later in the day.
15. **Don’t forget the conditions appropriate for human sleep!** Turning down the lights, sitting comfortably in the same place for more than a few minutes, and listening to the sound of your voice may be just the right conditions for your audience to drop off, particularly if the images are monotonous or unclear.
16. **Don’t import tables, text files and complex flowcharts just because you can.** The fact that you *can* import such files into a PowerPoint presentation leads many into temptation. These are very often the slides which can’t be read from the back (or even from the front). It is normally better to give students such information as files they can download, rather than to try to show it to them on-screen.
17. **Don’t use the wrong colours.** Colours that look good on a computer screen don’t always show up so well when they are projected. If most of your presentations will be in rooms with natural daylight, it is usually best to stick to dark colours for text, and light (or even white) backgrounds. If you know you’re going to be working in a lecture theatre where you have full control of the lighting, you can then be more adventurous, and use light lettering against dark backgrounds (not forgetting that you may be lulling your audience to sleep if you turn down the lights for optimum display).
18. **Don’t use the same slide format for all of your slides.** PowerPoint allows you to switch your whole presentation into different pre-prepared styles, but the result can be that your slides all look too similar to have an optimum learning payoff for your viewers. Vary the layout, colours and backgrounds from time to time, so that each new slide (or short sequence of slides) makes its own impact. (However, there will always be *some* feedback from the odd person who would have preferred all of your slides to be in exactly the same format – and the odd pedant who decrees that all the slides in the entire institution should use a given institutional background and layout!).
19. **Don’t talk to the screen!** In the past times of overhead projectors, it was easy to develop good habits, including looking at the transparency rather than at the screen, thereby avoiding turning your back on your audience and talking to the screen. With projected images, you may have no alternative but to keep an eye the screen, but you need to make sure that you talk to your audience. If you can arrange things so that you can look at a computer screen between yourself and the audience, rather than the projection screen, the problem can be partly solved.
20. **Don’t go backwards for too long!** If you need to return to a slide you showed much earlier, it really irritates an audience to go backwards through several slides to get there. It is better to temporarily switch the display off, and find the slide you want without your audience seeing every step. The same applies to returning to your original place in your presentation. Even better, in PowerPoint, if you know you wish to go back to slide 23, keying in ‘23’ then ‘enter’ will take you straight there. It’s useful to know which slide you were at before you did this, so that you can go straight back to it after revisiting ‘23’. Right-clicking gives you the option to return to the previously viewed slide – which is fine if you *only* revisited ‘23’. In practice, it’s useful to have a printout of your slides, for example six per page, with the numbers clearly marked with felt-tip pen on the printout, so that you can navigate your entire presentation in any order at will. One renowned presenter I’ve encountered often goes straight to her ‘conclusions’ slide shortly after starting a lecture, then explains that the next thirty minutes aims to show how these conclusions have been reached, and goes back to where she left off to continue the story. When the ‘conclusions’ slide comes up again she smiles with satisfaction – and the audience smiles back. Moreover, if audience questions should mean that there was a danger that there might not be time to reach the ‘conclusions’ slide, she can miss out some less important slides and go straight to that final slide just at the right time.
21. **Don’t forget to rehearse your presentation.** With overhead transparencies you always knew what was coming next; with PowerPoint it is all too possible to forget. If *you* look surprised when your next slide appears, it does not do much for your credibility with your audience.
22. **Don’t underestimate the potential of remote controls to surprise you!** Many systems allow you to change slides with a dongle inserted into your computer, and a simple remote which goes backwards and forwards, or to ‘blank screen’. Sometimes the remote also carries a laser pointer too, to spotlight actual things on the screen. If a presenter is very nervous (or has a hangover), however, laser pointers wobble disconcertingly, so you need a steady hand to use one with confidence. Some systems have more complex remote controls, where pressing the wrong button can switch the system to something quite different (for example video input, or ‘power down the projector altogether’), and can mean that you can find yourself unable to get back to your presentation without losing your cool.
23. **Don’t forget to check your spelling.** PowerPoint, for example, can do this for you, but you have to instruct the software appropriately, and avoid teaching the ‘custom dictionary’ wrong words! Be careful not to let the software replace words automatically, or you will get some strange slides if you are using unfamiliar words.
24. **Don’t miss out on seeing your presentation on paper.** Consider printing out your slides, for example six per page. This helps you to get an overview of your presentation, and can often alert you to where to insert an additional slide or two, or to where you’ve accidentally repeated yourself. You may also spot errors on the printout of your slides that you wouldn’t have noticed on your computer screen. It is also useful to have a printout of such pages in front of you as you present, so that you can easily remind yourself of what’s on the next slide, and navigate around your presentation at will when needed.
25. **Remember that in extremis, in ‘edit’ mode, you can still search for a particular word or phrase to return to a particular slide, using ‘Find’.** You may need to do this when asked a question. This can turn out to be quicker and less stressful than going backwards and forwards looking for a particular slide (but not so good as being able to spot the right slide at once, and its number, from a printout of 6 per page beside you).
26. **Don’t neglect to adjust and improve your slides.** It is so easy to alter a set of slides that there’s no real excuse for not editing your presentation frequently so that it is always finely tuned to the particular audience and context. The most beneficial additions are often new slides inserted to address frequently asked questions in advance. Just a few minutes spent editing within a day after giving a lecture can allow you to improve the slides more than you might have imagined.
27. **Don’t stop watching other people’s technique.** This is one of the fastest ways of improving your own presentations. Look for things that work well for other people, and find out how the effects were achieved, then emulate them. More importantly, look for things that don’t work or look clumsy, and make sure that you avoid them.
28. **Remember that when students are asked for feedback on your teaching, one of the first things which may come to their minds is their impressions of your slides.** If the slides were interesting, stimulating, not-too-many, and useful for revision, that will be reflected in their overall feedback.
29. **Don’t forget to back up your presentation.** Have it with you on a memory stick as well as on your laptop. When your laptop develops a problem, you can then still get to your presentation through other computers. There is usually a desktop computer in a lecture theatre – but if not, a student may be honoured to grant you use of another laptop.
30. **Don’t switch the data projector off!** You may have good reasons to wish to show nothing on the screen from time to time, but switching the machine itself off can be troublesome. Sometimes projectors take ages to cool down, and even longer to warm up after re-starting them. In most circumstances, when using PowerPoint, simply press ‘B’ for black on the keyboard, and the screen will go black. Then ‘B’ again to restart the display instantly. (Or ‘W’ for white, if you’d prefer more light around). An alternative is to insert a ‘black’ slide, where you wish to stop your audience from looking at the screen. Don’t, however, forget where you’ve placed these, and panic about where your display has gone! Alternatively, the remote control for the projector often has a button for ‘blank’.

