THIRD EDITION

The Lecturer’s TOOLKIT

A PRACTICAL GUIDE TO ASSESSMENT, LEARNING AND TEACHING

PHIL RACE
The Lecturer’s Toolkit

The Lecturer’s Toolkit is a wide-ranging, down-to-earth, practical resource for lecturers and teachers in higher education. Jargon-free and written with authority, clarity and candour, the Toolkit addresses a broad range of aspects of assessment, learning and teaching, and helps develop many facets of professional practice.

Built around a central agenda of improving the quality of student learning, the Toolkit is outcomes-focused. Retaining the strengths of its predecessors, this third edition includes new information on inclusive teaching practice, working with international students and evidencing reflections. Coverage includes:

- factors underpinning successful learning;
- designing assessment and feedback to enhance learning;
- refreshing and improving lecturing;
- making small-group teaching work;
- designing and using resource-based and online learning;
- looking after yourself, and managing feedback from your students;
- equal opportunities and inclusive practice.

Fully updated and expanded, this third edition of the Toolkit will be an essential and flexible resource for every higher education professional.

Phil Race is ALT (Assessment, Learning and Teaching) Visiting Professor at Leeds Metropolitan University, UK, and for the rest of his time travels widely running staff development workshops in universities and colleges. His other publications include Making Learning Happen (2005) and How to Study (2003). For further information, visit www.phil-race.com.
The Lecturer’s Toolkit

A practical guide to assessment, learning and teaching

Third Edition

Phil Race
Learning from screens? 172
Practical pointers on resource-based learning 175

6 Looking after yourself 186
Intended outcomes of this chapter 186
Managing your workload 186
Managing your stress levels 187
Managing your appraisal 189
Managing your feedback from students 192

7 Issues, challenges and reflections 206
Intended outcomes of this chapter 206
Equal opportunities and inclusive practice 206
Plagiarism 218
Working with international students 220
Evidencing your reflections on assessment, learning and teaching 223

References and further reading 229
Index 233
Preface to the third edition

An important consideration in preparing this third edition of _The Lecturer’s Toolkit_ was the feedback I have received on the second edition, and colleagues’ exhortations not to change things which are already working well. Therefore this new edition retains much of the content of its predecessor, but with updating where necessary, and some new sections replacing older ones, for example in some of the practical suggestions derived from relevant volumes in the ‘500 Tips’ series, where three of the most popular books have already appeared in revised editions. To keep to the required length of the book, I have had to remove a number of these sets of suggestions, and suggest that more detail can still be found in the ‘500 Tips’ books. I have, however, added a new final chapter, addressing various issues which have increased in prominence since the second edition was published, including some ideas about equal opportunities and inclusive teaching, working with international students, and reflecting on one’s professional practice in learning, teaching and assessment.

This _Toolkit_ aims to help you to underpin and develop further your professional practice as a teacher in higher education. It is essentially a practical book, but continues to be linked where appropriate to the increasingly extensive literature on the scholarship of assessment, learning and teaching. Although the contents are intended to be useful to new lecturers, I found with the earlier editions that many experienced practitioners found the book a source of practical suggestions, as well as food for thought and reflection. This _Toolkit_ is intended to serve as a practical reader for programmes for new lecturers, as well as to augment continuing professional development provision for experienced staff. In the UK, most universities have now in place programmes of staff development for lecturers, which link their institutional missions to identified knowledge about learning and teaching, and underpinning professional values, all of which I have tried to address in this _Toolkit_.

There continues to be pressure on university lecturers to be not just excellent researchers, but also professionally trained and qualified at supporting students’ learning, delivering teaching, giving useful feedback to students, and designing and implementing assessment. This pressure comes from all sides: from students, from colleagues, from funding agencies and from institutional managers. With students in the UK and elsewhere increasingly contributing towards the funding of their higher education, they are becoming much more aware of their role as consumers, and their right to demand high quality in the ways that their learning, teaching and assessment are delivered. In the UK, students’ views are now collected through a National Student Survey each year, and the findings of this survey are regarded very seriously (and competitively) as an indicator of the teaching quality of institutions.
What does this edition cover, and why?

There are seven chapters in this third edition. Each chapter is written to be relatively complete in itself. References, and suggestions for further reading are collected at the end of the book. Most of the book links to the central agenda of the quality of student learning introduced in Chapter 1, and I hope that you will find this a useful start to whichever parts of your professional practice you decide to review and develop first. Each chapter is prefaced by some intended outcomes, which tell more about the particular purposes the chapters are intended to serve.

Chapter 1, ‘Learning – a natural human process’, aims to get you thinking about the fundamental processes which underpin your students’ learning. In this chapter, I ask you to interrogate your own learning (past or present), and draw out five key factors which need to be catered for in making learning truly learner-centred. All of these factors are things that you can take into account in any of the learning, teaching and assessment contexts your students are likely to encounter. This chapter also now includes some suggestions on expressing and using learning outcomes, and developing students competences.

Chapter 2, ‘Designing assessment and feedback to enhance learning’, is, in some ways, the most crucial part of this Toolkit. Of all the things that lecturers do, I believe it is assessment, and feedback from lecturers, that most profoundly influence the ways that students go about their learning. My intention in this chapter is to alert you to some of the tensions between effective learning and assessment, and to encourage you to diversify your approaches to assessment, so that as many as possible of your students will be able to use a range of assessment formats to show themselves at their best. I am also aware of the fact that lecturers in higher education are often severely overloaded with marking, and offer suggestions about ways of making this a more manageable part of your professional life, without prejudicing the quality and relevance of assessment. I have added to this chapter a discussion of the vital role of formative feedback to students, which is now seen as an area which higher education institutions need to address, as the results in the UK from the 2005 National Student Survey have already indicated that students’ satisfaction was least in the areas of feedback and assessment. The chapter ends with a section on involving students in their own assessment, to deepen their learning and make them more aware of how assessment works in other contexts.

Chapter 3, ‘Refreshing your lecturing’, explores ways to design large-group teaching situations so that students’ learning during them is optimised. Especially for those new to lecturing, the thought of standing up before a large group of students can be somewhat intimidating. The thrust of the chapter is about thinking through what your students will be doing during a large-group session, and planning ways that they can be involved, and making the most of the opportunities in large groups for students to get feedback on how their learning is progressing. I have added to this chapter a range of suggestions aiming to help you make large-group teaching work for your students, and tips about using technology in lecture rooms, not least the now widespread usage of Microsoft’s ‘PowerPoint’.

Chapter 4, ‘Making small-group teaching work’, explores ways of getting students to participate effectively. Small-group learning situations can be deep learning experiences for students, but need skilful facilitation to get the most out of the opportunities they provide. This chapter focuses on the processes which can be used to help all students to engage in small-group learning situations. The chapter also looks at the place of academic tutorials in higher education, at a time when it is increasingly difficult to provide the quality or quantity of such student–staff encounters.
Chapter 5, ‘Resource-based and online learning’, reviews briefly the field of open, distance and flexible learning, and aims to encourage you to make the most of the wide range of learning resource materials – paper-based and electronic – that are available to support learning. With larger numbers of students at university, and lecturers increasingly under higher workloads, the role of resource-based learning pathways or elements in higher education continues to grow in significance. In this chapter, I offer particular advice for those wishing to adapt existing resources to optimise their usefulness to their own students, and to those setting out to design new learning resource materials for their students. The chapter continues by helping you to interrogate how effectively students learn both from print-based resources, and from electronic resources using the widening range of communication and information technologies available.

Chapter 6 is to help you to survive! It includes a range of suggestions to help you take control of your time, workload, paperwork, meetings and so on, and on preparing for appraisal. There are also suggestions about how to go about gathering feedback from your students about their experience of higher education in general, and your teaching in particular. Several feedback methods are illustrated, each with their own advantages and drawbacks.

Chapter 7 is new to this edition, and brings together some ideas about the increasingly important dimension of ‘inclusive practice’, not least responding to changes in legislation regarding equal opportunities. There is also some discussion of the issues which often come to the fore when working with international and cross-cultural groups of students. Finally, the Toolkit now ends with some ideas on how you can set about not only reflecting on your practices of teaching and assessment, but also capturing evidence of such reflections to aid your own further development as a practitioner in higher education.

This Toolkit is again published in two versions. The bound version is aimed to be used by individual lecturers as their own personal copies. The ring-bound photocopiable version additionally contains at the end of each chapter various tasks and activities which can be used (or adapted) to support staff development programmes in institutions, or for private reflection by individual lecturers.
I am grateful to thousands of lecturers at the workshops I run, in the UK and abroad, and to many colleagues who have emailed me with feedback, which continues to help me to develop the ideas and suggestions throughout this Toolkit. I am also indebted to large numbers of students, with whom I continue to run interactive sessions on developing their learning skills, as I continue to find that working with students is vital to help me think more deeply about teaching and assessment. I am particularly grateful to my wife Sally Brown, with whom I continue to discuss ideas in assessment, learning and teaching, and whose passion for creative and student-centred approaches is an inspiration to me in my work.

Phil Race
February 2006
Intended outcomes of this chapter
When you have worked through this chapter, you should be better able to:

- put into perspective some of the literature about how learning takes place;
- identify five factors, in straightforward language, which underpin student learning;
- address these factors in your day-to-day work with students;
- design or modify intended learning outcomes associated with your teaching, so that they align constructively with teaching approaches, and assessment processes and criteria.

Never mind the teaching – feel the learning!

Whatever sort of training we think about, or whatever sort of educational experience we consider, the one thing they all need to have in common is that they lead to effective learning. There is no single ideal way to teach. Learning would be very boring if all teachers used exactly the same approaches. However, whatever teaching approaches we choose to use, it's worth stopping to think about exactly how our choices impact on our students' learning.

The human species is unique in its capacity for learning – that is why our species has evolved as much as it has. The record of human beings engaging in learning goes back to the dawn of civilisation (and for quite some time before either of the words 'education' or 'training' were invented). Yet much that has been written about how we learn tends to have language that is unfamiliar and sometimes even alienating to most of the people who want to learn, or indeed to those who wish to cause learning to happen. In the first part of this chapter, my intention is to lead you through your own responses to four straightforward questions about learning, and to propose a simple yet powerful way of thinking about learning, in terms of five straightforward factors which underpin successful learning. These prove to be a very tangible basis upon which to build a strategy for designing lectures, tutorials and student assignments, and also for developing learning materials, including computer-based and electronically transmitted learning resources. However, before taking the practical look at learning described above, there follows a short review of some of the most significant ideas in the related literature.

Theories and models of learning

A number of models have been put forward to explain the processes of learning, or the ways that people acquire skills. There have been two main schools of thought on how learning happens.
The behaviourist school takes as its starting point a view that learning happens through stimulus, response and reward, in other words a conditioning process. The stimulus is referred to as an ‘input’, and the learned behaviours as ‘outputs’. It can be argued that the present emphasis on expressing intended learning outcomes derives from the behaviourist school of thinking, and that clearly articulated assessment criteria are an attempt to define the learning outputs.

The other main approach is the cognitive view, which focuses on perception, memory and concept formation, and on the development of people’s ability to demonstrate their understanding of what they have learned by solving problems. In the paragraphs below, some of the main contributors to both models are mentioned.

One of the most popular theories of the ‘cognitive’ school arises from the work of Lewin (1952) in ‘Field theory in social science’ which is part of Selected Theoretical Papers edited by Cartwright. This was extended by Kolb (1984) in his book Experiential Learning: Experience as the source of learning and development. Kolb’s model identifies that most of what we know we learn from experience of one kind or another, and then breaks this down into four stages, turning them into a learning cycle.

However, Coffield et al. (2004) in a large-scale systematic review of various models of learning were very critical of the Kolb learning cycle, and said:

Kolb clearly believes that learning takes place in a cycle and that learners should use all four phases of that cycle to become effective. Popular adaptations of his theory (for which he is not, of course, responsible) claim, however, that all four phases should be tackled and in order. The manual for the third version of the LSI is explicit on this point: ‘You may begin a learning process in any of the four phases of the learning cycle. Ideally, using a well-rounded learning process, you would cycle through all the four phases. However, you may find that you sometimes skip a phase in the cycle or focus primarily on just one’ (Kolb 1999: 4). But if Wierstra and de Jong’s (2002) analysis, which reduces Kolb’s model to a one-dimensional bipolar structure of reflection versus doing, proves to be accurate, then the notion of a learning cycle may be seriously flawed.

(Coffield et al. 2004)

Coffield et al. also reviewed in detail the strengths and weaknesses of various learning styles instruments and models, some deriving from Kolb’s work. Of the popular Honey and Mumford (1982) work in the area, particularly the ‘Learning Styles Questionnaire’ (LSQ), they said:

Perhaps the more fundamental problem is the implicit assumption that one instrument of 80 statements can capture all the complexities and the multifaceted nature of learning as well as the cycle of learning. In addition, Honey and Mumford based their LSQ on Kolb’s model, but because they found its bipolar structure untenable, they designed the LSQ so that the style preferences are aligned to the stages in the learning cycle. They have not, however, produced an alternative to Kolb’s bipolar theory. For all these criticisms, the LSQ remains very popular as a self-development tool with practitioners, is used extensively – for instance, by industrial trainers and FE tutors – and can now be completed online.

(Coffield et al. 2004)
Coffield *et al.* go so far as to ask:

> Should research into learning styles be discontinued, as Reynolds has argued? In his own words: ‘Even using learning style instruments as a convenient way of introducing the subject [of learning] generally is hazardous because of the superficial attractions of labelling and categorizing in a world suffused with uncertainties’.  


Another important approach is that of Ausubel (1968), who in his book *Educational Psychology: A cognitive view* places particular emphasis on starting points, and asserts ‘The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly.’ Many practices now common in training can be matched to the cognitive psychology approach of Ausubel (1968), and his ideas of the need for ‘anchoring’ concepts, advance organisers (such as what we now commonly refer to as learning objectives or statements of intended learning outcomes), and clearly broken down learning material. This can be regarded as bringing together useful elements of the cognitive and behaviourist ways of thinking about learning.

Cognitive psychology has also made use of clinical, experimental and survey-type researches, linking personality factors of learners to their successes or failures at learning. Such research has included the ways that learning can depend on individuals’ learning skills, their approaches to learning, and their learning styles; see for example the work of Pask (1976), who in an article entitled ‘Styles and strategies of learning’ compares serialist (basically step-by-step) and holist (meaning whole-subject, broad) approaches, respectively using operational learning (in other words learning to do one thing at a time) and comprehension learning (in other words, gaining a deeper understanding) strategies, that tend to divide people into knowledge-seekers and understanding-seekers.

Skinner (1954), in a journal article entitled ‘The science of learning and the art of teaching’ presented one of the seminal papers for the behavioural school, and paid particular attention to the importance of repeated practice, and the use of rewards to help appropriate responses to be retained. Another way of looking at learning is to try to define it in terms of learning outcomes. In the 1950s and 1960s behavioural objectives ruled, and one of the most influential publications was the Bloom *et al.* *Taxonomy of Educational Objectives*, volume 1 *The Cognitive Domain* being published in 1956. This approach to learning outcomes has had many forms, and can be said to have led to much of the competence-based philosophy now underpinning National Vocational Qualifications in Britain.

Ramsden (2003), in his book *Learning to Teach in Higher Education* gives a broad review of some of the models of learning, and mentions, for example, some of the differences between surface approaches to learning and deep approaches. He quotes an article by Biggs (1989), entitled ‘Approaches to the advancement of tertiary teaching’, who explains:

> ‘Knowing facts and how to carry out operations may well be part of the means for understanding and interpreting the world, but the quantitative conception stops at the facts and skills. A quantitative change in knowledge does not in itself change understanding. Rote-learning scientific formulae may be one of the things scientists do, but it is not the way that scientists think.’  

(Biggs 1989 in Ramsden 2003)
More recently, Biggs (2003) has brought together a comprehensive survey of the links between teaching and learning in higher education in the second edition of his book *Teaching for Quality Learning at University* where he makes a powerful case for ‘constructive alignment’ – systematically linking intended learning outcomes, choices of teaching methods, evidence of achievement of the outcomes and assessment methods and criteria.

The profound influence of assessment design on approaches to learning is brought into sharp relief by Gibbs (1999) in his chapter in *Assessment Matters in Higher Education* edited by Brown and Glasner, and the importance of the role of formative feedback has been thoroughly addressed by Knight and Yorke (2003), and Sadler (1998, 2003).

**Deep, surface or strategic learning?**

Much of the discussion about learning revolves around three or four words which describe different (though overlapping) ways of going about the process of learning. In their chapter entitled ‘The link between assessment and learning’, Dunn *et al.* introduce the topic of approaches to learning thus:

> Many researchers have distinguished between different cognitive levels of engagement between learning tasks. Perhaps most widely referred to is the distinction between a *surface approach*, in which a relatively low level of cognitive engagement occurs, and a *deep approach*, where a relatively high level of cognitive engagement with the task takes place. In a surface approach to a learning task, the student perceives that it is necessary to remember the body of knowledge. Mostly this would involve the need to rote-learn and then recall the facts concerned. Of course there are many situations where this kind of approach to learning task is appropriate – such as perhaps learning the chemical tables. At the other end of the spectrum is a deep approach to a learning task, where the student perceives that it is necessary to make meaning of the content concerned, to be able to appraise it critically and to be able to apply the knowledge to other contexts or knowledge domains.

>(Dunn *et al.* 2004: 9–10)

**Deep learning** generally gets a good press in the scholarly literature. ‘Deep’ learning is, we might argue, closer to developing real *understanding*. But this is difficult or even impossible to measure. So deep learning may be the wrong approach to wean our students towards when our assessment may only be measuring something rather less than deep learning. Deep learning may of course be much more appropriate for those students going on to higher levels, and is doubtless the kind of learning which leads to the most productive and inspired research. Perhaps that is why deep learning is regarded so favourably by educational researchers on the whole.

**Surface learning** gets a bad press on the whole in the literature. However, probably most of the learning done by most people in post-compulsory education is actually only surface learning. Students learn things ‘sufficient to the day’ – the exam day or the assessment week or whatever. When it’s been learned successfully enough to serve its purpose – pass the module, gain the certificate, whatever, it’s ditched. It’s not entirely wasted however, something that’s been surface-learned is a better starting point for re-learning, or for learning more deeply, than something which has not been learned at all. But students can all tell us tales of the countless things they have learned only well enough to give back when required to demonstrate their
achievements, which have been quite deliberately ‘eased out’ of their minds as they moved on to the next stage on their learning journey. ‘You are what you learn’ may be a noble sentiment, but it can be argued that our assessment processes and instruments cause students to learn far too many things which aren’t important, diluting the quality of learning that is afforded to those things that are important.

Despite the criticisms of surface learning approaches, sometimes it is a fit-for-purpose choice. Where a limited amount of factual information needs to be available at will in a particular scenario, but will not be needed after that scenario is completed, surface learning can be a wise enough choice. There are things that just are not important enough to warrant a lot of time and energy being invested in learning them deeply.

**What’s wrong with strategic learning?**

Strategic learning has perhaps had the worst press of all. It’s not just accidental surface learning. It is perhaps deliberate surface learning, consciously engaged in at the expense of deeper learning? Strategic learning is regarded as ‘learning for the exam’. It’s associated with ‘seeking out the marks or credit’ quite consciously in essays, reports, dissertations, theses, and extends readily to preparing strategically for job interviews, promotion boards, and so on.

Strategic learners tend to be successful, or at least moderately successful. Deep learners may well deserve success, but quite often shoot themselves in one foot or other, by mastering some parts of the curriculum very very well, but leaving other parts of the curriculum under-developed, and not getting the overall credit that they might have achieved had they spread their efforts more evenly across the curriculum.

Surface learners can also fare well enough, if and when all that is really being measured in our assessment systems is surface learning. Strategic learning is often thought of in terms of doing the minimum to get by. But there are various ‘minima’. In the present degree classification system in the UK perhaps there’s the minimum to get by and get a degree at all, and the (different) minimum to get by and get a 2–1, and the (different again) minimum to get by and get a first-class degree, and perhaps the minimum to get by and get a first-class degree with a margin for safety?

So what is strategic learning? We could regard it as making informed choices about when to be a deep learner, and when to be a surface learner. It could be viewed as investing more in what is important to learn, and less in what is less important to learn. It could be regarded as setting out towards a chosen level of achievement, and working systematically to become able to demonstrate that level of achievement in each contributing assessment element.

It can also be argued that those learners who go far are the strategic ones, rather than the deep ones. It can be argued that they know when to adopt a deep approach, and when it is sufficient to adopt a surface approach.

**Cue-consciousness**

As long ago as 1974, Miller and Parlett discussed what can now be thought about as one way of thinking about strategic learning: ‘cue-consciousness’. They proposed three approaches which learners can use in the ways that they structure their learning in systems where assessment is a significant driving force – an assessment regime which then in the UK was mainly comprised of written exams. They wrote of:
• cue-seeking learners: more likely to get first-class degrees;
• cue-conscious learners: more likely to get upper second-class degrees;
• cue-deaf learners: less likely to succeed.

Gibbs and Simpson (2002) expand on, and quote from, Miller and Parlett’s work as follows:

Miller and Parlett focussed on the extent to which students were oriented to cues about what was rewarded in the assessment system. They described different kinds of students: the cue seekers, who went out of their way to get out of the lecturer what was going to come up in the exam and what their personal preferences were; the cue conscious, who heard and paid attention to tips given out by their lecturers about what was important, and the ‘cue deaf’ for whom any such guidance passed straight over their heads. This ‘cue seeking’ student describes exam question-spotting:

‘I am positive there is an examination game. You don’t learn certain facts, for instance, you don’t take the whole course, you go and look at the examination papers and you say “looks as though there have been four questions on a certain theme this year, last year the professor said that the examination would be much the same as before”, so you excise a good bit of the course immediately...’.

(Miller and Parlett 1974: 60 in Gibbs and Simpson 2002)

In contrast these students were described as ‘cue-deaf’:

‘I don’t choose questions for revision – I don’t feel confident if I only restrict myself to certain topics.’