***Live links in lectures***

I’ve already mentioned that these should be used with caution, as delays and unusable links can be really annoying to audiences, and panic-inducing to presenters. With PowerPoint, you can insert hot-links to all sorts of things using the ‘Action Buttons’ facility. These links can be clicked using the mouse or remote control while on-screen in the lecture theatre, and if a suitable modem connection is up and running take you straight to the website, or photo, or different PowerPoint presentation, and so on. It is, of course, important to make sure that you can get *back* to your presentation when you want to. It is sometimes more difficult than you think, as you might need to click an ‘X’ box at the far top right-hand corner of the screen to do so, and this might not be possible using the particular remote control you’re using, or might be quite hard to do with nervous fingers using your mouse or the trackpad on your laptop.

When we link on-screen into web pages, the problem of visibility and readability can become serious. From the back of the room, it may only be the main headings that can be seen at all well. This is not to say that you should never show web pages on-screen in lectures; you may simply want students to register the general appearance of some pages so that they are primed to recognise them more readily when they subsequently search them out for themselves. Or we may just want students in the lecture to see a particular graphic, chart, diagram, table or photo, rather than the small-print wording surrounding it. All this is fine so long as we make our intentions clear at the time. In other words, if we say ‘just look at this bit’ and point to it with our on-screen cursor or laser pointer, and add ‘don’t try to read the text here, wait till you’ve got the web page on your own machine’, then no one is likely to become frustrated by what they *can’t* read there in the lecture room. However, the students sitting at the front are still going to be advantaged – or even distracted – by them actually being able to see both the words and the image we’re referring to.