‘I will try to revise everything ...’.

(Miller and Parlett 1974: 63)

Miller and Parlett were able to predict with great accuracy which students would get good degree results.

... people who were cue conscious tended to get upper seconds and those who were cue deaf got lower seconds.

(Miller and Parlett 1974: 55)

Knight and Yorke (2003) put the matter of cue-consciousness in perspective as follows:

Learned dependence is present when the student relies on the teacher to say what has to be done and does not seek to go beyond the boundaries that they believe to be circumscribing the task. The construction of curricula around explicit learning outcomes risks the inadvertent building-in of circumscriptions or, for the ‘strategic’ student seeking to balance study and part-time employment, a welcome ‘limitation’ to what they have to do. Formal and informal feedback can be interrogated for what it can tell about what is expected, and can become part of a vicious spiralling-in towards ‘playing it safe’, basing action on perceptions of the implicit – as well as the explicit – expectations. It is a paradox that active ‘cue-seekers’ (Miller and Parlett 1974) can exhibit a form of learned dependence, through ‘playing it clever’ (at least, superficially) by hunting for hints that will help them to maximise the grade received for their investment of effort. Over-reliance
on the teacher can thus give achievements a meretricious ring: these may look worthier
than they actually are ...

(Knight and Yorke 2003: 134)

Since seeking cues through assessment tasks is an established student practice, we need to
ensure that the cues we give lead to meaningful and productive learning activities.

Many of the sources referred to above inform the view of learning that this chapter will now
propose. However, it has been argued by Race (2005a) that much of the literature on learning is
presented using language and concepts which most students and teachers find different from their
everyday experience, and in this chapter (and throughout this Toolkit) a more pragmatic approach
is sought, to inform appropriately teaching, learning and assessment practices. The approach out-
lined in this chapter is based on asking students (and others) questions about their own learning,
and then analysing their responses (to date from many thousands of people from a wide range of
disciplines, professions and vocations) to identify primary factors which influence the quality of
learning. These factors, as you will see in this book, can be addressed consciously and directly
both by students and teachers. Students can be helped to gain control over the factors, and teach-
ers can plan their teaching to maximise the learning payoff associated with each factor.

Factors underpinning successful learning

One of the problems common to some, if not most, of the theories of learning referred to above
is that they tend to be written using educational or psychological terminology. This does not
mean that they are wrong, but it does mean that they are not particularly valuable when we try to
use them to help our students to learn more effectively, or to help ourselves to teach more suc-
cessfully. The remainder of this chapter is intended to provide you with a jargon-free, practical
approach to enquiring into how learning happens best, which you can share with your students,
and which you can use to inform all parts of your own work supporting students’ learning.

Getting people to think of something they have learned successfully is a positive start to alert-
ing them to the ways in which they learn. It does not matter what they think of as the successful
learning experience of their choice – it can be work-related, or a sporting achievement, or any
practical or intellectual skill. Try it for yourself – answer the pair of questions which follow now
before reading on.

**Question 1**

(a) Think of something you’re good at – something that you know you do well. Jot it down
in the space below.

(b) Write below a few words about how you became good at this.
Most responses to 1(b) are along the lines of:

- practice;
- trial and error;
- repetition;
- having a go;
- experimenting.

In other words, ‘learning by doing’ is a strong factor underpinning how most people learn. There’s nothing new about this – it’s already been called experiential learning for long enough – but let’s stay with short words like doing for the present. ‘Trial and error’ is also important. Learning through one’s mistakes is one of the most natural and productive ways to learn almost anything. Sadly, our educational culture – and particularly our assessment culture – leaves little room for learning from mistakes. Too often, mistakes are added up and used against students!

Next, another question, to probe another dimension of successful learning.

**Feeling the learning**

The matter of feelings is something which has not been sufficiently explored by the developers of theories of learning. Feelings are as much about what it is to be human as any other aspect of humanity. There is a lot of discussion about student motivation (particularly when there is a lack of motivation), but perhaps too little energy has been invested in exploring the emotions upon which motivation depends. A relatively simple question yields a wealth of information about the connection between feelings, emotions and successful learning. Try it for yourself.

**Question 2**

(a) Think of something about yourself that you feel good about – a personal attribute or quality perhaps. Jot it down in the space below.

(b) Write below a few words about how you know that you can feel good about whatever it is. In other words, what is the evidence for your positive feeling?

Most responses to 2(b) above are along the lines of:

- feedback;
- other people’s reactions;
- praise;
- seeing the results.
Therefore (unsurprisingly) feedback is an important underpinning factor to most people’s learning.

**Receiving positive feedback**

It is useful to follow up our exploration of the importance of positive feelings with some thoughts about how students can be helped to receive positive feedback. In some cultures, including that of the UK, there is quite a strong tendency to shrug off compliments and praise, or to resort to the defence strategy of laughter! The effects of this behaviour detract from the value of the positive feedback in the following ways:

- the positive feedback is often not really taken on board;
- the person giving the feedback may feel rejected, snubbed or embarrassed;
- the ease of giving further praise may be reduced.

Helping students (and others) to confront these possibilities can be useful in developing their skills to derive the maximum benefit from positive feedback. For example, simply replying along the lines ‘I’m glad you liked that’ can make all the difference between embarrassment, and feedback effectively delivered and received.

When extended to the domain of negative feedback, further dividends are available. It can be very useful to train students (and ourselves!) to thank people for negative feedback, while weighing the validity and value of it. This is much better than resorting to defensive stances, which tend in any case to stem the flow of negative feedback, usually before the most important messages have even been said.

**Doing + feedback = successful learning?**

Though these two elements are essential ingredients of successful learning, there are some further factors which need to be in place. These are easier to tease out by asking a question about unsuccessful learning. Try it for yourself now, then read on.

**Question 3**

(a) Think, this time, of something that you don’t do well! This could have been the result of an unsatisfactory learning experience. Jot down something you’re not good at in the space below.

(b) Now reflect on your choice in two ways. First, write a few words indicating what went wrong when you tried to learn whatever-it-was.

(c) Next, try to decide whose fault it was (if anyone’s of course) – does any blame rest with you, or with someone else (and if so, whom?).
Typical responses to 3(b) above include:

- I did not really want to learn it;
- I couldn’t see the point;
- I couldn’t get my head round it.

As for whose fault it may have been that the learning was not successful, many people blame themselves, but a significant number of respondents blame particular teachers, trainers or instructors – and can usually remember the names of these people, along with a lot of what they did to damage motivation.

**Wanting to learn**

If there’s something wrong with one’s motivation, it’s unlikely that successful learning will happen. However, motivation (despite being very close to ‘emotion’) is a rather cold word; *wanting* is a much more human word. Everyone knows what ‘want’ means. Also, *wanting* implies more than just motivation. *Wanting* goes right to the heart of human urges, emotions and feelings. When there’s such a powerful factor at work helping learning to happen, little wonder that the results can be spectacular. We’ve all been pleasantly surprised at how well people who really want to do something usually manage to do it. If people want to learn, all is well. Unfortunately, the *want* is not automatically there. When subject matter gets tough, the *want* can evaporate quickly. When students don’t warm to their teachers, or their learning environments, their *want* can be damaged.

**Making sense of what one has learned – digesting – realising – ‘making sense’**

We are thinking here about making sense of what has been learned, and also the learning experience – and also making sense of feedback received from other people. *Digesting* is about sorting out what is important in what has been learned. *Digesting* is about extracting the fundamental principles from the background information. *Digesting* is also about discarding what’s not important. It’s about putting things into perspective. *Digesting*, above all else, is about establishing a sense of *ownership* of what has been learned. It’s about far more than just reflection. Students often describe digesting as ‘getting my head around it’. They sometimes explain it as ‘realising’. When one has just realised something, one is then able to communicate the idea to other people – tangible evidence that learning has been successful.

Thousands of people have answered the three questions we’ve looked at, and even written their answers down. The people asked have covered all age ranges, occupations and professions. It is not surprising to discover that very different people still manage to learn in broadly similar ways. After all, learning is a *human* process – it matters little whether you’re a human trainer, a human student, or a human manager. In face-to-face training, or large-group based education, students are already surrounded by people who can help with the *digesting* stage – most importantly, each other. When students put their heads together informally to try to make sense of a difficult idea or problem, a lot of digesting and realising occurs.

**One more question!**

For the final question, let’s return to successful learning, but this time without that vital ‘want’.
A wide range of things are cited by respondents to 4(b) above, but common factors keeping different students going include:

- strong support and encouragement;
- determination not to be seen to get it wrong or fail;
- simply needing to learn something so that something else would be achievable.

**Needing to learn – a substitute for motivation?**

Responses to Question 4 often highlight that a successful driving force for learning is a necessity. There are some subjects where it can be very difficult to generate in students a strong want to learn, but where it may be quite possible for us to explain to them convincingly why they really do need to learn them. For example, for many years I taught students chemical thermodynamics. Few (normal!) students want to get to grips with the second Law of Thermodynamics, but many need to get their heads round it. When students have ownership of a want to learn, there is little that we need to do to help them maintain their motivation. However, helping students to gain ownership of the need to learn something is a reasonable fallback position, and can still help students to learn successfully.

**Five factors underpinning successful learning**

From my analysis of thousands of people’s answers to the four straightforward questions we’ve explored so far in this chapter, the principal factors underpinning successful learning can be summarised as follows.
How do these factors interact with each other?

The human brain is not a computer that works in a linear or pre-programmed way all the time. Our brains often work at various overlapping levels when, for example, solving problems or making sense of ideas. The wanting stage needs to pervade throughout, so that doing is wanted, feedback is positively sought, opportunities for digesting are seized, and so on. Perhaps a more sensible model would have wanting at the heart, and feedback coming from the outside, and doing and digesting occurring in an overlapping way as pictured below.

In Race (2005a) I have argued that these factors all continuously affect each other, and that a way of thinking about them is to liken them to ‘ripples on a pond’. Perhaps learning can be started by some wanting, where the bounced-back ripples from the external world constitute the feedback and continue to influence the doing. The effects of the feedback on the doing could be thought of as digesting. The main benefit of such a model is that it removes the need to think about learning as a unidirectional sequence. The model has about it both a simplicity and a complexity – in a way mirroring the simultaneous simplicity and complexity in the ways in which people actually learn.

![Figure 1.1 ‘Ripples on a pond’ model of learning processes](image)

Using the model

Probably the greatest strength of the wanting/need, doing, feedback, digesting model of learning is that it lends itself to providing a solid foundation upon which to design educational and training programmes. If you look at any successful form of education and training, you’ll find that one way or another, all of these factors underpinning effective learning are addressed. Different situations and processes attend to each of the factors in different ways.

For example, wanting is catered for by the effective face-to-face lecturer who generates enthusiasm. Wanting can be catered for by carefully worded statements showing the intended learning outcomes, which capture the students’ wishes to proceed with their learning. The wanting can be enhanced by the stimulation provided by attractive colours and graphics in computer-based packages or on the Internet. What if there’s no wanting or needing there in the
first place? Perhaps feedback can, when coupled with learning-by-doing and digests, cause the ripple to move back into the centre, and create some motivation.

Learning by **doing** is equally at the heart of any good course, and equally in any well-designed flexible learning package or online course.

**Feedback** is provided by tutors, or by the printed responses to exercises or self-assessment questions in flexible learning materials, or by feedback responses on-screen in computer assisted learning programmes, or simply by fellow-students giving feedback to each other. Feedback can be regarded as the process that prevents the whole ‘ripple’ simply dying away, as feedback interacts with the digesting and doing stages, and keeps the learning moving.

The one that’s all-too-easy to miss out is **digesting, making sense**. However, all experienced tutors know how important it is to give students the time and space to make sense of their learning and to put it into perspective. Similarly, the best learning packages cater for the fact that students need to be given some opportunity to practise with what they’ve already learned, before moving on to further learning.

**Learning and intelligence**

Gardner (1993), in his work on ‘multiple intelligences’ starts by regarding intelligence as ‘the capacity to solve problems or to fashion products that are valued in one or more cultural setting’. Whatever *intelligence* may be, it should not be thought of as simply being the capacity to perform well in particular assessment-related contexts or environments – for example intelligence must be much more than merely the capacity to do well in time-constrained, unseen written examinations. Gardner’s work usefully subdivides *intelligence* into multiple facets:

- **linguistic** – use of language – words;
- **mathematical-logical** – patterns, deductive reasoning;
- **musical** – compose, perform and appreciate musical patterns;
- **bodily-kinaesthetic** – use of whole body or parts of the body – coordination of movements;
- **spatial** – recognising and using patterns of space – parking the car, crystallography;
- **interpersonal** – working with other people, understanding their motivations, intentions and desires;
- **intrapersonal** – understanding oneself, and recognising one’s feelings, fears and motivations;
- **spiritual** – embracing aesthetic, unseen and spiritual dimensions;
- **bestial** – communicating effectively with animals.

Any one person’s intelligence can be regarded as a fairly unique blend of several of these facets. Any learning experience is likely to involve several of these, adding to the picture of each individual student being quite unique in their overall approach to learning, but without all the difficulties discussed by Coffield *et al.* (2004) when thinking about learning styles.

**How can we increase students’ motivation?**

In many universities, staff grumble that students’ motivation is not what it used to be. There are students who simply don’t seem to **want** to learn. There are students who don’t seem to see why they may **need** to learn. They seem less willing to sit at our feet and imbibe of our infinite wisdom. There are some who even seem to believe that we are paid to do their learning for them!
Why is motivation often low?

There are many reasons for increased incidence of low levels of student motivation, including:

- There are many more students in our higher education system. We still have those students who are keen to learn, but they are diluted by students whose motivation is much less, and who would not have come into our system some years ago. The proportion of students who know exactly why they’re in higher education has decreased.
- More students enter higher education to satisfy other people’s expectations of them, rather than through their own motivation to succeed. Some are coaxed, cajoled or pressed by parents and others, and come in as a duty rather than as a mission.
- There is a greater culture shock on moving from school to higher education – all those distracting temptations, and scary unprecedented freedom. Many students are unprepared for the increased responsibility for their own learning that higher education places upon them.
- Students are much more ‘grown up’ than they used to be. Their lifestyle expectations have increased. This means that problems with finances and difficulties with relationships take a greater toll on the energies of more students than used to be the case.
- The rigours of our academic systems can mean that there may be no chance of remediation for poor assessed work, and failure can breed irrecoverably low motivation.

What are the symptoms of low motivation?

Some symptoms of failing motivation appear to us as in-class behaviours, others we see evidence of as out-of-class behaviours, with yet more symptoms reflecting students’ perceptions about ourselves.

Some in-class symptoms of low motivation:

- coming to class late and/or leaving early, or indeed not turning up at all;
- talking to friends in class about other things;
- looking out of the window, scribbling, drawing, doodling, writing letters to friends, sending text messages on mobile phones;
- lack of engagement, not asking questions, not being willing to answer questions, nor volunteering responses when invited;
- diverting lecturers from the main issues;
- not coming in equipped with pens, paper, books, calculators, and so on;
- taking a longer break than is intended during long sessions, or failing to return at all;
- yawning, looking disinterested, and avoiding eye contact;
- inappropriate social interactions in class (compare back row of cinema!).

Some out-of-class symptoms of low motivation:

- consistent absence without reason;
- inadequate preparation towards class work;
- handing in scribbled last-minute work – botched, or not handing in any work;
- low quality individual and/or group work;
- damaging each other’s attitude;
• work avoidance strategies – giving in too easily to doing only unimportant tasks and putting off doing important ones;
• ignoring lecturers out of class;
• being found not to have contributed to group tasks – doing only what’s necessary for coursework marks, but not doing other things;
• not buying books, nor using library resources;
• maintaining poor folders and disorganised collections of handouts.

Is some of it our fault?

Some explanations of low student motivation are directed in our direction! The charges against us include:

• our seeming indifference to time-of-day factors – Friday afternoon classes, students’ need for an early afternoon snooze after lunch;
• students’ experiences of the unevenness of the pressure of work – e.g. weeks go by with nothing to hand in, then a deluge of hand-in dates;
• some students feeling that they’ve been labelled by us already as low-achievers, and taking all slightly critical feedback as reinforcement of their lowered self-esteem;
• seating plans too rigid and predictable, room quality, the overall learning environment being scruffy or unenthusing?;
• the teachers they meet – our own looks, sounds, level of enthusiasm, perceived lack of understanding about learning styles or the effects of the learning environment;
• more-able students feeling that they are undervalued and under-challenged, and that we spend too long catering for the lower-fliers;
• insufficient acceptance on our part of a basic human need for students (like children) to win at least some of the battles.

How can we tackle low motivation?

The following suggestions are tactics, rather than solutions. However, choosing tactics can be our first steps towards building a strategy to counter the malaise of poor student motivation. You will already have your own tactics to add to (or supersede) the ones suggested below.

1 Accept that motivation is a real problem. Pretending that low motivation doesn’t exist does not make it disappear. Treating it as an issue to be addressed jointly with students increases the chance that they will recognise it themselves, and (as only they can) make adjustments to their rationale for being in higher education.

2 Recognise the boundary conditions of the problem. Low motivation is essentially a problem with full-time students, rarely with part-timers. Low motivation is essentially a problem with younger students, rather than mature returners. When we have large mixed-ability, mixed age classes containing full-timers and part-timers together, the range of motivation is even more of a problem to all concerned.

3 Remember that students have difficult lives. First-year students may be far from home, family, friends, familiar streets, for the first extended time so far. For some, it’s like being on remand – they’ve been sent there by other people. Some delight in their new environment, others are homesick, but all are expending a lot of their energy
adjusting their lives. The differences between school and university are more profound than perhaps they were when we were new students?

4 Accept that many young people are rebels. It’s a natural enough stage of growing up. But this means that they aren’t so keen to please us, and may be more willing to be sullen, uncooperative and passive. In our consumer-led society (and students are consumers) they are less likely to try to hide their dissatisfaction. None of this means that they aren’t intelligent, or that they lack potential.

5 Seek different kinds of feedback from students. We already seek lots of feedback, but often with repetitive, boring devices such as tick-box questionnaires, where students don’t really tell us anything other than their surface responses to too-often-asked structured questions about our teaching. Ask students how they feel about topics, rooms, assignments, and us! Ask for words, not just rankings.

6 Make it OK to be demotivated. Students sometimes feel that their low morale is yet another failure, and it becomes a self-fulfilling prophecy. All human beings (ourselves included) have peaks and troughs in motivation, and students need to see that (for example) success can breed more success.

7 Don’t expect students to be passionately interested in things they don’t yet understand. The passion often comes with understanding, and the understanding often comes with experience and interaction, so concentrate on the learning-by-doing, peer feedback, and in-class involvement. Don’t lecture to a group that is supposed to be entirely switched on, when we know all too well that it isn’t.

8 Don’t presuppose that our own topic is the most fascinating thing in the life of all the students we see. A few may end up researching in this topic, but for most it is just another stepping stone to the degree that they are going to use for something quite different to our own particular field. Make it an interesting stepping stone, but don’t expect all the students to take it as seriously as we perhaps do.

9 Concentrate on their learning, rather than our teaching. Think more carefully when teaching about what will be going on in their minds, rather than the information in our minds that we’d love to transfuse to our students. Knowledge is not infectious, and is much more than mere information. Enthusiasm is, however, infectious – we can try to transmit this.

10 Keep assessment in perspective. The assessment students do for us sits alongside all the other assessed tasks they do for all their other teachers. Don’t let students’ lives be dominated by assessed work, to the exclusion of the natural joy of learning.

11 Spend more time helping all students to become better learners. Don’t regard it as someone else’s business. Don’t assume that students should already be skilled learners. Help students to gain more control over how they learn, so that they have a greater ownership over what they learn. Above all, continue to help them to address why they are learning.

12 Spend more energy on praising. Students (like ourselves) respond well to positive feedback. Ticks aren’t enough. It’s all too easy for us to spend our limited time on giving constructive critical feedback, but if there is not enough praise there, this just seems like condemnation to demotivated students.

13 Continue being a student. Perhaps a requirement for employment as a teacher in higher education should be that we too should always be enrolled on an academic programme as students, and that we should see our studies through to assessment. And we should have the opportunity to fail or succeed, just like our students. Therein lies the essence of understanding students’ motivations.
Developing students’ competences

Let’s stand back from what we’ve already thought about in this chapter, and go back to the central purposes of everything we do when teaching, or designing learning resources for students. We intend to help them to become more competent. The competences we are addressing are not just those relating to skills which students will be able to demonstrate to us, nor are they all amenable to our usual assessment processes and practices. The competences include those connected with thinking, creativity, originality, problem-solving, and so on, as well as those linked to mastery of defined areas of knowledge.

What’s the opposite of competence? ‘Incompetence’ is the word which immediately comes to mind. Unfortunately, incompetence is a word with negative associations, so some time ago I coined the word ‘uncompetence’ to mean not-yet-competent, less threatening than incompetence.

It is useful to add to our thinking about learning by exploring how we can help our students to gain competence, and how we can help them to be aware of what is happening as they learn. This is why I developed a model of conscious versus unconscious competence and uncompetence.

![Figure 1.2 Conscious–unconscious competence–uncompetence](image)

**The ‘target’ box**

We want to help our students to become consciously competent. This can be regarded as the target box on the competence–uncompetence matrix. The more we can help students to be aware of their competences, the better their motivation. In other words, conscious competence links to the wanting to learn factor. It breeds confidence. We can address this by expressing intended learning outcomes as clearly as we can, so that students are aware when they have reached the position of achieving these outcomes, and know that they are able to demonstrate their achievement of them to us when we assess their performance.
The ‘transit’ box

There’s nothing wrong with ‘conscious uncompetence’. Indeed, knowing what one can’t yet do is usually an essential step towards becoming able to do it. Of course, many unconscious uncompetences don’t even need to be addressed, including all the things one does not need to become able to do, and so on. It is only those conscious uncompetences which relate to the topics to be learned which need to be moved towards the target box on the diagram.