***‘Now you see it, now it’s gone’***

This is perhaps the most significant pedagogic problem associated with using sophisticated technology in lectures to bring to students’ eyes images, data, and so on. When we’re using a lot of different on-screen images, how much of it all do students remember, five minutes on, or an hour or two on (let alone a week or two on) after our lecture? It’s easy enough to give students our PowerPoint slides themselves, but if we’re linking to other things such as web pages, we can’t guarantee that students will also be able to follow up all the links wherever they are. But the problem of ‘now you see it, now it’s gone’ continues to apply at least to some extent. We know only too well that it’s possible to sit at a computer for an hour, totally absorbed, but not really have a firm grip on what we’ve been learning from it, unless we do more than just browse through some software applications or tour the Internet or follow up links.

***Now you see it, now it is gone altogether! Don’t panic?***

Returning to using technology in lectures, just about everyone I know has tales to tell of when the technology let them down, in front of large groups of students, unexpectedly, and irretrievably. One or more of the following can happen at any time, any of which can take the technological side of your roadshow right off the road:

* a power cut – everything goes dark except the emergency exit lights (and all the students’ mobile phones);
* a fire in the building, which means you’ve got to evacuate Theatre 2, leaving your laptop with all your stuff on it until tomorrow morning, when the fumes that came in through the air conditioning system have been deemed by the Fire Service to have gone again (and they don’t care that you needed your laptop as you’ve got another lecture on the other campus at 1600 – keep that memory-stick backup in your pocket and not on the lecture theatre console);
* nothing happens when you press the ‘next slide’ button on the remote control, or ‘N’ on the keyboard, or ‘esc’ for escape;
* the bulb blows in the data projector up on the ceiling;
* the server goes down, and you can’t log-on to the system to re-start the projector;
* the computer itself goes down;
* the computer won’t talk to the data projector it talked to happily yesterday;
* the image on the big screen is just the top left two-thirds of what’s on your laptop screen;
* the website you’re connecting to has gone down;
* alerts about your new emails keep coming up on the big screen when you’re linked in to the system and the ‘pings’ are audible to everyone to make sure they all notice the alerts;
* your text messages and incoming Tweets appear on the screen;
* your laptop insists that your machine is at risk and you must update your virus protection software, and imposes the warning every minute or two on top of your PowerPoint slides;
* you can’t find the file on your computer, and your memory stick backup has corrupted.

It’s enough to put anyone off using anything more than chalk and talk. But it happens. The main thing is to panic only inwardly. Your students will be *really* attentive now, watching how you rise to the challenges which beset you. One really wants to just sit there and cry, but that’s not what you want them to remember.

‘Oh, I’ll just give it another try’ can be famous last words. Sometimes, we *know* we know what to do, and that it will work. But we’ve all been there on those days where someone found, all too slowly, that there was nothing at all that could be done in the time available. It’s the technological equivalent of completely forgetting one’s lines on-stage, except that there’s not usually a helpful prompt from the wings to put one back on track. It is true that on some occasions a helpful student will know what to do and will bail us out.

My best advice, for use in these emergency situations, is to choose one or more of the following tactics, as your strategy for handling the crisis:

* Smile to yourself (through your teeth if necessary), then smile at the students, and get them smiling back at you.
* Think of something for the students to do for five minutes. It’s really useful if you *always* have with you something for the students to do for five minutes. Alternatively, get them discussing and arguing with each other about something you’ve already done in the lecture. Give them a decision to make, something which they’ll have different views about.
* Whatever you get *them* to do, now’s your time for planning what *you’re* going to do next. If what you *were* going to do next remains dependent upon the technology, it’s time to find something else which isn’t.
* Remember that it’s not going to be an eternity till the end of the session. The time remaining will pass much more quickly for your students if they’re engaged in something interesting.
* Perhaps turn the lecture into a question-and-answer session. Ask the students to cluster into small buzz-groups, and for each group to think of a question they’d like the answer to (preferably about the topic you’d been addressing, but not necessarily), and to jot questions down on slips of paper or post-its (it’s always really useful to have a pad of post-its with you in any lecture), and pass them down to you at the front. You can then choose some questions you already know the answers to first, and work towards those questions you may wish to throw back at the whole group.
* Accept that there is likely to be some adjusting you’ll need to do to your next couple of sessions, to get back on track to covering what you’d hoped to do before things went wrong. The only problem then is if something goes wrong in your *only* lecture with that group of students, and there are always ways of rescheduling the event if really necessary.

Most lecturers who seem to sail serenely like swans through technical disasters have learned to do so by trial and error. It’s always a useful learning experience for us when our plans are thwarted – indeed it can bring us back down to earth, and get us thinking with the students again. But it’s uncomfortable and unwelcome, and uses up far more of our energy than we’d like. Therefore, having at least *one* emergency tactic can be a comfort for us at any time, and a lifesaver now and then.

**Who make the best lecturers?**

Ken Bain (2004) sums this up nicely, and indeed is convergent with many suggestions in this chapter, in the following descriptors of effective college teachers:

The best college teachers:

1. Are willing to spend time with students, to nurture their learning.
2. Don’t foster a feeling of power over, but investment in, students.
3. Ensure their practices stem from a concern for learning.
4. Make the class user-friendly by fostering trust.
5. Employ various pedagogical tools in a search for the best way to help each student.
6. Have the attitude that “There is no such thing as a stupid question.”
7. Ensure that everyone can contribute and each contribution is unique.

8. Do not behave as a “high priest of arcane mysteries”.

9. Do not make the classroom an “an arena for expertise, a ledger book for the ego”.

10. Don’t expect students to see science as a “frozen body of dogma” that must be memorized and regurgitated.

11. Foster the feeling that teachers are fellow students/ human beings struggling with mysteries of the universe.

(Adapted from Bain, 2004, p.135)

**How can we move forward and adapt lectures to the 21st century?**

Earlier in the chapter, I quoted five pressures cited by Sally Brown as causing an unsatisfactory status-quo to have remained for far too long regarding large-group teaching. She suggests five movements and structures which nowadays can counterbalance those pressures:

1. Desires by academics and others to be more student-centred and to enable students to negotiate their own fluid pathways through learning programmes;
2. The changing nature of the relationship between students and the universities in which they study, with students expecting (and requiring) more individual control over what and how they are studying, especially in nations where full-cost fees are paid;
3. Movements by senior managers to harness free resources including open educational resources, TED talks and what is offered by Massive Open Online Courses (and variants of these) sometimes for good pedagogic reasons and sometimes for more nefarious ones, including what is often termed ‘driving down the unit of resource’ i.e. using fewer academics to teach more students more cost effectively;
4. A recognition by educational developers and others that what worked in a pre-digital age just isn’t enough at a time when accessing content is easier than ever before, but selecting relevant, appropriate and trustworthy content is a much tougher proposition altogether;
5. Student expectations that multi-tasking and concurrent activities support learning, so that learning experiences can involve multiple facets, with students using digital and social media while in classrooms, studios and labs, and interacting with academics, externals and one another virtually at the same time as undertaking tasks overseen by their teachers. (Brown, 2015).

**Making the most of lectures: some practical pointers**

This chapter ends with some practical suggestions for helping students to get the most out of your lectures – and for making these occasions more satisfying for yourself too. These tips are designed to optimise the learning potential of lectures, in particular with reference to teaching and learning processes, and to remind you of ways that large-group sessions can pay real dividends to students, not least in the age when they can, if they choose, watch some of the most renowned lectures free of charge online, on TED-talks, MOOCs and in many other learning resource materials.