When the intended learning outcomes are clear, it is easier for students themselves to work out what they can’t yet do, and they can often turn their conscious uncompetences into competences without further help. However, as teachers we can often help students to gain feedback which gives them a lot more detail of exactly how they should go about moving out of the transit position. Similarly, students can gain a great deal of feedback from each other about how best to make the move.
Unconscious uncompetence – the ‘danger’ box

This is about not knowing what one can’t yet do. For most learners (students, but also ourselves), it’s the things we don’t know we’re not yet good at which pose the greatest threat. It could be argued that the art of teaching is about helping students to find out what lies hidden in their ‘danger’ boxes on this diagram! Clear expressions of intended learning outcomes can help students to see that there are things they hadn’t yet identified that they needed to become able to achieve. However, even more help can be brought to bear by assessment and feedback, where we (and indeed fellow-students) contribute to giving students information about what they didn’t know that they couldn’t yet do.

Figure 1.5 Unconscious uncompetence: the ‘danger’ box

It is of course possible for students to jump straight from the ‘danger’ position to the ‘target’ one, but then it can be argued that their learning is not nearly so deep as it would have been if they had been alerted to the detail of exactly what it was that they didn’t know they couldn’t yet do, then tackling the situation consciously and addressing the problem.

It is increasingly recognised that an important function of higher education is to help students to develop their key transferable skills. Some of the most important of these are those connected with becoming self-sufficient, autonomous learners. Ideally, we need to be training students toward becoming able to probe for themselves what might lie in the danger box in their learning.

Unconscious competence – the ‘magic’ box?

Fortunately, we’ve all got unconscious competences as well as conscious ones. Many skilful teachers don’t actually need to be aware of exactly wherein lies the success of their teaching. Students who can already achieve learning outcomes don’t necessarily have to know that they are already in a position to do so. However, it can be argued that the transition from the ‘magic’ box to the ‘target’ one is a useful part of the learning process. For example, the excellent teacher who finds out why his or her teaching is successful is in a much better position to help others emulate that success. Similarly, students who find out about their unconscious competences are in a better position to build up their confidence, and to draw from that gain in self-understanding reflective processes that they can use in their conscious learning.
It can be a little unsettling to translate unconscious competences into conscious ones. It can be compared to being able to ride a bike, and wobbling when becoming aware of the processes involved. However, the learning which accompanies this sort of transition can be of value when applied to new learning scenarios.

More importantly, most students find that when they are alerted to the things they did not realise that they could already do well, they gain confidence and self-esteem. As teachers, we need to remind ourselves that our work is not just about telling students what they need to do, but equally about alerting to students to strengths they already have. Positive feedback is a powerful aid to motivation, and where better to direct our positive feedback than to the things that students may not have realised deserved our praise.

Confidence and self-concept

Students from non-traditional academic backgrounds are likely to find their confidence levels are further undermined if their beliefs in their own abilities to succeed are undermined by conceptions about themselves which have made it difficult for them to achieve academically in the past.

Clegg, in Peelo and Wareham (2002) citing Dweck, argues that there is a high correlation between self-concept and achievement and this depends on whether they see their capabilities as being set in stone or malleable to change through hard work and strategic approaches. They discuss two positions that students can adopt in regard to their own abilities, first, that intelligence is fixed (an entity theory of intelligence, as evidenced by IQ scores) and that there is very little they can do to improve themselves, and second, that ability is malleable and that hard work can lead to high achievement (an incremental theory of intelligence):

The personal commitment an individual makes to a theory of intelligence is indicative of their self perception. Students who subscribe to an entity theory of intelligence believe that failure is the final point, the outcome of their achievements. They need ‘a diet of easy successes’ (Dweck, 2000: 15) to confirm their ability and are fearful of learning goals as this involves an element of risk and personal failure. Assessment for these students is an all-encompassing activity that defines them as people. If they fail at the task, they are failures. Challenges are a threat to self-esteem as it is through being seen to be successful that these students define themselves. ...
Perhaps predictably, those students who believe that intelligence is incremental have little or no fear of failure. A typical response from such a student is ‘The harder it gets, the harder I need to try’. These students do not see failure as an indictment of themselves and [can] separate their self-image from their academic achievement. When faced with a challenge, these students are more likely to continue in the face of adversity because they have nothing to prove.

(Clegg in Peelo and Wareham 2002: 176)

Such self-beliefs are remarkably persistent and can interfere powerfully in how a student responds to negative comments in feedback from tutors:

Blaming oneself for failure indicates an incremental theory of intelligence. Students believe they could have done something to avoid failure and will try harder next time. ...
In other words, students choose how they interpret feedback and failure so as to lessen the emotional damage. Students deny the validity of teacher, peer and professional judgement if it disagrees with their own self concept.

(Clegg in Peelo and Wareham 2002: 177)

**Learning and understanding**

Knight and Yorke (2003) acknowledge that there is a problem with the word ‘understanding’, and also point out that the kinds of assessments students meet in post-compulsory education have a significant effect upon the extent to which students develop understanding.

There is uncertainty about what counts as understanding. Side-stepping some important philosophical issues, we suggest that a student who understands something is able to apply it appropriately to a fresh situation (demonstration by far transfer) or to evaluate it (demonstration by analysis). Understanding cannot be judged, then, by evaluating the learner's retention of data or information; rather, assessment tasks would need to have the student apply data or information appropriately. This might not be popular in departments that provide students with a lot of scaffolding because their summative assessment tasks only involve near transfer, not far transfer. Where far transfer and evaluation are the hallmarks of understanding, assessment tasks will not be low-inference, right or wrong tasks, but high-inference ones, judged by more than one person with a good working knowledge of agreed grade indicators.

(Knight and Yorke, 2003: 48)

Perhaps we have a problem in the English language in that words such as learning, knowing and understanding overlap so much in their everyday usage. One of the problems of formulating a curriculum is that in the English language people tend to use the word ‘understand’ much too loosely. Intended learning outcomes are too often badly phrased along the lines ‘by the end of this course students will understand x, y and z’. Nor is it much use to soften the outcomes along the lines ‘this course will help students to deepen their understanding of x, y and z’. Yes, the course may indeed help students to deepen their understanding, but do they know how much they are deepening it, and can we measure how much they have deepened it? In short, we can’t measure what students understand. We can only measure the evidence that students produce to demonstrate their understanding. That evidence is all too easily limited by technique of demonstrating understanding –
their written communication skills perhaps. Or whether they are note-perfect in music. We can measure such things, and give students feedback about them, but we can’t ever be sure that we’re measuring what is present in students’ minds. Or, when it comes to understanding, ‘if we can measure it, it almost certainly isn’t it’.

Developing students’ understanding may well be a useful direction to go in, but we need to be really careful to spell out exactly how far students are intended to develop their understanding, and what evidence they need to be aiming to produce to prove that they have developed their understanding, and what standards this evidence must measure up to, to indicate that they have successfully developed their understanding sufficiently. We also need to think hard about which processes are best to help students to develop their understanding, and to recognise that different processes and environments suit different students best. We can use similar arguments about knowing and knowledge. We only measure what students know as far as we can assess the evidence which students produce. In other words, we can only measure what students show of what they know.

**Positioning the goalposts – designing and using learning outcomes**

So far, this chapter has been about how learning can be caused to happen. All of this is academic unless we also link it to what is intended to be learned, including thinking about why, when, and where. That’s where learning outcomes come in. Indeed, Biggs (2003) places intended learning outcomes at the centre of his model of constructive alignment.

Learning outcomes represent the modern way of defining the content of a syllabus. The old-fashioned way was simply to list topic headings, and leave it to the imagination of the lecturer exactly what each heading would mean in practice, and how (or indeed if) each part of that would be assessed in due course. Nowadays, expressions of learning outcomes are taken to define the content, level and standard of any course, module or programme. External scrutiny interrogates assessment criteria against learning outcomes to ensure that the assessment is appropriate in level and standard to the course or module. Even more importantly, however, learning outcomes can be vitally useful to students themselves, who (with a little guidance) can be trained to use the expressed learning outcomes as the targets for their own achievement.

The intended learning outcomes are the most important starting point for any new teaching–learning programme. Learning outcomes give details of syllabus content. They can be expressed in terms of the objectives which students should be able to show that they have achieved, in terms of knowledge, understanding, skills and even attitudes. They are written as descriptors of ways that students will be expected to demonstrate the results of their learning. The links between learning outcomes and assessment criteria need to be clear and direct. Learning outcomes indicate the standards of courses and modules, and are spotlighted in quality review procedures.

**Why use learning outcomes?**

- Well-expressed statements of intended learning outcomes help students to identify their own targets, and work systematically towards demonstrating their achievement of these targets.
- Learning outcomes are now required, in the higher education sector in the UK, for subject review by the Quality Assurance Agency (QAA), and will be increasingly cross-referenced by academic reviewers against assessment processes, instruments and standards.
- In the context of benchmarking, learning outcomes can provide one of the most direct indicators of the intended level and depth of any programme of learning.
Where can learning outcomes be useful to students?

Learning outcomes should not just reside in course validation documentation (though they need to be there in any case). They should also underpin everyday teaching–learning situations. They can be put to good use in the following places and occasions:

1. In student handbooks, so that students can see the way that the whole course or module is broken down into manageable elements of intended achievement, and set their own targets accordingly.
2. At the start of each lecture, for example on a slide or transparency, so that students are informed of the particular purposes of the occasion.
3. At the end of each lecture, so that students can estimate the extent to which they have travelled towards being able to achieve the intended outcomes associated with the lecture.
4. At suitable points in the briefing of students for longer elements of their learning, including projects, group tasks, practical work and field work.
5. On each element of handout material issued before, during or after lectures, to reinforce the links between the content of the handout and students’ intended learning.
6. On tasks and exercises, and briefings to further reading, so that students can see the purpose of the work they are intended to do.
7. On the first few screens of each computer-based learning programme that students study independently (or in groups).
8. At the beginning of self-study or flexible learning packages, so that students can estimate their own achievement as they work through the materials.

Tips on designing and using learning outcomes

It is natural enough that professional people such as lecturers may feel some resistance to having the content of their teaching ‘pinned down’ by pre-expressed statements of intended learning outcome. However, the rationale for using them is so strong that we need to look at some practical pointers which will help even those who don’t believe in them to be able to write them reasonably successfully. It is in the particular public context of linking learning-expressed outcomes to assessment criteria that most care needs to be taken. The following suggestions are based on many workshops I have run helping lecturers to put into clear, everyday words the gist of their intentions regarding the learning they intend to be derived from a particular lecture, or a practical exercise, or a tutorial, or students’ study of a journal paper, and so on – each and every element which makes up a programme of study.

1. **Work out exactly what you want students to be able to do by the end of each defined learning element.** Even when you’re working with syllabus content that is already expressed in terms of learning outcomes, it is often worth thinking again about your exact intentions, and working out how these connect together for different parts of students’ learning.
2. **Don’t use the word ‘students’ in your outcomes** — except in dry course documentation. It is much better to use the word ‘you’ when addressing students. ‘When we’ve completed this lecture, you should be able to compare and contrast particle and wave models of radiation’ is better than stating ‘the expected learning outcome of this lecture is that students will ...’. Similarly, use the word ‘you’ when expressing learning outcomes in student handbooks, handouts, laboratory briefing sheets, and so on. Students need
to feel that learning outcomes belong to them, not just to other people.

3 Work imaginatively with existing learning outcomes. There may already be externally defined learning outcomes, or they may have been prescribed some time ago when the course or programme was validated. These may, however, be written in language which is not user-friendly or clear to students, and which is more connected with the teaching of the subject than the learning process. You should be able to translate these outcomes, so that they will be more useful to your students.

4 Match your wording to your students. The learning outcomes as expressed in course documentation may be off-putting and jargonistic, and may not match the intellectual or language skills of your students. By developing the skills to translate learning outcomes precisely into plain English, you will help the outcomes to be more useful to them, and at the same time it will be easier for you to design your teaching strategy.

5 Your intended learning outcomes should serve as a map to your teaching programme. Students and others will look at the outcomes to see if the programme is going to be relevant to their needs or intentions. The level and standards associated with your course will be judged by reference to the stated learning outcomes.

6 Remember that many students will have achieved at least some of your intended outcomes already. When introducing the intended learning outcomes, give credit for existing experience, and confirm that it is useful if some members of the group already have some experience and expertise which they can share with others.

7 Be ready for the question ‘why?’ It is only natural for students to want to know why a particular learning outcome is being addressed. Be prepared to illustrate each outcome with some words about the purpose of including it.

8 Be ready for the reaction ‘so what?’. When students, colleagues, or external reviewers still can’t see the point of a learning outcome, they are likely to need some further explanation before they will be ready to take it seriously.

9 Work out your answers to ‘what’s in this for me?’. When students can see the short-term and long-term benefits of gaining a particular skill or competence, they are much more likely to try to achieve it.

10 Don’t promise what you can’t deliver. It is tempting to design learning outcomes that seem to be the answers to everyone’s dreams. However, the real test for your teaching will be whether it is seen to enable students to achieve the outcomes. It’s important to be able to link each learning outcome to an assessable activity or assignment.

11 Don’t use words such as ‘understand’ or ‘know’. While it is easy to write (or say) ‘when you have completed this module successfully, you will understand the Third Law of Thermodynamics’, it is much more helpful to step back and address the questions: ‘how will we know that they have understood it?’, ‘how will they themselves know they have understood it?’, and ‘what will they be able to do to show that they have understood it?’.

12 Don’t start at the beginning. It is often much harder to write the outcomes that will be associated with the beginning of a course, and it is best to leave attempting this until you have got into your stride regarding writing outcomes. In addition, it is often much easier to work out what the ‘early’ outcomes actually should be once you have established where these outcomes are leading students towards.
Think ahead to assessment. A well-designed set of learning outcomes should automatically become the framework for the design of assessed tasks. It is worth asking yourself ‘How can I measure this?’ for each draft learning outcome. If it is easy to think of how it will be measured, you can normally go ahead and design the outcome. If it is much harder to think of how it could be measured, it is usually a signal that you may need to think further about the outcome, and try to relate it more firmly to tangible evidence that could be assessed.

Keep sentences short. It is important that your students will be able to get the gist of each learning outcome without having to re-read them several times, or ponder on what they really mean.

Consider illustrating your outcomes with ‘for example …’ descriptions. If necessary, such extra details could be added in smaller print, or in brackets. Such additional detail can be invaluable to students in giving them a better idea about what their achievement of the outcomes may actually amount to in practice.

Test-run your learning outcome statements. Ask target-audience students ‘what do you think this really means?’, to check that your intentions are being communicated clearly. Also test your outcomes statements out on colleagues, and ask them whether you have missed anything important, or whether they can suggest any changes to your wording.

Aim to provide students with the whole picture. Put the student-centred language descriptions of learning outcomes and assessment criteria into student handbooks, or turn them into a short self-contained leaflet to give to students at the beginning of the course. Ensure that students don’t feel swamped by the enormity of the whole picture! Students need to be guided carefully through the picture in ways that allow them to feel confident that they will be able to succeed a step at a time.

Don’t get hung up too much on performance, standards and conditions when expressing learning outcomes. For example, don’t feel that such phrases as ‘on your own’, or ‘without recourse to a calculator or computer’ or ‘under exam conditions’ or ‘with the aid of a list of standard integrals’ need to be included in every well-expressed learning outcome. Such clarifications are extremely valuable elsewhere, in published assessment criteria. Don’t dilute the primary purpose of a learning outcome with administrative detail.

Don’t be trivial! Trivial learning outcomes support criticisms of reductionism. One of the main objections to the use of learning outcomes is that there can be far too many of them, only some of which are really important.

Don’t try to teach something if you can’t think of any intended learning outcome associated with it. This seems obvious, but it can be surprising how often a teaching agenda can be streamlined and focused by checking that there is some important learning content associated with each element in it, and removing or shortening the rest.

Don’t confuse learning outcomes and assessment criteria. It is best not to cloud the learning outcomes with the detail of performance criteria and standards until students know enough about the subject to understand the language of such criteria. In other words, the assessment criteria are best read by students after they have started to learn the topic, rather than at the outset (but make sure that the links will be clear in due course).

Don’t write any learning outcomes that can’t (or won’t) be assessed. If it’s important enough to propose as an intended learning outcome, it should be
worthy of being measured in some way, and it should be possible to measure.

23 **Don’t design any assessment task or question that is not related to the stated learning outcomes.** If it’s important enough to measure, it is only fair to let students know that it is on their learning agenda.

24 **Don’t state learning outcomes at the beginning, and fail to return to them.** It’s important to come back to them at the end of each teaching–learning element, such as lecture, self-study package, or element of practical work, and so on. Turn them into checklists for students, for example along the lines ‘Check now that you feel able to ...’ or ‘Now you should be in a position to ...’.

**Conclusions about learning**

For too long, learning has been considered as a special kind of human activity, requiring its own jargon and vocabulary. It’s not! To learn is to be human. My main point is that wanting/needing, doing, feedback and digesting are so close to the essence of being human that it’s possible to keep these processes firmly in mind when designing educational courses, training programmes, learning resources and open learning materials. In addition, it’s worth thinking about the conscious and unconscious sides of developing students’ competences, to become better equipped to help students to develop their own learning skills. Even more important, it is useful to be able to relate the fundamental factors explored in this chapter to something that is usually inextricably linked to learning: assessment.

Furthermore, we need to remember that learning is done by people – not to them. In other words, it is useful to use a model of learning which students themselves can understand. Moreover, it is important to use a model of learning which students themselves believe in. The wanting/needing, doing, feedback, digesting model can easily be introduced to students by asking them the questions used earlier in this chapter, and they then gain a sense of ownership of the model. Similarly, students themselves readily identify with the competence–uncompetence model illustrated in this chapter, and find it helpful in taking more control of their own learning. It often comes as a pleasant surprise and a welcome relief that there is not something mystical or magical about how people learn.

Finally, having paid due regard to how students (and of course we ourselves) learn, it’s vital to become very skilled at putting into clear, unambiguous words our descriptions of what is to be learned. Writing learning outcomes is not an activity that can be done off the cuff. Expressions of intended learning outcome need to be drafted, edited, discussed, refined, and continuously reviewed, if we are to define our curriculum in ways which will stand up to the increasing levels of external scrutiny of our professional practice.

Many people returning to study later in life have hang-ups about things that went wrong in their previous experience of education or training, and straightforward approaches to how they learn, and clarification of what they are intended to learn, give them renewed confidence in their own abilities to apply everyday, common sense approaches to the business of studying.
Chapter 2

Designing assessment and feedback to enhance learning

Intended outcomes of this chapter

When you’ve explored the ideas in this chapter, and tried out the most appropriate ones in the context of your own teaching and assessment, you should be better able to:

- design assessment processes and instruments which will be integral to your students’ learning;
- reduce the assessment burden on yourself and on your students;
- interrogate your assessment processes, practices and instruments to ensure that they are valid, reliable and transparent;
- give more and better feedback to more students in less time;
- diversify the assessment processes and instruments you use, so that the same students are not repeatedly disadvantaged by a few of these;
- involve students in appropriate elements of their own assessment, to deepen further their learning.

Putting assessment and feedback into perspective

Whether we think of ourselves as lecturers, or teachers, or facilitators of learning, the most important thing we do for our students is to assess their work. This is why, in this book, I have gone straight into assessment after thinking about learning. It is in the final analysis the assessment we do that determines their diplomas, degrees, and future careers. One of the most significant problems with assessment is that just about all the people who do it have already survived having it done to them. This can make us somewhat resistant to confronting whether it was, when we experienced it at the receiving end, valid, fair and transparent, and explains why so many outdated forms of assessment still permeate higher education practice today.

Over the last decade, many of us have seen our assessment workload grow dramatically, as we work with increasing numbers of students, who are ever more diverse. Consequently, the time we have available to devote to assessing each student has fallen. Even those methods and approaches which used to work satisfactorily with relatively small numbers of students are now labouring as we try to extend them to a mass higher education context. It is therefore more important than ever to review the way we design and implement our assessment.

Brown and Glasner began the conclusion of their edited collection *Assessment Matters in Higher Education* with the words:
Assessment does matter. It matters to students whose awards are defined by the outcomes of the assessment process; it matters to those who employ the graduates of degree and diploma programmes; and it matters to those who do assessing. Ensuring that assessment is fair, accurate and comprehensive – and yet manageable for those doing it – is a major challenge. It is a challenge which has been grappled with by many, ... Despite the fact that there is a considerable body of international research about assessment and related issues, we experiment largely in ignorance of the way others have effected positive change, and we have limited opportunity to learn from the lessons of others.

(Brown and Glasner 1999)

Their book makes an excellent starting place from which to work backwards through the literature on innovative assessment during the last years of the twentieth century, and more recently Knight and Yorke (2003) explore in depth some of the things that are still going wrong in assessment at the opening of the present century, and the collection edited by Peelo and Wareham (2002) confronts both the experiences of students who fail, and the ways in which assessment in higher education can be regarded as failing students.

In Chapter 1 of this Toolkit, I looked at feedback as a fundamental process underpinning successful learning. Indeed, feedback on not-yet-successful learning can be even more important, as learning by trial and error is a perfectly valid way to learn. Unfortunately, the assessment culture within which higher education systems currently work tend to reward successful learning with credit, and to equate not-yet-successful learning with failure. The accompanying feedback culture tends all too often to take the form of giving students critical feedback when things go wrong, and precious little comment when things go right. In this situation, the feedback which students receive can be almost as damaging to their motivation as the label of failure that we pin on their not-yet-successful learning.

My overall aim in this chapter is to challenge your thinking on how best to assess students’ learning, and how to optimise the impact of our feedback on students’ learning – whether that learning has proved successful or not. I hope too to provide food for thought to enable you to confront the difficulties in order to move towards making assessment demonstrably fair, valid and reliable. As a prelude to this chapter, I would like to share some overarching thoughts and questions about teaching, learning and assessment, and the relationships between these processes. Then I will outline some ‘concerns’ about unseen written examinations, and about continuous assessment. The remainder of this chapter is intended to offer some thoughts about fifteen particular forms of assessment, each with its pros and cons, and with some suggestions for making each work better, to improve student learning.