1. **Make the most of opportunities when you have the whole group together.** There are useful benefits of whole-group shared experiences, especially for setting the scene in a new subject, and talking students through known problem areas. Use lectures for things like these that can’t happen easily online. Use them as sessions to develop whole-group cohesion, as well as to give briefings, provide introductions, introduce keynote speakers, and hold practical demonstrations.
2. **Make sure that lectures are not just ‘transmit**–**receive’ occasions.** Little was ever learned by students just writing down what the lecturer said, or copying down information from screens or boards, and today’s students just won’t do this anyway. There are more efficient ways of providing students with the information they need for their learning, including the use of handout materials supplied online, textbooks and other learning resource materials.
3. **Be punctual, even if some of your students will be late.** Chat to the nearest students while people are settling in. Ask them ‘How’s the course going for you so far?’ for example. Ask them ‘What’s your favourite topic so far?’ or ‘What are the trickiest bits so far?’. All the better if you can chat to them by name – this means a lot to most people.
4. **When you’re ready to start, capture students’ attention.** It’s often easier to do this by dimming the lights and showing your first slide, than by trying to quieten down the pre-lecture chatter by talking loudly. Sometimes you might be able to start with a short (no more than 2 minutes) funny video clip, with sound; it’s amazing how a hubbub of chatter quells if there’s a soundtrack to something amusing on the screen. Do make sure there’s a way of linking the funny clip to the topic however – students don’t usually appreciate humour just for the sake of it. Do your best to ignore latecomers. Respect the courtesy of punctuality of those already present, and talk to them.
5. **Make good use of your specific intended learning outcomes for each lecture.** It can be useful to find out how many students think they can already achieve some of these – and adjust your approach accordingly! Forexample show the slide and ask ‘Raise two hands if you can do this already, one if you can already do some of it, and none if it’s new to you’. Explaining the outcomes at the start of the session, can help students to know exactly what they should be getting out of the lecture, serving as an agenda against which they can track their own progress during the minutes which follow.
6. **Help students to place the lecture in context**. Refer back to previous material (perhaps with a very short summary (one slide) of the previous lecture) and explain how they’re going to continue on from this shortly.
7. **Work out some questions which the session will address.** Showing these questions as slide near the beginning of the session is a way of helping students to see the nature and scope of the specific learning outcomes they should be able to address progressively as the session proceeds.
8. **Get students learning-by-doing.** Just about any human being gets bored watching and listening for a full hour, so break the session up with small tasks such as problems for students to work out themselves, applying what you’ve told them, reading extracts from their handout material, or discussing a question or issue with the students nearest to them. Even in a crowded, tiered lecture theatre, students can be given things to do independently for a few minutes at a time, followed by a suitable debriefing, so that they can compare views and find out whether they were on the right track.
9. **Variety is the spice of lectures.** Make sure that you build into large-group lectures a variety of activities for students, which might include writing, listening, looking, making notes, sketching diagrams, undertaking small discussion tasks, asking questions, answering questions, giving feedback to you, solving problems, doing calculations, putting things in order of importance, and so on.
10. **Find out from students now and then how it is for them.** Show of hands questions such as ‘raise two hands of you get it, one if you partly get it, and none if it’s as clear as mud’ can let you know how their learning is going (and give them a chance to move a muscle or two). There are all sorts of such questions you can use, for example ‘How many of you can hear me clearly enough?’, ‘Am I going too fast?’, ‘Is this making sense to you?’. Observe their responses and try to adjust accordingly.
11. **Use lectures to start students learning from each other.** Getting students to work in small groups in a lecture environment can allow them to discuss and debate the relative merits of different options in multiple-choice tasks, or put things in order of importance, or brainstorm possible solutions to problems. After they have engaged with each other on such tasks, the you can draw conclusions from some of the groups, and give expert-witness feedback when needed. The important thing, however is to get them talking to each other about the topic – and once started well, that’s likely to continue to happen well beyond the confines of the lecture.
12. **Use lectures to help students polish up things they have already learned.** It is valuable to make full use of the times when all students are together to give them things to do to allow them to check out whether they can still do the things they covered in previous sessions. This can be really useful for alerting students to the important bits which are liable to slip.
13. **Use lectures to help shape students’ attitudes.** The elements of tone of voice, facial expression, gesture, emphasis, body language, and so on can be used by lecturers to bring greater clarity and direction to the attitude-forming shared experiences which help students set their own scene for a topic or theme in a subject.
14. **Genuinely solicit students’ questions.** Don’t just ask ‘any questions’ towards the end of a class – that’s a signal for everyone to stop thinking and start packing up too. Ask for questions much earlier. When a student does ask a question, repeat the question so all students can hear. Treat students’ questions with courtesy even if they seem very basic to you, and then answer in a way that doesn’t make the questioner feel stupid. It may have taken some courage to ask the question.
15. **Use large-group sessions to identify and answer students’ questions.** This can be much more effective, and fairer, than just attempting to answer their questions individually and privately. When one student asks a question in a large-group session, there are often many other students who only then realise that they too need to hear the answer.
16. **If too many questions keep coming from the same few students, vary your technique.** For example, give out post-its, and ask everyone to jot down a question about the topic, then show their post-it to their neighbours. Ask them then to swap post-its randomly for a few seconds. Then ask for someone to read out someone else’s question, with the comfort of relative anonymity regarding the question.
17. **Don’t waffle when stuck!** Don’t try to bluff your way out of it when you don’t know the answer to a question you’ve been asked. Reply that you’ll find out the answer to this question before your next lecture with them – students will respect you more for this than for trying to invent an answer. Alternatively, say ‘Great question. I don’t at this moment know the answer to this. Does anyone here know?’ and give someone who does know the chance to shine for a moment. There is usually someone who knows!
18. **Help any shy or retiring students to have equal opportunity to contribute.** Asking students in large groups to write questions, or ideas, on post-its helps to ensure that the contributions you receive are not just from those students who aren’t afraid to ask in public. It can be comforting for students to preserve their anonymity in asking questions, as they are often afraid that their questions may be regarded as silly or trivial.
19. **Put energy and effort into making your lectures interesting and stimulating.** A well-paced lecture which has visual impact and in which ideas are clearly communicated can be a motivating shared experience for students. Become comfortable using the available technology in the lecture room in imaginative ways, but don’t let technology distract from the learning you are trying to cause.
20. **Use some lecture time to draw feedback from students.** Large-group sessions can be used to provide a useful barometer of how their learning is going. You can ask students to jot down on post-its questions that they would like you to address at a future session, and stick these on the door on their way out so you can collect them easily.
21. **Use whole-class time to explain carefully the briefings for assessment tasks.** It is essential that all students have a full, shared knowledge of exactly what is expected of them in such tasks, so that no one is disadvantaged by any differentials in their understanding of the performance criteria or assessment schemes associated with the tasks.
22. ***Only* answer questions about assessment in whole-class settings.** When students come up to you at the end with questions about assessment, or see you at other times with such questions, it can be useful to respond ‘Very good question. Please jot it down on this post-it, and put your name too, so I can explain the answer to this next time the whole group is together (make sure you actually do this, of course). It would be unfair if some students were to know more about assessment than others.
23. **Show students how the assessor’s mind works.** This can be done by devising class sessions around the analysis of how past examples of students’ work were assessed, as well as by going through in detail the way that assessment criteria were applied to work that the class members themselves have done.
24. **Record yourself on video every now and then.** Review the video to help you see your own strengths and weaknesses, and look for ways to improve your performance. Your keenest critic is likely to be yourself, so don’t try to resolve every little habit or mannerism at once, just tackle the ones that you think are most important, little by little. It can also be really useful for a group of colleagues together to look at each other’s videos, and offer each other constructive comments. This is excellent practice for any kind of inspection quality assessment procedures which might be coming up.
25. **Use all opportunities to observe other people’s lectures.** You can do this not only in your own department, but also at external conferences and seminars. Watching other people helps you to learn both from what others do well, that you might wish to emulate, and from awful sessions where you resolve never to do anything similar in your own classes.
26. **Watch the body language of your audience.** You’ll soon learn to recognise the symptoms of ‘eyes glazing over’ when students are becoming passive recipients rather than active participants. That may signal the time for one of your prepared anecdotes, or better, for a task for students to tackle.
27. **Notice the nodders.** Sometimes, it’s really comforting to have at least some members of your audience nodding in agreement when you’re emphasising an important point. It makes you feel you are getting your message across. But beware! I once asked someone who had been nodding quite regularly ‘Tell me what *you* think about this please’, and she turned out to have been nodding while thinking about something completely different.
28. **Don’t feel you’ve got to keep going for the full time.** Sometimes the class will have done all that needed to be done, with still ten or fifteen minutes in hand. Don’t feel you have to waffle on. It may come as a surprise to you, but your students may be quite pleased to finish early occasionally!
29. **Don’t feel that you have to get through all of your material.** Even very experienced lecturers, when preparing a new lecture, often overestimate what they can cover in an hour. It is better to cover part of your material well, than to try to rush through all of it. You can adjust future sessions to balance out the content.
30. **Students will give you feedback on what you did, and on what *they* did.** They don’t need to know what you would have done if you’d had more time. Student experience surveys and module evaluation questionnaires are on what they *experienced*. Make that experience as good as you can.
31. **Come to a timely conclusion.** Become known for your good timing. A large group session should not just fizzle out, but should come to a definite and strong ending. End with a bang and not a whimper. It is really important not to overrun. It is better to come to a good stopping place a few minutes early, than to end up rushing through something important right at the end of the session.
32. **Capture your reflections.** Within a few hours of the lecture, find just five minutes to think through ‘two things which worked well, and which I’ll do again’ and ‘two things that didn’t quite work this time’, and ‘what I’ll try to do next time to make them work better’ or ‘something *else* I’ll try next time’. It is useful to jot down short notes in response to these questions, so you can build on them next time you’re doing something similar. Do make sure you actually jot such things down somewhere, on paper, on your computer, on your mobile phone; just thinking is not enough, reflective thoughts evaporate away and are lost. (Towards the end of Chapter 7, I offer various suggestions and templates for capturing your reflections on lectures).