In this chapter, I offer various practical suggestions regarding how assessment can be improved, particularly so that assessment can be:

- more valid, measuring that which we really intend to measure, rather than ‘ghosts’ of students’ real learning;
- more reliable and consistent, moving away from the subjectivity that can cause assessment to be unfair;
- more transparent, so that students know where the goalposts are, and so that external reviewers can see clear links between intended learning outcomes as spelled out in course documentation, and assessment criteria applied to students’ work;
- more diverse, so that individual students are not disadvantaged unduly by particular forms of assessment.
more manageable, both for our students and for ourselves;
more useful in terms of feedback, so that students’ learning is enhanced;
more successful in promoting deep learning, so that students get a firmer grasp of the important theories and concepts underpinning their learning.

Values for assessment

Race et al. (2005) propose the following values and principles for assessment design.

1. **Assessment should be valid.** It should assess what it is that you really want to measure. For example, when attempting to assess problem-solving skills, the assessment should not be dependent on the quality and style of the production of written reports on problem solving, but on the quality of the solutions devised.

2. **Assessment should be reliable.** If we can get the task briefings, assessment criteria and marking schemes right, there should be good inter-assessor reliability (when more than one assessor marks the work), as well as good intra-assessor reliability (assessors should come up with the same results when marking the same work on different occasions). All assignments in a batch should be marked to the same standard. (This isn’t the same as the strange notion of benchmarking, which implies that assignments should hit the same standards in every comparable course in existence – an interesting but quite unachievable idea).

3. **Assessment should be transparent.** There should be no hidden agendas. There should be no nasty surprises for students. Students should not be playing the game ‘guess what’s in our assessors’ minds’. Assessment should be in line with the intended learning outcomes as published in student handbooks and syllabus documentation, and the links between these outcomes and the assessment criteria we use should be plain to see (not just by external scrutineers such as QAA reviewers, but by students themselves).

4. **Assessment should be authentic.** There are at least two dimensions to this. First, we need to be striving to measure each student’s achievement, in ways where we are certain that the achievement belongs to the student, and not to anyone else. Second, we need to be measuring students’ achievement of the intended outcomes in contexts which are as close as possible to the intentions lying behind the outcomes in the first place – for example performance skills should be measured in performances, not just where students are writing about performance in exam rooms.

5. **Assessment should motivate students to learn.** Assessment should help them to structure their learning continuously during their studies, not just in a few critical weeks before particular assessment climaxes. Assessment should allow students to self-assess and monitor their progress throughout a course, and help them to make informed choices about what to learn, how to learn it, how best to evidence the achievement of their learning.

6. **Assessment should promote deep learning.** Students should not be driven towards surface or ‘reproductive’ learning because of the ways their learning is to be assessed. They should not find themselves ‘clearing their minds of the last subject, in order to make room for the next subject’.

7. **Assessment should be fair.** Students should have equivalence of opportunities to succeed even if their experiences are not identical. This is particularly important when assessing work based in
individual learning contracts. It is also important that all assessment instruments and processes should be seen to be fair by all students.

8 Assessment should be equitable. While assessment overall may be designed to discriminate between students on the basis of the extent to which they have achieved the intended learning outcomes, assessment practices should not discriminate between students, and should set out not to disadvantage any individual or group. Obviously, students may prefer and do better at different kinds of assessment (some love exams and do well in them, while others are better at giving presentations for example) so a balanced diet of different means of assessment within a course will set out to ensure that no particular group is favoured over any other group.

9 Assessment should be formative – even when it is primarily intended to be summative. Assessment is a time-consuming process for all concerned, so it seems like a wasted opportunity if it is not used as a means of letting students know how they are doing, and how they can improve. Assessment that is mainly summative in its function (for example when only a number or grade is given) gives students very little information, other than frequently confirming their own prejudices about themselves.

10 Formative assessment should start as early as possible in a course or module. There is a great deal of research evidence that students benefit greatly by having some early feedback on how they are doing, and how they can improve. Conversely, if we leave assessment till too late, students who fail are frequently so discouraged that they drop out, or lose motivation.

11 Assessment should be timely. Assessment that occurs only at the end of a learning programme is not much use in providing feedback, and also leads to the ‘sudden death’ syndrome, where students have no chance to practise before they pass or fail. Even where there is only end-point formal assessment, earlier opportunities should be provided for rehearsal and feedback.

12 Assessment should be incremental. Ideally, feedback to students should be continuous. There is sense therefore in enabling small units of assessment to build up into a final mark or grade. This avoids surprises, and can be much less stressful than systems when the whole programme rests on performance during a single time-constrained occasion.

13 Assessment should be redeemable. Most universities insist that all assessment systems contain within them opportunities for the redemption of failure when things go wrong. This not only is just, but avoids high attrition rates.

14 Assessment should be demanding. Passing an assessment or test should not be automatic, and the assurance of quality is impossible when students are not stretched by assessment methods. That is not to say that systems should only permit a fixed proportion of students to achieve each grade: a good assessment system should permit all students considered capable of undertaking a course of study to have a chance of succeeding in the assessment, provided they learn effectively and work hard.

15 Assessment should enable the demonstration of excellence. The very best students should be able to be challenged to achieve at the highest standards.

16 Assessment should be efficient and manageable. Brilliant systems of assessment can be designed, but which are completely unmanageable because of ineffective use of staff time and resources. The burden on staff should not be excessive, nor should the demands on students undertaking the assessment tasks.
Why should we assess?

If we think clearly about our reasons for assessment, it helps to clarify which particular methods are best suited for our purposes, as well as helping to identify who is best placed to carry out the assessment, and when and where to do it. Some of the most common reasons for assessing students are listed below. You might find it useful to look at these, deciding which are the most important ones in the context of your own discipline, with your own students, at their particular level of study.

1 **To guide students’ improvement.** The feedback students receive helps them to improve. Assessment that is primarily formative need not necessarily count towards any final award and can therefore be ungraded in some instances. The more detailed the feedback we provide, the greater is the likelihood that students will have opportunities for further development.

2 **To help students to decide which options to choose.** For example if students have to select electives within a programme, an understanding of how well (or otherwise) they are doing in foundation studies will enable them to have a firmer understanding of their current abilities in different subject areas. This can provide them with guidance on which options to select next.

3 **To help students to learn from their mistakes or difficulties.** Many forms of formative assessment can be useful to students to help to diagnose errors or weaknesses, and enable students to rectify mistakes. Nothing is more demotivating than struggling on getting bad marks and not knowing what is going wrong. Effective assessment lets students know where their problems lie, and provides them with information to help them to put things right.

4 **To allow students to check out how well they are developing as learners.** Assessment does not just test subject-specific skills and knowledge, but provides an ongoing measure of how well students are developing their learning skills and techniques. Students themselves can use assessment opportunities to check out how they are developing their study-skills, and can make adjustments as appropriate.

5 **To classify or grade students.** There are frequently good reasons for us to classify the level of achievements of students individually and comparatively within a cohort. Assessment methods to achieve this will normally be summative and involve working out numerical marks or letter grades for students’ work of one kind or another. However, continuous assessment processes can address classifying or grading students, yet still provide opportunities for formative developmental feedback along the way.

6 **To set standards.** The best way to estimate the standard of an educational course or module is to look at the various ways in which students’ achievement is measured. The standard of the course is illustrated by the nature of the assessment tasks, and of course by the quality of students’ work associated with the various tasks.

7 **To allow students to make realistic decisions about whether they are up to the demands of a course or module.** Students sometimes choose a module because they are interested in part of the subject, but then find that substantial parts of the module are too difficult for them, or not interesting enough. When the assessment profile of the module is clearly spelled out in advance, students can see how much the part they are interested in actually counts in the overall picture, and can be alerted to other important things they may need to master to succeed in the module.

8 **To determine fitness for entry to a programme.** Students often can not undertake
9 To give us feedback on how our teaching is going. If there are generally significant gaps in student knowledge, this often indicates faults in the teaching of the areas concerned. Excellent achievement by a high proportion of students is often due to high quality facilitation of student learning.

10 To cause students to get down to some serious learning. As students find themselves under increasing pressure, they tend to become more and more strategic in their approaches to learning, only putting their energies into work that counts. Assessment methods can be designed to maximise student motivation, and prompt their efforts towards important achievements.

11 To translate intended learning outcomes into reality. Assessment tasks and the feedback students receive on their work can show them what the intended learning outcomes mean in practice. Often it is only when students undertake tasks where their evidence of achievement of the learning outcomes is being measured, that they fully appreciate the nature and level of the competences they need to attain.

12 To add variety to students’ learning experience. Utilising a range of different assessment methods spurs students to develop different skills and processes. This can promote more effective – and enjoyable – teaching and learning, and can help us to ensure that all students can demonstrate their strengths in those assessment contexts they find most comfortable and appropriate for them.

13 To help us to structure our teaching and constructively align learning outcomes to assessments. While ‘teaching to the exam’ is regarded as poor practice, it is very useful to keep in mind an overview of the various ways in which students’ knowledge and skills will be assessed, so we can help students to strike a sensible balance regarding the time and energy they devote to each specific element of their study.

14 To allow students to place themselves in the overall class picture. Assessment can give students a frame of reference, whereby they can compare their achievements with those of their peers. Students get a great deal of feedback from each other – more than their teachers can give them. Assessment helps them to find out how they are placed in the cohort, and can encourage them to make adjustments to get into a better position.

15 To provide statistics for the course, or for the institution. Educational institutions need to provide funding bodies and quality assurance agencies with data about student achievement and progression, and assessment systems need to take account of the need for appropriate statistical information.

16 To lead towards a licence to practice. In some professions, a degree or other qualification is taken as a measure of fitness to practice. It then becomes particularly important to ensure that validity and authenticity are achieved in the design of the assessment processes and instruments.

17 To lead to appropriate qualifications. Unlike some overseas universities, UK universities still maintain the degree classification system. However, some universities are continuing to ponder the introduction of a no-classifications system coupled with the production of student portfolios. Meanwhile, it is vitally important that we do everything we can to ensure that the students who deserve first class degrees gain such awards, and that all students are judged fairly on the evidence of their achievement which we assess.
Concerns about assessment

Before it is possible to persuade people to review what they are presently doing, and to consider implementing changes, it is useful to take a critical look at whether current practices actually work as well as we think they do. Therefore I continue this chapter with a critical review of the two principal areas of assessment which most students encounter: traditional time-constrained, unseen written exams, and assessed coursework. In each case I will list some general concerns, starting with concerns about the links between these kinds of assessment and the factors underpinning successful learning drawn from Chapter 1 of this book: wanting to learn, needing to learn, learning by doing, learning through feedback and making sense of or digesting what has been learned. For most of the concerns, I will add hints at how the repercussions they cause be ameliorated – or at least confronted. Later in the chapter I offer a range of practical pointers suggesting how even the most traditional methods of assessment can be put to good use.

Concerns about traditional exams

Much has been written about the weaknesses of traditional examinations – in particular time-constrained unseen written exams. In many subject disciplines, this assessment format seems to be at odds with the most important factors underpinning successful learning. Moreover, there is abundant evidence that even in discipline areas where the subject matter is well defined, and answers to questions are either correct or incorrect, assessors still struggle sometimes to make exams valid, reliable, or transparent to students. In disciplines where the subject matter is more discursive, and flexibility exists in how particular questions can be answered well, it can be even harder to achieve demonstrable reliability in assessment, even when validity is well achieved.

Overall in higher education at present, with larger numbers of students, and staff time under more pressure, there is evidence of a drift back to reliance on exams, which can be argued to be one of the more time-efficient and cost-effective methods of assessment, where it is fairly easy to achieve fairness and reliability, and with the added bonus that plagiarism or cheating cause less headaches to markers than in many other forms of assessment.

Some of the principal concerns that can be expressed about unseen written exams in are summarised below.

1. Exams don’t do much to increase students’ ‘want’ to learn. Students often make choices in modular schemes strategically, so that they avoid this kind of assessment if they can. This can lead them to choose subjects in which they are less interested than those which they fear to select because they will be subjected to exams.
2. Exams are not often a good way of alerting students to what they really need to learn. Admittedly, students will often only get down to serious learning when an impending exam causes them to revise actively, but the fact that in unseen exams the actual assessment agenda has to be guessed at rather than worked towards systematically means that the resultant learning can be unfocused, and the assessment judgement becomes too dependent upon the success of the agenda-guessing.
3. Exams are not ideal occasions for learning by doing. Though students may do a lot of learning before formal unseen written examinations, their actual experiences of learning in such situations is very limited. In other words, a note could be placed on the door of the exam room stating ‘exam cancelled; you’ve already done all the learning that this exam could have caused’! The learning payoff during
an assessment element should be considered more. It is therefore worth our while revisiting our testing processes to search for forms of assessment which are in themselves better learning experiences.

4 The amount of feedback that students receive about exams is not optimal. Most systems require marked exam scripts to be regarded as secret documents, not to be shown to students on any account! It is worth asking what reasons underlie this philosophy? It is useful to reconsider the value that students can derive from seeing their marked examinations papers, where it should be possible to be able to demonstrate to students that the examination marking has indeed been reliable, fair, and valid. Moreover, the natural process of learning from mistakes should always be accommodated, even when the assessment judgements have already been taken down to be used in evidence against the candidates.

5 Exams tend not to do much to help students make sense of what they have learned. While there may be a significant amount of ‘digesting’ concepts and theories during the time leading up to exams, the assessment experience itself does little to help students to gain any further deepening of their grasp of these. One of the consequences of modularising the curriculum can be that some subject matter is introduced too close to an impending exam for the content to be satisfactorily digested.

6 We mark exam scripts in a rush. Most staff who mark exams agree that the task usually has to be completed in haste, in preparation for timetabled exam boards. The situation has been worsened by modularisation and semesterisation developments in most institutions, which give tighter turnaround intervals between examinations and progression to the next element of study. While our marking may still be fair and reliable, it can be shocking to students who have spent a great deal of time preparing for unseen written exams to find out that their scripts are marked so quickly.

7 Unseen written exams can lead to us placing too much emphasis on unimportant factors in candidates’ answers. For example, factors such as quality of handwriting, or neatness of overall presentation of scripts can influence examiners, consciously or subconsciously. Many students nowadays are much more comfortable composing essays or reports using a keyboard, and adjusting their writing on-screen, cutting and pasting to bring their writing to a logical or coherent whole; this is much harder to do well with pen and paper, against the clock, in a threateningly silent environment.

8 We’re often tired and bored when we mark exam scripts. Because of the speed with which exam scripts need to be marked, and the pressure to do the task well, we may not be functioning at our best while undertaking the task.

9 We’re not good at marking objectively. There is abundant data on the problems both of inter-assessor reliability and intra-assessor reliability, particularly with the more qualitative or discursive kinds of exam question.

10 Unseen written exams tend to favour candidates who happen to be skilled at doing exams! If we look at exactly what skills are measured by unseen written exams, the most important of these from students’ point of view turns out unsurprisingly to be the techniques needed to do unseen written exams, and the same students can get rewarded time after time! This skill may have little to do with the competences we need to help students to develop to become professionals in the subject disciplines they are learning.
Despite these concerns, there is a lot we can do to make exams work better or in different ways, for example open book, open notes, time-unconstrained exams, in-tray exams, OSCEs and so on. Some discussion is given later in this chapter, and further developed by Race et al. (2005).

Concerns about continuous assessment

Having made a broadside about the limitations of unseen written exams, I have to admit that such exams have advantages as well, particularly that in their own way they are fair to candidates, and they are not subject to most of the problems of plagiarism, unwanted collaboration, and so on which can affect the assessment of coursework. Let me proceed to further balance the picture by expressing some parallel concerns about continuous assessment – including that of essays and reports.

1 If students are under too much coursework-related pressure, their ‘want’ to learn is damaged. When almost everything that students do, as part of their learning, is measured, they naturally adopt strategic approaches to their learning, and only concentrate on those things that are going to be assessed. In many disciplines, we need to ensure that students’ practical work is focused on quality learning, and is not unnecessarily burdensome regarding quantity.

2 Continuous assessment does not always alert students to important aspects of their need to learn. For example, when continuous assessment is repetitive in format (too many essays or too many reports), students may indeed become better able to deliver in these formats, but their overall learning is not deepened in ways that could be achieved by matching each assessment format to the nature of the particular achievements of the intended learning outcome intended to be assessed.

3 The range of learning-by-doing may be too narrow. For example, repetitive use of formats such as essays and reports narrow the scope of students’ learning, and tend to favour inordinately those students who happen to master the skills associated with the format at the expense of other students who have been more successful at learning the subject itself.

4 Coursework feedback may be eclipsed by marks or grades. Students pay most attention to their scores or grades when they get back marked work, and often are quite blind to valuable feedback which may accompany their returned work. A way out of this problem is to return students’ work with feedback but without grades in the first instance, then get them to self-assess their own grades. Most students’ self-assessments (when they are primed with clear assessment criteria, linked to clear statements defining the intended learning outcomes) are within 5 per cent or one grade point, and it is possible to allow...
students’ own grades or scores to count. It is well worth talking to the few students whose self-assessment is at odds with our own assessment, and alerting them to the blind spots which could have caused them to overestimate the worth of their work, or (this happens more often) to boost their self-esteem by reassuring them that their work was worth more than they believed it to be.

5 Students may not have the opportunity to make sense of the feedback they receive. Particularly when there is a delay in getting feedback to students, they may already have moved on to learning other topics, and they don’t then make learning from the feedback available to them a priority. Modularisation and semesterisation have both in their own ways contributed to making delays in receiving feedback more significant, related to the overall learning timescales involved.

6 It is getting harder to detect unwanted collaboration. Particularly with assignments submitted in word-processed formats, it is difficult if not impossible to detect every instance of plagiarism or copying. Whether marking essays or practical reports, if there are several lecturers or demonstrators involved in marking them, students who have copied can be quite skilled at making sure that different people mark their respective work, minimising the chance that the collaboration is detected. The most skilful plagiarists will always evade our detection!

7 Too much of our time may be involved in fairly routine kinds of marking. In many courses, lecturers continue to try to use the same continuous assessment processes that worked quite well when student numbers were much smaller. With large numbers of students, it is essential that human assessment and feedback should be reserved for higher-level agendas, and that computer-delivered assessment formats (in those curriculum areas where they can be designed well) should be exploited to provide assessment and feedback on relatively routine matters. There has already been a significant growth in the use of computer-aided assessment in many subject disciplines, saving a great deal of assessor time, while (when used well) providing a great deal of feedback to students, often very quickly.

8 Students may not be aware of the criteria used to assess their work. When students are practised in interpreting and making use of assessment criteria, the standard of their assessed work rises dramatically. Alerting students to the detail of the assessment agenda is regarded by some staff as a move towards ‘spoonfeeding’. However, it can be argued that enabling students to demonstrate their full potential is a desirable goal. Involving students in self-assessment of suitable elements of their own work, and in peer-assessment of appropriate assignments, can help students to gain a substantial understanding of the way that their work is assessed by tutors. Moreover, there is an increased level of expectation that assessment criteria can be closely linked to the achievement of expressed learning outcomes, and students themselves can make good use of these ways of clarifying the assessment agenda.

9 Students often get the balance wrong between continuous assessment and exams. Students feel the pressure to submit coursework by stated deadlines, and may still be working on such work at a late stage in their studies on a particular module, when they would be better advised to cut their losses regarding that coursework and prepare for important exams. Particularly happens when students who fall behind in writing up practical work, continue to try to get this work finished and handed in, when they may be better advised to spend their remaining time making sure that they are well prepared for forthcoming formal exams.
PROS AND CONS OF FIFTEEN ASSESSMENT TECHNIQUES

Assessment can take many forms, and it can be argued that the greater the diversity in the methods of assessment, the fairer assessment is to students. Each and every one of the forms of assessment I consider in this chapter can be claimed to disadvantage those students who do not give of their best in the particular circumstances in which it is used. Therefore, diversifying assessment so that students experience a range of assessment methods evens out the situation, and increases the chance that all students will be able to demonstrate their best performance in at least some of the formats. The art of assessing therefore needs to embrace several different kinds of activity. I would like to encourage colleagues to broaden the range of assessment processes, and I have tried to provide practical suggestions about how to maximise the benefits of each of a number of methods I have addressed below.

In the next part of this chapter, I will look systematically at each of fifteen forms of assessment, listing a few advantages, some disadvantages, and I will offer some suggestions (sometimes a few, sometimes a lot) for making the particular assessment device work better. None of these lists should be considered as anything more than a starting point. Nor should the fifteen kinds of assessment I happen to have chosen be taken as representative of a sufficiently diverse range of assessment processes. Some of this discussion is further expanded now in Race et al. (2005).

1 Traditional unseen, time-constrained written exams

Traditional unseen written exams still make up the lion’s share of assessment in higher education, though in some disciplines, for example mathematics, engineering and sciences courses, this situation is considerably balanced by the inclusion of practical work, projects and other contributions to the evidence on the basis of which we grade and classify students. Despite growing concern about the validity and fairness of traditional exams, for all sorts of reasons they will continue to play a large part in the overall assessment picture. Despite many concerns about exams, I have tried in the following discussion to suggest a number of ways that the use of exams can be improved. I have given more suggestions about setting exam questions than for setting any of the other types of assessment explored in this chapter as, in general, good practice in writing exam questions overlaps with, or extends across, many of the other types.
ADVANTAGES

- **Relatively economical.** Exams can be more cost-effective than many of the alternatives (though this depends on economies of scale when large numbers of students are examined, and also on how much time and money needs to be spent to ensure appropriate moderation of assessors’ performance). However, any form of assessment can only be truly said to be cost-effective if it is actually effective in its contribution to students’ learning.

- **Equality of opportunity.** Exams are demonstrably fair in that students have all the same tasks to do in the same way and within the same timescale. (However, not all things are equal in exams – ask any hay-fever sufferer, or candidate with menstrual problems).

- **We know whose work it is.** It is easier to be sure that the work being assessed was done by the candidate, and not by other people. For this reason, exams can be considered to be an ‘anti-plagiarism assessment’ device, and although there are instances of attempting to cheat in exam rooms, good invigilation practice and well-planned design of the room (and the questions themselves) can eliminate most cheating.

- **Teaching staff are familiar with exams.** Familiarity does not always equate with validity, but the base of experience that teaching staff already have with traditional unseen exams means that at least some of the problems arising from them are well known, and sometimes well addressed.

- **Exams cause students to get down to learning.** Even if the assessment method has problems, it certainly causes students to engage deliberately with the subject matter being covered by exams, and this can be worthwhile particularly for those ‘harder’ discipline areas where students may not otherwise spend the time and energy that is needed to make sense of the subject matter.

DISADVANTAGES

- **Students get little or no feedback** about the detail of their performance, which is therefore wasted as far as feedback is concerned. Though it can be argued that the purpose of exams is measurement rather than feedback, the counter-argument is that most exams, to some extent, represent lost learning opportunities because of this lack of feedback. Where students are given the opportunity to see their marked scripts (even with no more feedback than seeing the subtotals and total marks awarded along the way), they learn a great deal about exactly what went wrong with some of their answers, as well as having the chance to receive confirmation regarding the questions they answered well.

- **Badly set exams encourage surface learning,** with students consciously clearing their minds of one subject as they prepare for exams in the next subject. In many discipline areas, it is inappropriate to encourage students to put out of their minds important subject matter, where they will need to retain their mastery for later stages in their studies.

- **Technique is too important.** Exams tend to measure how good students are at answering exam questions, rather than how well they have learned. The consequence is that those students who become skilled at exam technique are rewarded time after time, while other students who may have mastered the subject material to a greater degree may not get due credit for their learning if their exam technique repeatedly lets them down.

- **Exams only represent a snapshot of student performance, rather than a reliable indicator of it.** How students perform in traditional exams depends on so many other factors than their grasp of the subject being tested. Students’ state of mind on the day, their luck or
otherwise in tackling a good question first, their state of health, and many other irrelevant factors creep in.

Setting unseen written exam questions: some practical suggestions

Many experienced lecturers remember with some horror the first time they put pen to paper to write exam questions. Sometimes they felt well equipped to do so, as they had been involved in exams as candidates for most of their lives, and thought that it was quite straightforward to write good questions. But then the realisation dawned that the words and tasks used in exam questions could determine students’ future careers, prospects, incomes and lifestyles. Often, only when marking the exam scripts do lecturers first become aware of just how sensitively the questions need to be designed, and how clearly the assessment criteria and marking schemes need to be laid out to anticipate as many as possible of the different ways that even the most unambiguous looking question can turn out to be answered in practice. The suggestions below can help to spare you from some of the headaches which can result from hastily written exam questions.

1 Don’t do it on your own! Make sure you get feedback on each of your questions from colleagues. They can spot whether your question is at the right level more easily than you can. Having someone else look at one’s draft exam questions is extremely useful. It is better still when all questions are discussed and moderated by teams of staff. Where possible, draft questions with your colleagues. This allows the team to pick the best questions from a range of possibilities, rather than use every idea each member has.

2 Ask colleagues: ‘what would you say this question really means?’ If they tell you anything you hadn’t thought of, you may need to adjust your wording a little.

3 Get one or two colleagues to do your questions! Sometimes even sketch answers can be helpful. This may be asking a lot of busy colleagues, but the rewards can be significant. You will often find that they answered a particular question in a rather different way than you had in mind when you designed the question. Being alerted in advance to the ways that different students might approach a question gives you the opportunity to accommodate alternative approaches in your marking scheme, or to adjust the wording of your question so that your intended or preferred approach is made clear to students.

4 Have your intended learning outcomes in front of you as you draft your questions. It is all too easy to dream up interesting questions which turn out to be tangential to the learning outcomes. Furthermore, it is possible to write too many questions addressing particular learning outcomes, leaving other outcomes unrepresented in the exam.

5 Keep your sentences short. You’re less likely to write something that can be interpreted in more than one way if you write plain English in short sentences. This also helps reduce any discrimination against those students whose second or third language is English.

6 Work out what you’re really testing. Is each question measuring decision-making, strategic planning, problem solving, data processing (and so on), or is it just too much dependent on memory? Most exam questions measure a number of things at the same time. Be upfront about all the things each question is likely to measure. In any case, external scrutiny of assessment may interrogate whether your questions (and your assessment criteria) link appropriately with the published learning outcomes for your course or module.
7 Don’t measure the same things again and again. For example, it is all too easy in essay-type exam questions to repeatedly measure students’ skills at writing good introductions, firm conclusions, and well-structured arguments. Valuable as such skills are, we need to be measuring other important things too.

8 Include data or information in questions to reduce the emphasis on memory. In some subjects, case-study information is a good way of doing this. Science exams often tend to be much better than other subjects in this respect, and it is appropriate to be testing what candidates can do with data rather than how well they remember facts and figures.

9 Make the question layout easy to follow. A question with bullet points or separate parts can be much easier for (tense) candidates to interpret correctly than one which is just several lines of continuous prose.

10 Don’t overdo the standards. When you’re close to a subject, it’s easily possible that your questions get gradually harder year by year. For example, in exams including quantitative questions, there is the danger that numerical problems become more difficult in each successive exam, partly because of the wish to stretch students a little further than did the worked examples they may have seen in lectures, or the problems students tackled in tutorials.

11 Write out an answer to your own question. This will be handy when you come to mark answers, but also you’ll sometimes find that it takes you an hour to answer a question for which candidates have only half an hour. Lecturers setting problem-type questions for students often forget that familiarity with the type of problem profoundly influences the time it takes to solve it. Students who get stuck on such a question may end up failing the exam more through time mismanagement than through lack of subject-related competence.

12 Decide what the assessment criteria will be. Check that these criteria relate clearly to the syllabus objectives or the intended learning outcomes. Make it your business to ensure that students themselves are clear about these objectives or intended outcomes, and emphasise the links between these and assessment. When students are aware that the expressed learning outcomes are a template for the design of assessment tasks, it is possible for them to make their learning much more focused.

13 Work out a tight marking scheme. Imagine that you are going to delegate the marking to a new colleague. Write it all down. You will find such schemes an invaluable aid to share with future classes of students, as well as colleagues actually co-marking with you, helping them to see how assessment works.

14 Use the question itself to show how marks are to be allocated. For example, put numbers in brackets to show how many marks are attached to various parts of the question (or alternatively, give suggested timings such as ‘spend about ten minutes on Part 2’).

15 Try your questions out. Use coursework and student assignments to do pilot runs of potential components of your future exam questions, and use or adapt the ones that work best for exams.

16 Proofread your exam questions carefully. Be aware of the danger of seeing what you meant, rather than what you actually wrote! Even if you’re very busy when asked to check your questions, a little extra time spent editing your questions at this time may save you many hours sorting out how to handle matters arising from any ambiguities or errors which could have otherwise slipped through the proofreading process.
Designing marking schemes

Making a good marking scheme can save you hours when it comes to marking a pile of scripts. It can also help you to know (and show) that you are doing everything possible to be uniformly fair to all students. As your marking schemes will normally be shown to people including external examiners and quality reviewers, it’s important to design schemes in the first place so that they will stand up to such scrutiny. The following suggestions should help.

1 **Write a model answer for each question.** This can be a useful first step towards identifying the mark-bearing ingredients of a good answer. It also helps you see when what you thought was going to be a 30-minute question turns out to take an hour! If you have difficulties answering the questions, the chances are that your students will too! Making model answers and marking schemes for coursework assignments can give you good practice for writing exam schemes.

2 **Make each decision as straightforward as possible.** Try to allocate each mark so that it is associated with something that is either present or absent, or right or wrong, in students’ answers.

3 **Aim to make your marking scheme usable by a non-expert in the subject.** This can help your marking schemes be useful resources for students themselves, perhaps in next year’s course.

4 **Aim to make it so that anyone can mark given answers, and agree on the scores within a mark or two.** It is best to involve colleagues in your piloting of first-draft marking schemes. They will soon help you to identify areas where the marking criteria may need clarifying or tightening up.

5 **Allow for ‘consequential’ marks.** For example, when a candidate makes an early mistake, but then proceeds correctly thereafter (especially in problems and calculations), allow for some marks to be given for the ensuing correct steps even when the final answer is quite wrong.

6 **Pilot your marking scheme by showing it to others.** It’s worth even showing marking schemes to people who are not closely associated with your subject area. If they can’t see exactly what you’re looking for, it may be that the scheme is not yet sufficiently self-explanatory. Extra detail you add at this stage may help you to clarify your own thinking, and will certainly assist fellow markers.

7 **Make yourself think about honourable exceptions.** Ask yourself whether your marking scheme is sufficiently flexible to accommodate a brilliant student who hasn’t strictly conformed to your original idea of what should be achieved. There are sometimes candidates who write exceptionally good answers which are off-beam and idiosyncratic, and they deserve credit for these.

8 **Consider having more than 20 marks for a 20-mark question.** Especially in essay-type answers, you can’t expect students to include all the things you may think of yourself. It may be worth having up to 30 or more ‘available’ marks, so that students approaching the question in different ways still have the opportunity to score well.

9 **Look at what others have done in the past.** If it’s your first time writing a marking scheme, looking at other people’s ways of doing them will help you to focus your efforts. Choose to look at marking schemes from other subjects that your students may be studying, to help you tune in to the assessment culture of the overall course.

10 **Learn from your own mistakes.** No marking scheme is perfect. When you start applying it to a pile of scripts, you will soon start adjusting it. Keep a note of any difficulties you experience in adhering to your scheme, and take account of these next time you have to make one.
Marking examination scripts to optimise reliability

The following suggestions may help you approach the task of marking exam scripts efficiently, while still being fair and helpful to students.

1 **Be realistic about what you can do.** Marking scripts can be boring, exhausting and stressful. As far as constraints allow, don’t attempt to mark large numbers of scripts in short periods of time. Put scripts for marking into manageable bundles. It is less awesome to have ten scripts on your desk and the rest out of sight than to have the whole pile threatening you as you work.

2 **Avoid halo effects.** If you’ve just marked a brilliant answer on a script, it can be easy to go into the same student’s next answer seeing only the good points and passing over the weaknesses. Try to ensure that you mark each answer dispassionately. Conversely, when you look at the next student’s answer, you may be over-critical if you’ve just marked a brilliant one.

3 **Watch out for prejudices.** There will be all sorts of things which you like and dislike about the style and layout of scripts, not to mention handwriting quality. Make sure that each time there is a ‘benefit of the doubt’ decision to be made, it is not influenced by such factors.

4 **Recognise that your mood will change.** Every now and then, check back to scripts you marked earlier, and see whether your generosity has increased or decreased. Be aware of the middle-mark bunching syndrome. As you get tired, it feels safe and easy to give a middle-range mark. Try as far as possible to look at each script afresh.

5 **Remind yourself of the importance of what you're doing.** You may be marking a whole pile of scripts, but each individual script may be a crucial landmark in the life of the student concerned. Your verdict may affect students for the rest of their careers.

6 **Take account of the needs of second markers.** Many universities use a blind double-marking system, in which case you should not make any written comments or numbers on the scripts themselves, to avoid prejudicing the judgement of a second marker (unless of course photocopies have already been made of each script for double marking). You may find it useful to use ‘post-it’ notes or assessment pro formas for each script, so you are able to justify the marks you give at any later stage. Such aides-memoirs can save you having to read the whole scripts again, rethinking how you arrived at your numbers or grades.

7 **Write feedback for students.** In most exams, the system may not allow you to write on the scripts the sort of feedback you would have given if the questions had been set as assessed coursework. However, students still need feedback, and making notes for yourself of the things you would have explained about common mistakes can help you prepare some discussion notes to issue to students after the exam, or can remind you of things to mention next time you teach the same subjects.

8 **Devise your own system of tackling the marking load.** You may prefer to mark a whole script at a time, or just Question 1 of every script first. Do what you feel comfortable with, and see what works best for you.

9 **Provide feedback for yourself and for the course team.** As you work through the scripts, note how many students answered each question, and how well they performed. You may begin to realise that some questions turned out to have been very well written, while others could
have been framed better. You will find out which questions proved to be the hardest for students to answer well, even when all questions were intended to be of an equal standard. Such feedback and reflection should prove very useful when designing questions next time round.

1. **Let a class have a try at an exam question under exam conditions.** Then ask students to exchange their answers, and lead them through marking their work using a typical marking scheme. This helps students to learn quickly how examiners’ minds work. It is well worth using the whole of at least one lecture slot for such an exercise; the learning payoff for students is likely to be considerably more than if you’d just spent an extra hour with one small element of their curriculum.

2. **Issue two or three old exam questions for students to try in preparation for a tutorial.** Then lead them through assessing their work using a marking scheme during the tutorial. Ask them to prepare lists of questions on matters arising from the exercise, both on subject content and requirements for exams, and use their questions to focus tutorial discussion.

3. **Display an exam question on-screen in a large-group lecture.** Ask students in groups to brainstorm the principal steps they would take in the way they would approach answering the question. Then give out a model answer to the question as a handout, and talk the class through the points in the model answer where marks would be earned. All this can be achieved in less than half of the overall time of a typical lecture, and you may be surprised at the levels of interest and attention which students pay to such elements in a lecture slot.

4. **In a lecture or a tutorial, get students in groups to think up exam questions themselves.** You can base this on work they have already covered, or on work currently in progress. Ask the groups to transcribe their questions onto overhead transparencies. Display each of these in turn, giving feedback on how appropriate or otherwise each question is in terms of standard, wording, length and structure. (You will get many questions this way which you can later use or adapt for next year’s exams or future coursework assignments!).

5. **Use exam questions to help students to create an agenda.** In a lecture or tutorial, give out two or three related exam questions as a handout. Ask students in groups to make lists of short questions that they don’t yet know the answers to. Then allow the groups to use you as a resource, quizzing you with these questions. You don’t have to answer them all at once – for
some your reply will be along the lines ‘We’ll come to this in a week or two’, and for others ‘You won’t actually be required to know this’.

6 Get students to make marking schemes. Give them a typical exam question, and ask groups of students to prepare a breakdown of how they think the marks should be allocated. Ask them to transcribe the marking schemes to overhead transparencies. Discuss each of these in turn with the whole group, and give guidance to how closely the marking schemes resemble those used in practice.

7 Get students to surf the net. Ask them to access the Internet to see if they can find appropriate exam questions on the subjects they are studying. Suggest that they work in twos or threes, and bring the questions they find to the next class session. You can encourage them to download the questions they find, and make an electronic question bank.

8 Ask students in groups to think up a ‘dream’ question. Ask the groups to make bullet-point lists of the ten most important things that they would include in answers to these questions. These questions will give you useful information about their favourite topics.

9 Ask students in groups to think up ‘nightmare’ questions. With these, you can open up a discussion of the causes of their anxieties and traumas, and can probably do a lot to allay their fears, and point them in the right direction regarding how they might tackle such questions.

10 Ask students to think of way-out, alternative questions. Suggest that they think of questions which are not just testing of their knowledge and skills, but which get them to think laterally and creatively. This encourages deeper reflection about the material they are learning, and will probably give you some interesting ideas to use in future exams.

2 Open-book exams

In many ways these are similar to traditional exams, but with the major difference that students are allowed to take in with them sources of reference material. Alternatively, candidates may be issued with a standard set of resource materials that they can consult during the exam, and are informed in advance about what will be available to them, so that they can prepare themselves by practising to apply the resource materials. Sometimes, in addition, the ‘timed’ element is relaxed or abandoned, allowing students to answer questions with the aid of their chosen materials, and at their own pace.

ADVANTAGES

These have many of the advantages of traditional exams, with the addition of:

- **Less stress on memories!** The emphasis is taken away from students being required to remember facts, figures, formulae, and other such information.
- **Measuring retrieval skills.** It is possible to set questions which measure how well students can use and apply information, and how well they can find their way round the contents of books and even databases.
- **Slower writers helped?** If coupled with a relaxation in the timed dimension (e.g. a nominal ‘2-hour’ paper where students are allowed to spend up to three hours if they wish) some of the pressure is taken away from those students who happen to be slower at writing down their answers (and also students who happen to think more slowly).
DISADVANTAGES

- **Not enough books or resources!** It is hard to ensure that all students are equally equipped regarding the books they bring into the exam with them. Limited stocks of library books (and the impossibility of students purchasing their own copies of expensive books) means that some students may be disadvantaged.

- **Need bigger desks?** Students necessarily require more desk space for open-book exams if they are to be able to use several sources of reference as they compose their answers to exam questions. This means fewer students can be accommodated in a given exam room than with traditional unseen exams, and therefore open-book exams are rather less cost-effective in terms of accommodation and invigilation.

Tips on setting open-book exam questions

All of the suggestions regarding traditional exam questions still apply. In addition:

1. **Decide whether to prescribe the books students may employ.** This is one way round the problem of availability of books. It may even be possible to arrange supplies of the required books to be available in the exam room.

2. **Consider compiling a source-collection for the particular exam.** Check on copyright issues, and see if it is cost-effective to put together a set of papers, extracts, data, and other information from which students can find what they need to address the questions in the particular exam.

3. **Set questions which require students to do things with the information available to them,** rather than merely summarising it and giving it back.

4. **Make the actual questions particularly clear and straightforward to understand.** The fact that students will be reading a lot during the exam means that care has to be taken that they don’t read the actual instructions too rapidly.

5. **Focus the assessment criteria on what students will have done with the information,** and not just on them having located the correct information.

6. **Plan for shorter answers.** Students doing open-book exams will be spending quite a lot of their time searching for, and making sense of, information and data. They will therefore write less per hour than students who are answering traditional exam questions ‘out of their heads’.

3 Open-notes exams

These are similar to open-book exams described above, but this time students are allowed to bring into the examination room any notes that they have prepared for the purpose. In other words, we are talking about a situation of ‘legitimised crib-notes’! Your first thought may be that this is all very strange, but in fact such exams can work surprisingly well. Many of the advantages and suggestions for open-book exams continue to apply – the following additional matters arise.

ADVANTAGES

- **Students can achieve a very significant learning payoff simply making the notes in the first place.** The act of making revision summaries can have high learning payoff. It is best not to place stringent limits on the amount of materials which students can bring in.
Those who bring in everything they have ever written about your topic will be disadvantaging themselves in that it will take them much longer to search for the relevant parts of their notes, compared to students who have been really selective in summarising the important parts of your topic.

- **The emphasis on memory is reduced, allowing competence to be tested more effectively.** Open-notes exams can also spread candidates’ abilities out more fairly, as the better candidates will have made better notes in the first place.
- **You can write shorter questions.** When it is up to the students to ensure that they have with them important information or data, you don’t have to put so much into the questions themselves.

**DISADVANTAGES**

- **Students need rehearsal at preparing for open-notes exams.** They may take two or three practice runs to develop the art of making comprehensive but manageable summaries of the important data or information you intend them to make available to themselves.
- **Candidates whose open notes were not very suitable are penalised quite severely.** Some of these candidates may have been better at answering traditional exam questions with no notes.
- **Extra desk space is needed, just as for open-book exams.**

**TIPS ON DESIGNING OPEN-NOTES EXAMS**

- **Think of giving a topic menu in advance.** This can save candidates from trying to prepare open notes on everything they have learned about your topic. It does, of course, also mean that you are letting them off the hook regarding trying to learn some of the things that you don’t include in your menu.
- **Consider having an inspection process.** For example, let it be known that yourself or your colleagues will be keeping an eye on the range and content of the open notes, or even that they may be temporarily retained after the exam.

**4 Structured exams**

These include multiple-choice exams, and several other types of formats where students are not required to write ‘full’ answers, but are involved in making true/false decisions, or identifying reasons to support assertions, or fill in blanks or complete statements, and so on. It is of course possible to design mixed exams, combining free-response traditional questions with structured ones. Some kinds of structured exams can be computer-based, and technology can be used both to process students’ scores and to provide feedback to them. In the following discussion, I will concentrate on the benefits and drawbacks of multiple-choice questions. Many of the same points also apply at least in part to other types of structured exam questions, such as true–false, short-answer, and sequencing questions.
ADVANTAGES

- **Greater syllabus coverage**: it is possible, in a limited time, to test students’ understanding of a much greater cross-section of a syllabus than could be done in the same time by getting students to write in detail about a few parts of the syllabus.
- **Multiple-choice exams test how fast students think**, rather than how fast they write. The level of their thinking depends on how skilled the question-setters have been.
- **Students waste less time**. For example, questions can already show, for example, formulae, definitions, equations, statements (correct and wrong) and students can be asked to select the correct one, without having to provide it for themselves.
- **Saving staff time and energy**. With optical mark readers, it is possible to mark paper-based multiple-choice exams very cost-effectively, and avoid the tedium and subjectivity which affect the marking of traditional exams.
- **Computer-based tests can save even more time**. As well as processing all of the scores, computer software can work out how each question performs, calculating the discrimination index and facility value of each question. This allows the questions which work well as testing devices to be identified, and selected for future exams.
- **Testing higher-level skills?** Multiple-choice exams can move the emphasis away from memory, and towards the ability to interpret information and make good decisions. However, the accusation is often made that such exams seem only to test lower cognitive skills, and there are numerous examples which seem to support this argument. There are, however, examples where high level skills are being tested effectively, and more attention needs to be given to the design of such testing to build on these.

DISADVANTAGES

- **The guess factor**. Students can often gain marks by lucky guesses rather than correct decisions.
- **Designing structured questions takes time and skill**. It is harder to design good multiple-choice questions than it is to write traditional open-ended questions. In particular, it can be difficult to think of the last distractor or to make it look sufficiently plausible. It is sometimes difficult to prevent the correct answer or best option standing out as being the one to choose.
- **Black and white or shades of grey?** While it is straightforward enough to reward students with marks for correct choices (with zero marks for choosing distractors), it is more difficult to handle subjects where there is a ‘best’ option, and a ‘next-best’ one, and so on.
- **Where multiple-choice exams are being set on computers, check that the tests are secure**. Students can be ingenious at getting into computer files that are intended to be secret!
- **The danger of impersonators**? The fact that exams composed entirely of multiple-choice questions do not require students to give any evidence of their handwriting increases the risk of substitution of candidates.
Designing multiple-choice exams

1. Continuously try out questions with colleagues and with large groups of students. Make sure that you select for exam usage questions where people are selecting correct options for the right reasons—and not because in any way or another the question gives away which is the correct option.