**Conclusions**

This book from which I selected these extracts is still called ‘The Lecturer’s Toolkit’ in its 4th edition, and many of us are still (in some countries) called ‘lecturers’, and in colleges and universities around the world there are slots on timetables called ‘lectures’. Yet as you will have seen from Chapter 2, most ‘lecturers’ spend far more time designing and implementing assessment, and getting feedback to students on their learning, than merely standing up in front of a large number of them for an hour at a time. It is, of course, just a bit more terrifying for us to stand and talk to a packed auditorium, than to sit down with a pen or keyboard giving students individual feedback on evidence of their learning.

For campus-based students, lectures are milestones on their learning journey, even if they only count for a relatively small proportion of the time they spend studying and producing evidence of their learning. It is our job, however, to make these milestones work. If our lectures are so boring that students don’t come along for them, they’ve missed some milestones, and their journeys and destinations may be in jeopardy. Whereas if we can manage to enthuse them, arouse their curiosity, entertain them now and then (remembering how finite human concentration spans are), we’ve done the best we can to use large group contexts to make at least some learning happen.

I hope that the various ideas in this chapter of the *Toolkit* have increased your confidence regarding what you can do when lots of pairs of eyes are looking at what you do, what you put up on a screen or board, and above all your enthusiasm for the topic concerned. That confidence is important, as large-group teaching is the most public thing we do, and feedback on lectures is regarded as such an important part of the indicators that are gathered to measure the quality of the overall student learning experience.

All that said, lectures can be dreams and nightmares – even for the most experienced and acclaimed of lecturers. Now and again, it is wonderful to be able to say to oneself ‘that worked’. But the nightmares are of the things that didn’t work, and like cliff-edge paths getting narrower, long journeys with missed travel connections, and all the other things that disturb our sleep now and again, they can come at any time. We need to distance ourselves from the sentiment ‘you’re only as good as your last gig’ that pervades many cultures. The next gig can always be better – we’re learning as we go, however experienced we become. That’s how learning is, especially in the driving seat.