2. Make sure that distractors are plausible. If no one is selecting a given distractor, it is serving no useful purpose. Distractors need to represent anticipated errors in students’ knowledge or understanding.

3. Try to avoid overlap between questions. If one question helps students successfully to answer further questions, the possibility increases of students picking the right options for the wrong reasons.

4. Avoid options such as ‘none of the above’ or ‘all of the above’. These options are a let-out for students who find it hard to decide between the other alternatives, and are often chosen by weaker students in surface-thinking mode. Also, it is surprisingly rare for such options to be in fact the correct one, and test-wise candidates will already have guessed this.

To complicate matters, the best students will sometimes spot weaknesses with the option which is intended to be correct, and select ‘none of these’ because of this.

5. Pilot questions in formative tests before using them in summative exams. Ideally, multiple-choice questions that appear in formal exams should be tried-and-tested ones. It is worth consulting the literature on multiple-choice question design and finding out how to assess the discrimination index and facility value of each question from statistical analysis of the performance of substantial groups of students.

6. Remember that students can still guess. The marking scheme needs to take into account the fact that all students can score some marks by pure luck! If most of the questions are, for example, four-option ones, the average mark which would be scored by a monkey would be 25 per cent, so the real range lies between this and 100 per cent. It is important that people are indeed allowed to get 100 per cent in such structured exams, and that this does not cause any problems when the marks are blended with more traditional exam formats where written answers in some subjects still attract marks only in the 70s even when they’re reckoned to be first-class answers.

7. Write feedback responses to each option. Where possible, it is useful to be able to explain to students selecting the correct (or best) option exactly why their selection is right. It is even more useful to be able to explain to students selecting the wrong (or less-good) options exactly what may be wrong with their understanding. When multiple-choice questions are computer-marked, it is a simple further step to get the computer to print out feedback responses to each student. This practice can equally be applied to formative multiple-choice tests, and to formal multiple-choice exams. Furthermore, the availability of feedback responses to each decision students make lends itself to extending the use of such questions in computer-based learning packages, and even computer-managed exams.

8. Ensure that students are well-practised at handling multiple-choice questions. Answering such questions well is a skill in its own right, just as is writing open answers well. We need to ensure that students are sufficiently practised, so that multiple-choice exams measure their understanding and not just their technique.

9. Look at a range of published multiple-choice questions. For example, in the UK several Open University courses have
multiple-choice assignment questions, as well as multiple-choice exams. You may be surprised how sophisticated such questions can be, and may gain many ideas that you can build into your own question design.

**10 Gradually build up a large bank of questions.** This is best done by collaborating with colleagues, and pooling questions that are found to be working well. It then becomes possible to compose a multiple-choice exam by selecting from the bank of questions. If the bank becomes large enough, it can even be good practice to publish the whole collection, and allow students to practise with it. Any student who has learned to handle a large bank of questions can normally be said to have learned the subject well.

**When you’ve got a large bank of questions, there is the possibility of on-demand exams.** Students can then take a multiple-choice test with a random selection of questions from the bank, at any time during their studies, and ‘pass’ the component involved as soon as they are able to demonstrate their competence with the questions.

**5 Essays**

In some subjects, assessment is dominated by essay-writing. Traditional (and open-book) exams often require students to write essays. Assessed coursework often takes the form of essays. It is well known that essay-answers tend to be harder to mark, and more time-consuming to assess, than quantitative or numerical questions. There are still some useful functions to be served by including some essay questions in exams or coursework assessments, but perhaps we need to face up to the fact that reliability in marking essays is often unsatisfactory, and refrain from using essays to the extent that they are used at present.

**ADVANTAGES**

• **Essays allow for student individuality and expression.** They are a medium in which the ‘best’ students can distinguish themselves. This means, however, that the marking criteria for essays must be flexible enough to be able to reward student individuality fairly.

• **Essays can reflect the depth of student learning.** Writing freely about a topic is a process which demonstrates understanding and grasp of the material involved.

• **Essay-writing is a measure of students’ written style.** It is useful to include good written communication somewhere in the overall assessment strategy. The danger of students in science disciplines missing out on the development of such skills is becoming increasingly recognised.

**DISADVANTAGES**

• **Essay-writing is very much an art in itself.** Students from some backgrounds are disadvantaged regarding essay-writing skills as they have simply never been coached in how to write essays well. For example, a strong beginning, a coherent and logical middle, and a firm and decisive conclusion combine to make up the hallmarks of a good essay. The danger becomes that when essays are over-used in assessment strategies, the presence of these hallmarks is measured time and time again, and students who happen to have perfected the art of delivering these hallmarks are repeatedly rewarded irrespective of any other strengths and weaknesses they may have.
Essays take a great deal of time to mark objectively. Even with well thought out assessment criteria, it is not unusual for markers to need to work back through the first dozen or so of the essays they have already marked, as they become aware of the things that the best students are doing with the questions, and the difficulties experienced by other students.

‘Halo effects’ are significant. If the last essay answer you marked was an excellent one, you may tend to approach the next one with greater expectations, and be more severe in your assessment decisions based upon it.

Essays take time to write (whether as coursework or in exams). This means that assessment based on essay-writing necessarily is restricted regarding the amount of the syllabus that is covered directly. There may remain large untested tracts of syllabus.

‘Write down the number we first thought of’! Essays are demonstrably the form of assessment where the dangers of subjective marking are greatest. Essay-marking exercises at workshops on assessment show marked differences between the mark or grade that different assessors award the same essay – even when equipped with clear sets of assessment criteria.

Tips on setting and using essay-type questions

Most of the suggestions given earlier in this chapter about writing traditional exam questions continue to apply – whether essays are to be used as assessed coursework or as exam questions. Some further suggestions are given below.

1 Help students to see exactly how essays are marked. Alert students to the credit they gain from good structure and style. One of the best ways of doing this is to involve classes of students in looking at examples of past (good, bad and indifferent) essays, and applying assessment criteria. This can be followed by involving students in peer-assessment of each other's essays.

2 Don’t leave students to guess the real agenda. Some essay questions are so open ended that it is hard for students to work out exactly what is being sought. The authors of such questions will defend their questions by saying ‘well, it's important to find the students who know what to do in such circumstances’, but the fact remains that it is an aspect of study technique which is being rewarded, rather than mastery of the learning involved in answering the question.

3 Subdivide essay questions into several parts, each with marks publicly allocated. This helps to prevent students from straying so far off the point that they lose too many of the marks that they could have scored.

4 Give word limits. Even in exams, it can be useful to suggest to students that an essay-answer should lie between (for example) 800 and 1200 words say for a 30-minute question, and so on. This helps to avoid the quantity-versus-quality issue, which leads some students into simply trying to write a lot, rather than thinking deeply about what they are writing – and it also helps reduce the time it takes to mark the essays.

5 Help students to develop the skills required to plan the content for essays. This is particularly important in those disciplines where students will be more accustomed to handling structured questions and problems. The danger then is that students tackling essay questions in exams spend far too long on them, and penalise themselves regarding time for the rest of the examination. One of the best – and most time-effective – ways of
helping students to become better at handling essay questions is to set class or coursework tasks which require students to prepare essay-plans rather than fully finished masterpieces. A concept-map or diagram can show a great deal about the eventual ‘worth’ of students essays, and can avoid distraction from the elements of style and structure. Students can put together maybe half-a-dozen essay plans in the time it would take them to complete one essay, and making the plans involves far more payoff per unit time in thinking and learning.

6 **Don’t assess essays too often.** Any assessment form advantages those students who happen to be skilled at delivering what is being measured. This applies to essays too, and there is a significant danger that those students who happen to become good at planning and writing essays continue to be advantaged time and time again.

7 **Have a clear, well-structured marking scheme for each essay question.** This can save a lot of time when marking, and can help guarantee that students’ answers are assessed fairly and consistently.

8 **Don’t assume that longer equals better.** It is often harder for students to write succinctly than to just ramble on. However, students need to be briefed on how best we want them to develop their art in writing briefly.

9 **Consider involving students in peer-assessing some essays or essay-plans.** This helps them to put their own efforts into perspective, and to learn things to emulate (and things to avoid!) by seeing how other students go about devising essays.

10 **Help students to improve their technique through feedback.** Consider the range of approaches you can use to give students useful feedback on their essays, including statement banks, assignment return sheets and email messages, and try to minimise the time you spend writing similar feedback comments onto different students’ essays.

11 **Use some class time to get students to brainstorm titles for essays.** This helps them to think about the standard they could anticipate for essay questions in forthcoming exams, and gives them topic areas to base their practice on.

### 6 Reviews and annotated bibliographies

Anyone who reviews books or articles for journals or magazines will confirm that there’s no better way of making oneself look deeply into a book or article than to be charged with the task of writing a review of it! Getting students to write reviews is therefore a logical way of causing them to interact in depth with the information they review. One way of getting students to review a lot of material at once is to ask them to produce annotated bibliographies on a topic area, and to use these as assessment artefacts.

**ADVANTAGES**

- **Reviewing is an active process.** Reviewing material gives students a task to do which focuses their thinking, and helps them avoid reading passively, or writing the content out in ‘transcribing’ mode.
- **Reviews are useful for revision.** When students have reviewed material, the reviews are useful learning tools in their own right, and may spare students from having to wade through the material on subsequent revision.
Reviewing involves important cognitive processes. When students are required to review material from different sources critically, they are necessarily engaged in higher-level skills of comparing, contrasting and evaluating – far beyond passive reading.

Reviewing other papers and articles is useful practice for research writing. Students who will move on to research can benefit from the training involved in writing reviews, and gain skills in communicating their conclusions coherently.

Reviewing helps students to develop critical skills. Getting students to compare and contrast chosen sources helps them think more deeply about the subject matter involved.

Compiling annotated bibliographies is a way of requiring students to survey a considerable amount of material. It also helps them to reduce a large field to a manageable body of notes and references.

DISADVANTAGES

Reviews are necessarily quite individual. For reviews to lend themselves to assessment, it is important that the task should be delineated quite firmly. This may go against the open-ended approach to reviewing which we may wish students to develop.

There aren’t enough books! With large numbers of students and limited library resources, students may find it difficult or impossible to get adequate access to the materials we want them to review.

Reviewing individually can be lonely. Reviewing a range of resources is often best done as a group task rather than an individual one, maximising the benefits that students derive from discussion and debate. It then becomes more difficult to assess individual contributions to such reviews.

Setting assessed review tasks

1. Promote variety. Ask students to select their own subject for research, and give them a wide range of topics to choose from.

2. Prompt awareness of audience. Ask students to write reviews of different kinds of publication (learned journal, subject magazine, next year’s students, student newsletter, and so on), so that they become aware of the differences in tone and style of writing which are appropriate for different audiences.

3. Get students to assess existing reviews. For example, issue students with a selection of existing reviews, and ask them to identify features of the best reviews, and faults of the worst ones.

4. Help students to see that reviewing is not just a matter of summarising what everyone has said. You only have to look at book reviews in journals to see how some reviewers make up their contributions by summarising the ‘contents’ pages of the material that they are reviewing. This is not a high-level intellectual activity.

5. Decide about credit to be awarded to ‘search’ tasks. It is useful to get students both to locate all relevant major resources addressing a field, and to prioritise (for example) the most important or most relevant half-dozen sources.

6. Consider limiting the parameters. Getting students to do a short comparative review of two or three important sources can be easier (and fairer) to assess than when the reviews are done without any restrictions. When such focused review tasks are coupled with a general search, it is possible to measure information
retrieval skills as well as the higher-level ‘compare and contrast’ skills, without the agenda for the latter remaining too wide for objective assessment.

7 **Set a tight word limit for the review.** The art of writing a good, short review is more demanding than writing long reviews. When students’ reviews are of equal length, it becomes easier to distinguish the relative quality of their work. However, brief students on how to draft and re-draft their work, to ensure the quality of short reviews. Make sure that students don’t adopt the ‘stop when you’ve written a thousand words’ approach.

8 **Think about combining collaborative and individual work.** For example, suggest that groups of students do a search collaboratively, and identify the most relevant sources together. Then suggest they write individual reviews of different sources. Finally, consider asking them to share their reviews, then write individual comments comparing and contrasting the sources.

9 **Ask students to look at the same texts, but give them different focuses.** For example, students could look at a series of articles on pollution, and write different reviews of them aimed to be separately useful to conservationists, parents, individualists, and general consumers.

10 **Encourage qualitative judgement.** Prompt students to write on not only what a book or article is about, but also about how effective it is in providing convincing arguments, and how well it is expressed.

11 **Involv[e your library or information services staff.** It’s a mean trick to send off large groups of students to rampage through the library, without giving notice to the staff there of what you are doing. Discussing your plans with your faculty librarians, for example, gives them a chance to be prepared, and gives opportunities for them to make suggestions and give advice to you on the nature of the task, before you give it to students.

12 **Think hard about resource availability.** Make sure that there won’t be severe logjams with lots of students chasing particular library resources. Widen the range of suggested resources. Consider arranging with library staff that any books which will be in heavy demand are classified as ‘reference only’ stock for a specified period, so that they can remain in the library rather than disappearing on loan.

13 **Consider setting annotated bibliographies as formative group tasks.** This can encourage students to collaborate productively in future information-seeking tasks, and can reduce the drudgery sometimes experienced in tasks such as literature searching. Giving feedback on the reviews can be sufficiently valuable to students to make it unnecessary to couple the task with formal assessment.

14 **Consider making the final product ‘publishable’.** Aim to compile collections of the best reviews and annotated bibliographies, for example to use in next year’s Course Handbook, or as the basis of an assessed task for next year’s students.

15 **Explore the possibility of involving library staff in the assessment.** Library staff may be willing and able to assess annotated bibliographies and reviews in parallel with yourself, or may be willing to provide additional feedback comments to students.
7 Reports

Assessed reports make up at least part of the coursework component of many courses. Report-writing is one of the most problematic study-skills areas in which to work out how and what to advise students to do to develop their approaches. The format, layout, style and nature of an acceptable report varies greatly from one discipline to another, and even from one assessor to another in the same discipline. The most common kinds of report that many students write are those associated with their practical, laboratory or field work. Several of the suggestions offered in this section relate particularly to report-writing in science and engineering disciplines, but can readily be extended to other subject areas.

ADVANTAGES

- **Report-writing is a skill relevant to many jobs.** In many careers and professional areas, the ability to put together a convincing and precise report is useful. Report-writing can therefore provide a medium where specific skills relevant to professional activity can be addressed.

- **Reports can be the end-product of useful learning activities.** For example, the task of writing reports can involve students in research, practical work, analysis of data, comparing measured findings with literature values, prioritising, and many other useful processes. Sometimes these processes are hard or impossible to assess directly, and reports provide secondary evidence that these processes have been involved successfully (or not).

- **Report-writing can allow students to display their talents.** The fact that students can have more control when they write reports than when they answer exam questions, allows students to display their individual strengths.

DISADVANTAGES

- **Collaboration can be difficult to detect.** For example, with laboratory work, there may be a black market in old reports! Also, when students are working in pairs or groups in practical work, it can be difficult to set the boundaries between collaborative work and individual interpretation of results.

- **Report-writing can take a lot of student time.** When reports are assessed and count towards final grades, there is the danger that students spend too much time writing reports at the expense of getting to grips with their subject matter in a way which will ensure that they succeed in other forms of assessment such as exams.

- **Report-marking can take a lot of staff time.** With increased numbers of students, it becomes more difficult to find the time to mark piles of reports and to maintain the quality and quantity of feedback given to students about their work.

**Setting assessed report-writing**

1. **Give clear guidance regarding the format of reports.** For example, issue a sheet listing principal generic section headings, with a short description of the purpose and nature of each main section in a typical report. Remind students, when necessary, of the importance of this guidance in your ongoing feedback to their reports.

2. **Get students to assess subjectively some past reports.** Issue students with copies of some good, bad and indifferent reports,
and ask them to mark them independently, simply giving each example an impression mark. Then facilitate a discussion where students explain why they allocated the marks in the ways they did.

3 **Get students to assess objectively some past reports.** Issue groups of students with good, bad and indifferent reports, along with a sheet listing assessment criteria and a mark scheme. Ask each group to assess the reports. Then initiate discussions and comparisons between groups.

4 **Make explicit the assessment criteria for reports.** Help students to see the balance between the marks associated with the structure of their reports, and those given to the content and the level of critical thinking and analysis.

5 **Ask students for full reports less often.** For example, if during a course students tackle eight pieces of work involving report writing, ask students to write full reports for only two of these, and ask for summary or ‘short-form’ or ‘memorandum’ reports for the remaining assignments. These shorter reports can be structured in note form or bullet points, and can still show much of the evidence of the thinking and analysis that students have done.

6 **Accommodate collaboration.** One way round the problems of collaboration is to develop approaches where students are required to prepare reports in groups – often closer to real life than preparing them individually.

7 **Involve students in assessing each other’s reports.** When marks for reports ‘count’ significantly, it may be desirable to moderate student peer-assessment in one way or another, but probably the greatest benefit of peer-assessment is that students get a good deal more feedback about their work than hard-pressed staff are able to provide. It is far quicker to moderate student peer-assessment than to mark all the reports from scratch.

8 **Consider asking students to write (or word-process) some reports onto pre-prepared pro formas.** This can help where there are significant ‘given’ elements such as equipment and methodology. You can then concentrate on assessing the important parts of their writing, for example interpretation of data.

9 **Publish clear deadlines for the submission of successive reports.** For example, in the case of practical work, allow only one or two weeks after the laboratory session. It is kinder to students to get them to write up early, rather than to allow them to accumulate a backlog of report writing, which can interfere (for example) with their revision for exams.

10 **Prepare a standard assessment/feedback grid, to return to students with marked reports.** Include criteria and marks associated with (for example) the quality of data, observations, calculations, conclusions, references and verdicts.

11 **Start students thinking even before the practical work.** For example, allocate practical work in advance of laboratory sessions, and include some assessed pre-laboratory preparation as a prelude to the eventual report. One way of doing this is to pose half a dozen short-answer questions for students to complete before starting a piece of laboratory work. This helps students know what they are doing, rather than follow instructions blindly. It also avoids wasting time at the start of a laboratory session working out only then which students are to undertake each experiment.

12 **Include some questions linked closely to practical or field work in examinations.** For example, tell students that two exam questions will be based on work they will have done outside the lecture room. This helps to ensure that practical work and associated reports don’t get forgotten when students start revising for exams.
Many areas of study involve practical work, but it is often much more difficult to assess such work in its own right; assessing reports of practical work may only involve measuring the quality of the end product of the practical work, and not the work itself, compromising the validity of the assessment. The following discussion attempts to help you to think of ways of addressing the assessment of the practical work itself.

**ADVANTAGES**

- **Practical work is really important in some disciplines.** In many areas of physical sciences for example, practical skills are just as important as theoretical competences. Students proceeding to research or industry will be expected to have acquired a wide range of practical skills.
- **Employers may need to know how good students’ practical skills are (and not just how good their reports are).** It is therefore useful to reserve part of our overall assessment for practical skills themselves, and not just the final written products of practical work.
- **Practical work is learning-by-doing.** Increasing the significance of practical work by attaching assessment to it helps students approach such work more earnestly and critically.

**DISADVANTAGES**

- **It is often difficult to assess practical work in its own right.** It is usually much easier to assess the end point of practical work, rather than the processes and skills involved in their own right.
- **It can be difficult to agree on assessment criteria for practical skills.** There may be several ways of performing a task well, requiring a range of alternative assessment criteria.
- **Students may be inhibited when someone is observing their performance.** When doing laboratory work, for example, it can be very distracting to be watched! Similar considerations apply to practical exercises such as interviewing, counselling, advising, and other ‘soft skills’ which are part of the agenda of many courses.

---

13 Get students to design exam questions based on the work covered by their reports. Set groups of students this task. Allocate some marks for the creativity of their questions. When done over several years, the products could be turned into a bank of questions which could be placed on computer for students to consult as they prepared for exams.

14 Consider the use of computers in the laboratories and other practical work situations. Where facilities are available, arrange that students can input their experimental data directly onto a computer or network. Many universities now enable students to write up their reports straight into a word processor alongside the laboratory bench, using a report template on disk. Such reports can be handed in immediately at the end of the laboratory session, and marked and returned promptly.
Questions and suggestions for assessing practical work

It is important to address a number of questions about the nature and context of practical work, the answers to which help to clarify how best to go about assessing such work. First the questions, then some suggestions.

1. **What exactly are the practical skills we wish to assess?** These may include a vast range of important skills, from deftness in assembling complex glassware in a chemistry laboratory to precision and speed in using a scalpel on the operating table. It is important that students know the relative importance of each skill.

2. **Why do we need to measure practical skills?** The credibility of our courses sometimes depends on what students can do when they enter employment. It is often said by employers that students are very knowledgeable, but not necessarily competent in practical tasks.

3. **Where is the best place to try to measure these skills?** Sometimes practical skills can be measured in places such as laboratories or workshops. For other skills, students may need to be working in real-life situations.

4. **When is the best time to measure practical skills?** When practical skills are vitally important, it is probably best to start measuring them very early on in a course, so that any students showing alarming problems with them can be appropriately advised or redirected.

5. **Who is in the best position to measure practical skills?** For many practical skills, the only valid way of measuring them involves someone doing detailed observations while students demonstrate the skills involved. This can be very time consuming if it has to be done by staff, and also can feel very threatening to students.

6. **Is it necessary to establish minimum acceptable standards?** In many jobs, it is quite essential that everyone practising does so with a high level of skill (for example surgery!). In other situations, it is possible to agree on a reasonable level of skills, and for this to be safe enough (for example teaching!).

7. **How much should practical skills count for?** In some disciplines, students spend a considerable proportion of their time developing and practising practical skills. It is important to think clearly about what contribution to their overall assessment such skills should make, and to let students know this.

8. **May student self-assessment of practical skills be worth using?** Getting students to assess their own practical skills can be one way round the impossible workloads which could be involved if staff were to do all the requisite observations. It is much quicker for staff to moderate student self-assessment of such skills than to undertake the whole task of assessing them.

9. **May student peer-assessment of practical skills be worth using?** Involving students in peer-assessment of practical skills can be much less threatening than using tutor assessment. The act of assessing a peer’s practical skills is often very good for the peer-assessors, in terms of improving similar skills of their own, and learning from others’ triumphs and disasters.

10. **Is it necessary to have a practical examination?** In some subjects, some sort of end-point practical test may be deemed essential. Driving tests, for example, could not be wholly replaced by a written examination on the Highway Code.

11. **Reserve some marks for the processes.** Help students to see that practical work is not just reaching a defined end point, but is about the processes and skills involved in doing so successfully.
Ask students to include in their reports ‘ways I would do the experiment better next time’. This encourages students to become more self-aware of how well (or otherwise) they are approaching practical tasks.

Add some ‘supplementary questions’ to report briefings. Make these questions that students can only answer when they have thought through their own practical work. For example, students can be briefed to compare their findings with a given published source, and comment on any differences in the procedures used in the published work from those they used themselves.

Design the right end products. Sometimes it is possible to design final outcomes which can only be reached when the practical work itself is of high quality. For example, in chemistry, the skills demonstrated in the preparation and refinement of a compound can often be reflected in the purity and amount of the final product.

9 Portfolios

Building up portfolios of evidence of achievement is becoming much more common, following on from the use of Records of Achievement at school. Typically, portfolios are compilations of evidence of students’ achievements, including major pieces of their work, feedback comments from tutors, and reflective analyses by the students themselves. It seems probable that in due course, degree classifications will no longer be regarded as sufficient evidence of students’ knowledge, skills and competences, and that profiles will be used increasingly to augment the indicators of students’ achievements, with portfolios to provide in-depth evidence. Probably the most effective way of leading students to generate portfolios is to build them in as an assessed part of a course. Here, the intention is to alert you to some of the more general features to take into account when assessing student portfolios. You may, however, also be thinking about building your own portfolio to evidence your teaching practice, and can build on some of the suggestions below to make this process more effective and efficient.

ADVANTAGES

- **Portfolios tell much more about students than exam results.** They can contain evidence reflecting a wide range of skills and attributes, and can reflect students’ work at its best, rather than just a cross-section on a particular occasion.
- **Portfolios can reflect development.** Most other forms of assessment are more like ‘snapshots’ of particular levels of development, but portfolios can illustrate progression. This information reflects how fast students can learn from feedback, and is especially relevant to employers of graduates straight from university.
- **Portfolios can reflect attitudes and values as well as skills and knowledge.** This too makes them particularly useful to employers, looking for the ‘right kind’ of applicants for jobs.

DISADVANTAGES

- **Portfolios take a lot of looking at!** It can take a long time to assess a set of portfolios. The same difficulty extends beyond assessment; even though portfolios may contain material of considerable interest and value to prospective employers, it is still much easier to draw up
interview shortlists on the basis of paper qualifications and grades. However, there is increasing recognition that it is not cost-effective to skimp on time spent selecting the best candidate for a post. This is as true for the selection of lecturers as for the selection of students for jobs. Lecturers are increasingly expected to produce hard evidence of the quality of their teaching and research, as well as to demonstrate how they teach to those involved in their appointment.

- **Portfolios are much harder to mark objectively.** Because of the individual nature of portfolios, it is harder to decide on a set of assessment criteria which will be equally valid across a diverse set of portfolios. This problem can, however, be overcome by specifying most of the criteria for assessing portfolios in a relatively generic way, while still leaving room for topic-specific assessment.

- **The ownership of the evidence can sometimes be in doubt.** It may be necessary to couple the assessment of portfolios with some kind of oral assessment or interview, to authenticate or validate the origin of the contents of portfolios, particularly when much of the evidence is genuinely based on the outcomes of collaborative work.

**Designing and assessing portfolios**

1. **Specify or negotiate intended learning outcomes clearly.** Ensure that students have a shared understanding of the level expected of their work.

2. **Propose a general format for the portfolio.** This helps students demonstrate their achievement of the learning outcomes in ways which are more easily assembled.

3. **Specify or negotiate the nature of the evidence which students should collect.** This makes it easier to assess portfolios fairly, as well as more straightforward for students.

4. **Specify or negotiate the range and extent of the evidence expected from students.** This helps students plan the balance of their work effectively, and helps them avoid spending too much time on one part of their portfolio while missing out important details on other parts.

5. **Don’t underestimate the time it takes to assess portfolios.** Also don’t underestimate their weight and volume if you have a set of them to carry around with you!

6. **Prepare a pro forma to help you assess portfolios.** It is helpful to be able to tick off the achievement of each learning outcome, and make decisions about the quality of the evidence as you work through a portfolio.

7. **Use ‘post-it’ notes to identify parts of the portfolio you may want to return to.** This can save a lot of looking backwards and forwards through a portfolio in search of something you know you’ve seen in it somewhere!

8. **Consider using ‘post-it’ notes to draft your feedback comments.** You can then compose elements of your feedback as you work through the portfolio, instead of having to try to carry it all forward in your mind till you’ve completed looking at the portfolio.

9. **Put a limit on the physical size of the portfolio.** A single box file is ample for most purposes, or a specified size of ring-binder can provide guidance for the overall size.

10. **Give guidance on audio or video elements.** Where students are to include video or audiotapes, it is worth limiting the duration of the elements they can include. Insist that they wind the tapes to the point at which they want you to start viewing or listening, otherwise you can spend ages trying to find the bit that they intend you to assess.
11 **Provide interim assessment opportunities.** Give candidates the opportunity to receive advice on whether the evidence they are assembling is appropriate.

12 **Quality not quantity counts.** Students should be advised not to submit every piece of paper they have collected over the learning period, otherwise the volume of material can be immense.

13 **Get students to provide route maps.** Portfolios are easier to assess if the material is carefully structured, and accompanied by a reflective account which not only outlines the contents but also asserts which of the criteria each piece of evidence contributes towards.

14 **Get students to provide a structure.** Portfolio elements should be clearly labelled and numbered for easy reference. If loose-leaf folders are used, dividers should be labelled to enable easy access to material. All supplementary material such as audiotapes, videos, drawings, computer programs, tables, graphs, and so on should be appropriately marked and cross-referenced.

15 **Be clear about what you are assessing.** While detailed mark schemes are not really appropriate for portfolios, it is still necessary to have clear and explicit criteria, both for the students’ use and to guide assessment.

16 **Structure your feedback.** Students may well have spent many hours assembling portfolios and may have a great deal of personal investment in them. To give their work number marks only (or pass/fail) may seem small reward. Consider using an assessment pro forma so that your notes and comments can be directly relayed to the students, particularly in cases where required elements are incomplete or missing.

17 **Encourage creativity.** For some students, this may be the first time they have been given an opportunity to present their strengths in a different way. Hold a brainstorming session about the possible contents of portfolios, for example which may include videos, recorded interviews, newspaper articles, and so on.

18 **Provide opportunities for self-assessment.** Having completed their portfolios, a valuable learning experience in itself is to let the students assess them. A short exercise is to ask them: ‘In the light of your experience of producing a portfolio, what do you consider you did especially well, and what would you now do differently?’

19 **Assess in a team.** If possible set aside a day as a team. Write your comments about each portfolio, and then pass them round for others to add to. In this way, students get feedback that is more comprehensive, and assessors get to see a more diverse range of portfolios.

20 **Set up an exhibition.** Portfolios take a long time to complete and assess. By displaying them (with students’ permission) their valuable experience can be shared.

21 **Think about where and when you will mark portfolios.** They are not nearly as portable as scripts, and you may need equipment such as video or audio playback facilities to review evidence. It may be helpful therefore to set aside time when you can book a quiet, well-equipped room where you are able to spread out materials and look at a number of portfolios together. This will help you get an overview, and makes it easier to get a feel for standards.
10 Presentations

Giving presentations to an audience requires substantially different skills from writing answers to exam questions. Also, it can be argued that the communications skills involved in giving good presentations are much more relevant to professional competences needed in the world of work. It is particularly useful to develop students’ presentations skills if they are likely to go on to research, so that they can give effective presentations at conferences. It is therefore increasingly common to have assessed presentations as part of students’ overall assessment diet.

**ADVANTAGES**

- **There is no doubt whose performance is being assessed.** When students give individual presentations, the credit they earn can be duly given to them with confidence.
- **Students take presentations quite seriously.** The fact that they are preparing for a public performance usually ensures that their research and preparation are addressed well, and therefore they are likely to engage in deep learning about the topic concerned.
- **Presentations can also be done as collaborative work.** When it is less important to award to students individual credit for presentations, the benefits of students working together as teams, preparing and giving presentations, can be realised.
- **Where presentations are followed by question-and-answer sessions, students can develop some of the skills they may need in oral examinations or interviews.** Perhaps the most significant advantage of developing these skills in this way is that students can learn a great deal from watching each other’s performances.

**DISADVANTAGES**

- **With large classes, a round of presentations takes a long time.** This can be countered by splitting the large class into groups of (say) twenty students, and facilitating peer-assessment of the presentations within each group on the basis of a set of assessment criteria agreed and weighted by the whole class.
- **Some students find giving presentations very traumatic!** However, it can be argued that the same is true of most forms of assessment, not least traditional exams.
- **The evidence is transient.** Should an appeal be made, unless the presentations have all been recorded, there may be limited evidence available to reconsider the merit of a particular presentation.
- **Presentations can not be anonymous.** It can prove difficult to eliminate subjective bias.

*Assessing presentations*

1. **Be clear about the purposes of student presentations.** For example, the main purpose could be to develop students’ skills at giving presentations, or it could be to cause them to do research and reading and improve their subject knowledge. Usually, several such factors may be involved together.

2. **Make the criteria for assessment of presentations clear from the outset.** Students will not then be working in a vacuum and will know what is expected of them.

3. **Get students involved in formulating or weighting the assessment criteria.** This can be done either by allowing them to
negotiate the criteria themselves or by giving them plenty of opportunities to interrogate criteria you share with them.

4 **Ensure that students understand the weighting of the criteria.** Help them to know whether the most important aspects of their presentations are to do with the way they deliver their contributions (voice, clarity of expression, articulation, body language, use of audio–visual aids, and so on) or the **content** of their presentations (evidence of research, originality of ideas, effectiveness of argument, ability to answer questions, and so on).

5 **Give students some prior practice at assessing presentations.** It is useful, for example, to give students a dry run at applying the assessment criteria they have devised, to one or two presentations on video. The discussion which this produces usually helps to clarify or improve the assessment criteria.

6 **Let the students have a mark-free rehearsal.** This gives students the chance to become more confident and to make some of the more basic mistakes at a point where it doesn’t count against them. Constructive feedback is crucial at this point so that students can learn from the experience.

7 **Involve students in the assessment of their presentations.** When given the chance to assess each other’s presentations they take them more seriously and will learn from the experience. Students merely watching each other’s presentations tend to get bored and can switch off mentally. If they are evaluating each presentation using an agreed set of criteria, they tend to engage themselves more fully with the process, and in doing so learn more from the content of each presentation.

8 **Ensure that the assessment criteria span presentation processes and the content of the presentations sensibly.** It can be worth reserving some marks for students’ abilities to handle questions after their presentations.

9 **Make up grids using the criteria which have been agreed.** Allocate each criterion a weighting, and get all of the group to fill in the grids for each presentation. The average peer-assessment mark is likely to be at least as good an estimate of the relative worth of each presentation as would be the view of a single tutor doing the assessment.

10 **Be realistic about what can be achieved.** It is not possible to get twelve five-minute presentations into an hour, as presentations always tend to overrun. It is also difficult to get students to concentrate for more than an hour or two on others’ presentations. Where classes are large, consider breaking the audience into groups, for example dividing a class of 100 into four groups, with students presenting concurrently in different rooms, or at different timetabled slots.

11 **Think about the venue.** Students do not always give of their best in large, echoing tiered lecture theatres (nor do we!). A more intimate flat classroom is less threatening particularly for inexperienced presenters.

12 **Consider assessing using videotapes.** This can allow the presenters themselves the opportunity to review their performances, and can allow you to assess presentations at a time most suitable to you. Viewing a selection of recorded presentations from earlier rounds can be useful for establishing assessment criteria with students. This sort of evidence of teaching and learning is also useful to show external examiners and quality reviewers.

13 **Start small.** Mini-presentations of a few minutes can be almost as valuable as 20-minute presentations for learning the ropes, especially as introductions to the task of standing up and addressing the peer group.
**11 Vivas – oral exams**

Viva-voce (‘live voice’) exams have long been used to add to or consolidate the results of other forms of assessment. They normally take the form of interviews or oral examinations, where students are interrogated about selected parts of work they have had assessed in other ways. Such exams are often used to make decisions about the classification of degree candidates whose work straddles borderlines.

**ADVANTAGES**

- **Vivas are useful checks on the ownership of evidence.** They are good when authenticity needs to be tested. It is relatively easy to use a viva to ensure that students are familiar with things that other forms of assessment seem to indicate they have learned well.
- **Vivas seem useful when searching for particular things.** For example, vivas have long been used to help make decisions about borderline cases in degree classifications, particularly when the written work or exam performance has for some reason fallen below what may have been expected for particular candidates.
- **Candidates may be examined fairly.** With a well constructed agenda for a viva, a series of candidates may be asked the same questions, and their responses compared and evaluated.
- **Vivas give useful practice for interviews for employment.** Sadly, for most vivas, what is at stake is more serious than a possible appointment, so it is worth considering using vivas more widely but less formally to allow students to develop the appropriate skills without too much depending on their performance.

**DISADVANTAGES**

- **Some candidates never show themselves well in vivas.** Cultural and individual differences can result in some candidates underperforming when asked questions by experts and figures of authority.
- **The agenda may ‘leak’**. When the same series of questions is being posed to a succession of students, it is quite difficult to ensure that candidates who have already been examined aren’t able to commune with friends whose turn is still to come.
- **The actual agenda covered by a viva is usually narrow.** Vivas are seldom good as measures of how well students have learned and understood large parts of the syllabus.
- **Vivas can not be anonymous!** Lecturers assessing viva performance can be influenced by what they already know about the students’ work. However, it is possible to use lecturers who don’t know the students at all, or to include such lecturers in a viva panel.
Using vivas

1 **Remind yourself what the viva is for.** Purposes vary, but it is important to be clear about it at the outset. For example, the agenda could include one or more of the following: confirming that the candidates did indeed do the work represented in their dissertations, or probing whether a poor examination result was an uncharacteristic slip, or proving whether students’ understanding of the subject reached acceptable levels.

2 **Prepare your students for vivas.** Explain to them what a viva is, and what they will normally be expected to do. It helps to give them opportunities to practise. Much of this they can do on their own, but they will need you to start them off on the right lines, and to check now and then that their practice sessions are realistic.

3 **Think about the room layout.** Sitting the candidate on a hard seat while you and your fellow-assessors sit face-on behind a large table is guaranteed to make the candidate tremble! If possible, sit beside or close to the candidate. Where appropriate provide students with a table on which to put any papers they may have with them.

4 **Think about the waiting room.** If candidates are queuing together for long, they can make each other even more nervous. If you’re asking the same questions of a series of students (in some situations you may be required to do this for fairness), the word can get around about what you’re asking.

5 **Prepare yourself for vivas!** Normally, if you’re a principal player at a viva, you will have read the student’s work in some detail. It helps if you come to the viva armed with a list of questions you may ask. You don’t have to ask all of them, but it helps to have some ready! Normally, you may need to have a pre-viva discussion with other members of the examining panel, and you need to be seen to have done your homework.

6 **Prepare the agenda in advance, and with colleagues.** It is dangerously easy (and unfair to students) for the agenda to develop during a series of interviews with different students. Prepare and use a checklist or pro forma to keep records. Memory is not sufficient, and can be unreliable, especially when different examiners conducting a viva have different agendas.

7 **Do your best to put the candidate at ease.** Students find vivas very stressful, and it improves their confidence and fluency if they are greeted cheerily and made welcome at the start of a viva.

8 **When vivas are a formality, indicate this.** When students have done well on the written side of their work, and it’s fairly certain that they should pass, it helps to give a strong hint about this straightaway. It puts students at ease, and makes for a more interesting and relaxed viva.

9 **Ensure there are no surprises.** Share the agenda with each candidate, and clarify the processes to be used. You are likely to get more out of candidates this way.

10 **Ask open questions which enable students to give full and articulate answers.** Try to avoid questions which lead to minimal or ‘yes/no’ replies.

11 **Let students do most of the talking.** The role of an examiner in a viva is to provoke thought and prompt candidates into speaking fluently about the work or topics under discussion, and to spark off an intellectual dialogue. It is not to harangue, carp or demonstrate the examiner’s intelligence, or to trick candidates!

12 **Prepare to be able to debrief well.** Write your own notes during each viva. If you are dealing with a series of such events, it can become difficult to remember each feedback point that you want to give to
each student. Vivas can be very useful learning experiences, but much of the experience can be lost if time is not set aside for a debrief. Such debriefing is particularly useful when students will encounter vivas again.

When debriefing, ask students for their opinions first. This can spare them the embarrassment of having you telling them about failings they already know they have. You may also find useful food for thought when students tell you about aspects of the vivas that you were unaware of yourself.

Be sensitive. Vivas can be traumatic for students, and they may have put much time and effort into preparing for them. Choose words carefully particularly when giving feedback on aspects which were unsuccessful.

Be specific. Students will naturally want to have feedback on details of things they did particularly well. As far as you can, make sure you can find something positive to say even when overall performance was not good.

Consider recording practice vivas on video. This is particularly worthwhile when one of your main aims is to prepare students for more important vivas to follow. Simply allowing students to borrow the recordings and look at them in the comfort of privacy can provide students with useful deep reflection on their performance. It is sometimes more comfortable to view the recordings in the atmosphere of a supportive student group.

Run a role-play afterwards. Ask students to play both examiners and candidates, and bring to life some of the issues they encountered in their vivas. This can allow other students observing the role-play to think about aspects they did not experience themselves.

Plan for the next step. Get students to discuss strategies for preparing for their next viva, and ask groups of students to make lists of ‘do’s and don’ts’ to bear in mind next time.

Get students to produce a guidance booklet about preparing for vivas and taking part in them. This may be useful for future students, but is equally valuable to the students making it as a way of getting them to consolidate their reflections on their own experience.

12 Student projects

In many courses, one of the most important kinds of work undertaken by students takes the form of individual projects, often relating theory to practice beyond the college environment. Such projects are usually an important element in the overall work of each student, and are individual in nature.

ADVANTAGES

- **Project work gives students the opportunity to develop their strategies for tackling research questions and scenarios.** Students’ project work often counts significantly in their final year degree performance, and research opportunities for the most successful students may depend primarily on the skills they demonstrated through project work.
- **Projects can be integrative.** They can help students to link theories to practice, and to bring together different topics (and even different disciplines) into a combined frame of reference.
- **Project work can help assessors to identify the best students.** Because project work necessarily involves a significant degree of student autonomy, it does not favour those students who just happen to be good at tackling traditional assessment formats.
DISADVANTAGES

- **Project work takes a lot of marking!** Each project is different, and needs to be assessed carefully. It is not possible for assessors to ‘learn the scheme, and steam ahead’ when marking a pile of student projects.

- **Projects are necessarily different.** This means that some will be ‘easier’, some will be tough, and it becomes difficult to decide how to balance the assessment dividend between students who tackled something straightforward and did it well, as opposed to students who tried something really difficult, and got bogged down in it.

- **Projects are relatively final.** They are usually one-off elements of assessment. When students fail to complete a project, or fail to get a difficult one started at all, it is rarely feasible to set them a replacement one.

*Designing student projects*

Setting, supporting, and assessing such work can be a significant part of the work of a lecturer, and the following suggestions should help to make these tasks more manageable.

1. **Choose the learning-by-doing to be relevant and worthwhile.** Student projects are often the most significant and extended parts of their courses, and it is important that the considerable amount of time they may spend on them is useful to them and relevant to the overall learning outcomes of the courses or modules with which the projects are associated.

2. **Work out specific learning outcomes for the projects.** These will be of an individual nature for each project, as well as including general ones relating to the course area in which the project is located.

3. **Formulate projects so that they address appropriately higher level skills.** The aims of project work are often to bring together threads from different course areas or disciplines, and to allow students to demonstrate the integration of their learning.

4. **Give students as much opportunity as possible to select their own projects.** When students have a strong sense of ownership of the topics of their projects, they put much more effort into their work, and are more likely to be successful.

5. **Include scope for negotiation and adjustment of learning outcomes.** Project work is necessarily more like research than other parts of students’ learning. Students need to be able to adjust the range of a project to follow through interesting or important aspects that they discover along the way. Remember that it is still important to set standards, and the scope for negotiation may sometimes be restricted to ways that students will go about accumulating evidence to match set criteria.

6. **Make the project briefings clear, and ensure that they will provide a solid foundation for later assessment.** Criteria should be clear and well understood by students at the start of their work on projects.

7. **Keep the scope of project work realistic.** Remember that students will usually have other kinds of work competing for their time and attention, and it is tragic when students succeed with project work, only to fail other parts of their courses to which they should have devoted more time alongside their projects.

8. **Liaise with library and information services colleagues.** When a number of projects make demands on the availability of particular learning resources or information technology facilities, it is important to arrange this in advance with
such colleagues, so that they can be ready to ensure that students are able to gain access to the resources they will need.

9 **Ensure that a sensible range of factors will be assessed.** Assessment needs to relate to work that encompasses the whole of the project, and not be unduly skewed towards such skills as writing up or oral presentation. These are likely to be assessed in any case in other parts of students’ work.

10 **Collect a library of past projects.** This can be of great help to students starting out on their own projects, and can give them a realistic idea of the scope of the work likely to be involved, as well as ideas on ways to present their work well.

11 **Arrange staged deadlines for projects.** It is very useful for students to be able to receive feedback on plans for their project work, so that they can be steered away from going off on tangents, or from spending too much time on particular aspects of a project.

12 **Allow sufficient time for project work.** The outcomes of project work may well include that students develop time-management and task-management skills along the way, but they need time and support to do this. Arrange contact windows so that students with problems are not left too long without help.

13 **Consider making projects portfolio-based.** Portfolios often represent the most flexible and realistic way of assessing project work, and allow appendices containing a variety of evidence to be presented along with the more important parts showing students’ analysis, thinking, argument and conclusions.

14 **Encourage students to give each other feedback on their project work.** This can be extended to elements of peer-assessment, but it is more important simply to get students talking to each other about their work in progress. Such feedback can help students sort out many of the problems they encounter during project work, and can improve the overall standard of their work.

15 **Think about the spaces and places which students will use to do their project work.** Some of the work may well occur off-campus, but it remains important that students have access to suitable places to write up and prepare their project work for assessment, as well as facilities and support to help them analyse the data and materials they accumulate.

16 **Include a self-evaluation component in each project.** This allows students to reflect on their project work, and think deeper about what went well and where there may have been problems. It can be particularly useful to students to get feedback about the quality of their self-evaluation.

**13 Poster displays and exhibitions**

When students are asked to synthesise the outcomes of their learning and/or research into a self-explanatory poster, (individually or in groups), which can be assessed on the spot, it can be an extremely valuable process. More and more conferences are providing poster display opportunities as an effective way of disseminating findings and ideas. This kind of assessment can provide practice in developing the skills relevant to communicating by such visual means.
ADVANTAGES

- **Poster displays and exhibitions can be a positive step towards diversifying assessment.** Some students are much more at home producing something visual, or something tangible, than at meeting the requirements of traditional assessment formats such as exams, essays or reports.
- **Poster displays and exhibitions can provide opportunities for students to engage in peer-assessment.** The act of participating in the assessment process deepens students’ learning, and can add variety to their educational experience.
- **Such assessment formats can help students to develop a wide range of useful, transferable skills.** This can pave the way towards the effective communication of research findings, as well as developing communication skills in directions complementary to those involving the written (or printed) word.

DISADVANTAGES

- **However valid the assessment may be, it can be more difficult to make the assessment of posters or exhibitions demonstrably reliable.** It is harder to formulate ‘sharp’ assessment criteria for diverse assessment artefacts, and a degree of subjectivity may necessarily creep into their assessment.
- **It is harder to bring the normal quality assurance procedures into assessment of this kind.** For example, it can be difficult to bring in external examiners, or to preserve the artefacts upon which assessment decisions have been made so that assessment can be revisited if necessary (for example for candidates who end up on degree classification borderlines).
- **It can take more effort to link assessment of this sort to stated intended learning outcomes.** This is not least because poster displays and exhibitions are likely to be addressing a range of learning outcomes simultaneously, some of which are subject-based, but others of which will address the development of key transferable skills.

Planning assessed poster displays and exhibitions

1. **Use the assessment process as a showcase.** Students are often rather proud of their achievements and it can be invaluable to invite others in to see what has been achieved. Think about inviting moderators, senior staff, students on parallel courses, and employers. Gather their impressions, either using a short questionnaire, or verbally asking them a couple of relevant questions about their experiences of seeing the display.
2. **Use posters as a way to help other students to learn.** For example, final year students can produce posters showing the learning they gained during placements. This can be a useful opportunity for students preparing to find their own placements to adjust their approaches and base them on others’ experiences.
3. **Get students to peer-assess each other’s posters.** Having undertaken the task of making posters themselves, they will be well prepared to review critically the work of others. This also provides chances for them to learn from the research undertaken by the whole cohort rather than just from their own work.
4. **Consider asking students to produce a one-page handout to supplement their poster.** This will test a further set of skills, and will provide all reviewers with an aide memoire for subsequent use.
5 *Give sufficient time for the debrief.* Lots of learning takes place in the discussion during and after the display. The tendency is to put poster display and exhibition sessions on during the last week of the term or semester, and this can give little time to unpack the ideas at the end.

6 *Make careful practical arrangements.* Large numbers of posters take up a lot of display space, and to get the best effect they should be displayed on boards. Organising this is possible in most universities, for example by borrowing publicity display boards, but it needs to be planned in advance. Allow sufficient time for students to mount their displays, and make available drawing pins, sticky tack, tape, sticky pads, demountable display equipment, and so on.

7 *Stagger the assessment.* Where peers are assessing each other’s posters, to avoid collusion, ‘fixing’, and outbursts of spite, it is valuable to arrange that half the display is in one room and the rest in another, or to run successive displays at different times. Number the posters and get one half of the group to assess the odd-numbered posters and the other half to assess the even-numbered ones, and average the data which is produced.

8 *Consider getting groups to produce a poster between them.* This encourages collaborative working and can reduce the overall numbers of posters – useful when student numbers are large. You could then consider getting students within the group to peer-assess (intra) their respective contributions to the group as well as to assess collaboratively the posters of the other groups (inter-peer-group assessment).

9 *Link assessment of poster displays to open days.* Students coming to visit the institution when they are considering applying for courses may well get a good idea about what students actually do on the courses, from looking at posters on display.

10 *Prepare a suitable assessment sheet.* Base this firmly on the assessment criteria for the exercise. Provide space for peers’ comments. This paves the way towards plenty of opportunity for peer feedback.

11 *Use assistance.* When working with large numbers of peer-assessed posters, you may need help in working out the averaged scores. Either get the students to do the number work for themselves or for each other (and advise them that the numbers will be randomly checked to ensure fair play). Alternatively, press-gang colleagues, partners, administrators, or progeny to help with the task.

12 *Provide a rehearsal opportunity.* Let the students have a practice run at a relatively early stage, using a mock-up or a draft on flipchart paper. Give them feedback on these drafts, and let them compare their ideas. This can help them to avoid the most obvious disasters later.

13 *Let everyone know why they are using poster displays.* This method of assessment may be unfamiliar to students, and to your colleagues. It is therefore valuable if you can provide a clear justification of the educational merits of the method to all concerned.

14 *Brief students really carefully about what is needed.* Ideally, let them see a whole range of posters from previous years (or some mock-ups, or photographs of previous displays) so that they have a good idea about the requirements, without having their originality and creativity suppressed.

15 *Use the briefing to discuss criteria and weighting.* Students will need to know what level of effort they should put into different elements such as presentation, information content, structure, visual features, and so on. If students are not clear about this, you may well end up with brilliantly presented posters with little relevance to the topic, or really dull, dense
14 Dissertations and theses

Students invest a great deal of time and energy in producing dissertations and theses, usually in their final year. Sometimes these arise from the results of their project work. We therefore owe it to them to mark them fairly and appropriately.

**ADVANTAGES**

- **Dissertations and theses are individual in nature.** There are reduced possibilities regarding plagiarism and cheating, and a greater confidence that we are assessing the work of individual students.

- **There is usually double or multiple marking.** Because dissertations and theses are important assessment artefacts, more care is taken to ensure that the assessment is as objective as possible.

- **There is usually further triangulation.** External examiners are often asked to oversee the assessment of at least a cross-section of dissertations or theses, and sometimes see all of them. The fact that such triangulation exists is a further pressure towards making the assessment reliable and valid in the first instance.
DISADVANTAGES

- **Assessment takes a long time.** Even more so than with student projects, dissertations or theses are so individual that it is not possible for assessors to ‘get into their stride’ and forge ahead marking large numbers of these in a given period of time.

- **Assessment can involve subjectivity.** For example, it is less possible to achieve ‘anonymous’ marking with large-scale artefacts such as these, as the first assessor at least is likely to have been supervising or advising the candidate along the route towards assessment.

- **Assessment can be over-dominated by matters of style and structure.** While both of these are important and deserve to contribute toward assessment of dissertations or theses, there is abundant evidence that a well structured, fluent piece of work where the actual content is quite modest, attracts higher ratings than a less-well structured, somewhat ‘jerky’ piece of work where the content has a higher quality.

**Tips on assessing dissertations and theses**

1. **Make sure that the assessment criteria are explicit, clear and understood by the students.** This may seem obvious! However, theses and dissertations are normally very different in the topics and themes they address, and the assessment criteria need to accommodate such differences. Students will naturally compare marks and feedback comments. The availability of clear criteria helps them see that their work has been assessed fairly.

2. **Get students to assess a few past dissertations.** You can’t expect them to do this at the same level as is appropriate for ‘real’ assessment, but you can (for example) issue students with a one-sided pro forma questionnaire to complete as they study examples of dissertations. Include questions about the power of the introduction, the quality and consistency of referencing, and the coherence of the conclusions.

3. **Offer guidance and support to students throughout the process.** Dissertations usually take students quite some time to complete. Students appreciate and need some help along the route. It is worth holding tutorials both individually and with groups. This takes good planning, and dates need to be set well in advance, and published on a notice board or hand-out to students.

4. **Ensure that student support mechanisms are available.** With large class sizes, we cannot afford to spend many hours of staff time with individual students. However, much valuable support can be drawn from the students themselves, if we facilitate ways of them helping each other. Consider introducing supplemental instruction processes, or setting up friendly yet critical student syndicates. Running a half-day workshop with students counselling each other can be valuable.

5. **Beware of the possibility of bias.** Sometimes dissertations involve students writing on topics with a sensitive cultural or political nature. We need to be aware of any prejudices of our own, and to compensate for any bias these could cause in our assessment. Whenever possible, dissertations should be second-marked (at least!).

6. **Can you provide students with equal opportunity regarding selecting their dissertation themes?** Research for some dissertations will involve students in visiting outside agencies, finding materials for experiments, building models, and so on. With resource limitations becoming more severe, students may be forced to avoid certain topics altogether. Try to suggest
15 Work-based learning

Increasing use is being made of assessment based on students’ performance in the workplace, whether on placements, as part of work-based learning programmes, or during practice elements of courses. Often, a variety of assessors are used, sometimes giving rise to concerns about how consistent assessment practice between the workplace and the institution can be assured. Traditional means of assessment are often unsuitable in contexts where what is important is not easily measured by written accounts. Many courses include a placement period, and the increasing use of accreditation of prior experiential learning in credit accumulation systems means that we need to look at ways of assessing material produced by students in work contexts, rather than just things students write up when back at college after their placements.

ADVANTAGES

- **Work-based learning can balance the assessment picture.** Future employers are likely to be at least as interested in students’ work-related competences as in academic performance, and assessing work-based learning can give useful information about students’ competences beyond the curriculum.
- **Assessing placement learning helps students to take placements more seriously.** As with anything else, if they’re not assessed, some students will not really get down to learning from their placements.
- **Assessing placement learning helps to make your other assessments closer to practice.** Although it is difficult to assess placement learning reliably, the validity of the related learning may outweigh this difficulty, and help you to tune in more successfully to real-world problems, situations and practices in the rest of your assessment practice.
- **Assessing placement learning can bring you closer to employers who can help you.** It is sometimes possible to involve external people such as employers in some in-college forms of assessment, for example student presentations, interview technique practising, and so on. The contacts you make with employers during placement supervision and assessment can help you to identify those who have much to offer you.
DISADVANTAGES

- **Reliability of assessment is difficult to achieve.** Placements tend to be highly individual, and students’ opportunities to provide evidence that lends itself well to assessment can vary greatly from one placement to another.
- **Some students will have much better placements than others.** Some students will have the opportunity to demonstrate their flair and potential, while others will be constrained into relatively routine work practices.

Assessing work-based learning

The following suggestions may help you to strike an appropriate balance between validity and reliability if your assessment agenda includes assessing work-based learning, whether associated with work placements, or arising from a need to accredit prior experiential learning.

1 **Explore how best you can involve employers, professional supervisors and colleagues.** They will need careful briefing, and negotiation may also be required to achieve their full cooperation, as they (like you!) are often very busy people. Ways of involving them include asking them to produce testimonials, statements of competence, checklists, grids and pro formas, or simply to sign off students’ own statements of competence or achievement.

2 **Be clear about the purpose of the assessment.** Is the assessment being done to satisfy a funding body, or because it is required by the university, or because the employers wish it to be done? Or is the assessment primarily to aid students’ learning? Or is the assessment primarily designed to help students develop skills and experience which will aid their future careers? Clarifying the purposes can help you decide the most appropriate forms of assessment.

3 **Get the balance right.** Work out carefully what proportion of students’ overall assessment will be derived from their placements. Decide whether the related assessment should be on a pass–fail basis, or whether it should be attempted to classify it for degrees.

4 **Expect placements to be very different.** If a group of students are spread through a number of companies or organisations, some will have a very good experience of placement, and others through no fault of their own can have an unsatisfactory experience. It is important that factors outside students’ control are not allowed to prejudice assessment.

5 **Consider carefully whether a mentor is well-placed to assess.** There can sometimes be complex confusions of role if the person who is the professional supporter or friend of the student whose performance is being assessed is also the person who has to make critical evaluations for assessment purposes.

6 **Decide carefully whether to tutor-assess during workplace visits.** Visiting students on placement certainly gives tutors opportunities to gather data that may be relevant to assessment, but if assessment is on the agenda the whole nature of such visits changes. One way of separating the assessment ethos from the workplace environment is to handle at least some face-to-face meetings with students off site rather than at the workplace.

7 **Consider including the assessment of a work log.** Some professions prescribe the exact form such a log or work diary should take, whereas in other work contexts it is possible for the course team or the students themselves to devise their
own formats. It is often helpful if such logs include lists of learning outcomes, skills, or competences that students are expected to achieve and demonstrate, with opportunities to check off these and add comments as appropriate. It can be even better to encourage students to express as learning outcomes unanticipated learning that they discover happening to them during a placement. Some of these outcomes may be more important than the intended ones.

8 **Ask students to produce a reflective journal.** This can be a much more personal kind of document, and might include hopes, fears and feelings as well as more mundane accounts of actions and achievements. Assessing reflective journals can raise tricky issues of confidentiality and disclosure, but ways around such issues can be found, particularly if students are asked to submit for assessment edited extracts from their reflective journals.

9 **Consider using a portfolio.** A portfolio to demonstrate achievement at work can include suitably anonymised real products from the workplace (with the permission of the employer) as well as testimonials from clients, patients, support staff and others.

10 **Help to ensure that assessment does not blind students to their learning on placement.** Consider asking students who have completed work placements to write their experiences up in the form of a journal article, perhaps for an in-house magazine or journal. A collection of these can help to disseminate their experiences. Joint articles written with employers are even more valuable, and help make links with employers better.

### Making formative feedback work

The National Student Survey in England and Wales in 2005 showed that the areas where students expressed least satisfaction regarding their experience of final-year university studies were those linking to assessment and feedback. John Cowan, formerly Director of the Open University in Scotland famously described assessment as the engine that drives learning, to which I would add that feedback is the oil that lubricates the cogs of understanding. Boud (1988) would add: ‘Assessment methods and requirements probably have a greater influence on how and what students learn than any other single factor. This influence may well be of greater importance than the impact of teaching materials.’

**And ‘feed-forward’?**

In practice, most feedback comprises not just commentary about what has been done, but suggestions for what can be done next. In particular, advice about how to improve the next element of work can be particularly helpful to students receiving feedback, especially when this advice is received during the progress of ongoing work, so that adjustments can be made in a progressive manner. It can be worth checking that enough ‘feed-forward’ is being given, rather than merely feedback on what has already been done. It is also important to help students themselves to distinguish between feedback and feed-forward, and to look carefully for the latter, and regard it as the most useful part, and consciously build upon it as their work progresses.
**What is formative assessment?**

This is a highly contested term with no common understanding in the literature. Orsmond *et al.* (2004) have identified from the literature a range of interpretations of the term. Pickford and Brown (2006), quoting Cowie and Bell, use the following working definition: ‘The process used ... to recognise, and respond to, student learning in order to enhance that learning, *during learning*’ (Cowie and Bell 1999) (their italics). The problem could be considered to be that students receive too much feedback *after* learning, rather than *during* learning, hence their need for much more feed-forward.

**What's the difference between formative and summative assessment?**

Sadler, who has written extensively about the powerful impact that formative assessment can have on achievement suggests:

> Summative contrasts with formative assessment in that it is concerned with summing up or summarizing the achievement status of a student, and is geared towards reporting at the end of a course of study especially for purposes of certification. It is essentially passive and does not normally have immediate impact on learning, although it often influences decisions which may have profound educational and personal consequences for the student. The primary distinction between formative and summative assessment relates to purpose and effect, not to timing. It is argued below that many of the principles appropriate to summative assessment are not necessarily transferable to formative assessment; the latter requires a distinctive conceptualization and technology.

(Sadler 1989)

A number of writers argue that ‘pure’ formative assessment does not include marks and grades and Sadler concurs with this view:

> A grade therefore may actually be counterproductive for formative purposes. In assessing the quality of a student’s work or performance, the teacher must possess a concept of quality appropriate to the task, and be able to judge the student’s work in relation to that concept.

(Sadler 1989)

Nevertheless, many assessors feel that for students, particularly those working to demonstrate capability in live and practical skills, some kind of indication of level of achievement is valuable and that formative assessment is principally a means by which tutors can support the development of their students’ understanding and encourage them to progress by providing feedback that is meaningful to the individual.

**The role of the tutor in providing formative feedback**

The role of the teacher could broadly be described as working to reduce (but not necessarily eliminate) the rate of error production in trial and error learning, and thereby to make learning more efficient. (Sadler 1998). Sadler asks what good teachers do in providing feedback to students. He argues that they bring to the task of assessment:
Superior knowledge about the content or substance of what is to be learned.
A set of attitudes or dispositions towards teaching as an activity, and towards learners, including their own ability to empathize with students who are learning, their desire to help students develop, improve and do better, their personal concern with the validity of feedback and the veracity of their own judgments, and their patterns in offering help.
Skill in constructing or compiling tests, in devising tasks, and generally in working out ways to elicit revealing and pertinent responses from students.
Evaluative skill or expertise in having made judgments about student efforts on similar tasks in the past.
Expertise in framing feedback statements for students.

(Adapted from Sadler 1998)

Getting students to make use of formative feedback

Students tend to be really bad at doing anything constructive with the feedback we give them. Often they are only interested in the mark, and sometimes they don’t even bother to read what we have written. When receiving feedback live, they frequently fail to retain what is said to them, apart from when their own views (or worst fears) of how they have performed are confirmed. Sadler argues that getting a clear picture in mind of the characteristics of high quality work is imperative:

A key premise is that for students to be able to improve, they must develop the capacity to monitor the quality of their own work during actual production, rather than later on. This in turn requires that students possess an appreciation of what high quality work is, that they have the evaluative skill necessary for them to compare with some objectivity the quality of what they are producing in relation to the higher standard, and that they develop a store of tactics or moves which can be drawn upon to modify their own work.

(Sadler 1989)

We need to find ways to help students make good use of the hard work we put into giving them feedback, to interpret it appropriately, to see how the comments and advice they are given links to what they are doing, and to turn this into improvements in competence and knowledge. Sadler proposes that it is crucial that the student works with the feedback s/he receives in order to internalise the standards that are required:

The indispensable conditions for improvement are that the student comes to hold a concept of quality roughly similar to that held by the teacher, is able to monitor continuously the quality of what is being produced during the act of production itself, and has a repertoire of alternative moves or strategies from which to draw at any given point. In other words, students have to be able to judge the quality of what they are producing and be able to regulate what they are doing during the doing of it.

(Sadler 1989)

Giving formative feedback is not unproblematic. We can’t just assume that they know what to do with the commentary we give them; we need to help them engage with it positively and productively. Sadler further describes:
... the common but puzzling observation that even when teachers provide students with valid and reliable judgments about the quality of their work, improvement does not necessarily follow. Students often show little or no growth or development despite regular, accurate feedback. The concern itself is with whether some learners fail to acquire expertise because of specific deficiencies in the instructional system associated with formative assessment.

(Sadler 1989)

**Using formative assessment to improve student retention**

In relatively recent history in UK higher education, high rates of ‘wastage’ were regarded as a form of quality assurance. ‘Look to the right and left of you,’ students in their first lecture at university were commonly told, ‘and remember only one of you will achieve a degree’. This brutalist approach certainly weeded out the unconfident and those who didn’t really think they belonged in higher education anyway, but didn’t do a lot for social justice. Today most academics would hold back from such an approach, but some residual sentiments of that kind still remain in some pockets of traditionalism. However, nowadays staff are more likely to be deeply concerned to maximise the number of students who successfully complete their awards, not only because it is nowadays a key governmental performance indicator in many countries, the ignoring of which can result in financial penalties, but also because they work in values-driven organisations that genuinely care about students as people, not just statistics.

Yorke (2002), who has pioneered research into student retention in the UK, proposes a number of reasons for student non-completion: among these, the lack of formative assessment ranks highly, especially in the early stages of a programme of learning. If students haven’t a clue about how they are doing, a negative mindset can easily develop, leading to a downward spiral and ultimate drop-out.

**Do students know what we’re expecting from them?**

A number of studies have suggested that a key issue lies around the management of expectations of students about what studying at degree level implies. For many undergraduate students on degree courses, particularly those studying part-time, balancing paid work, caring responsibilities and studying can lead to a corner-cutting approach, so that only essential tasks are completed. This means in essence that they only do assessed work, and only this if there are heavy penalties for non-completion. Bowl (2003) reported one of the students in her study saying:

‘If 25 per cent of your marks is from reading, you’ve got to try and show that, even if you haven’t read. I’m not going to sit there and read a chapter, and I’m certainly not going to read a book. But I’ll read little paragraphs that I think are relevant to what I’m writing, and it’s got me through, and my marks have been fine. But I can’t read. If I read too much, it goes over my head. If I’m writing something, I know what I want to say and I need something to back me up ... then I will find something in a book that goes with that. I’m not going to try to take in the whole book just for one little bit. I have my book next to me and then I can pick out the bits’ (Jenny, full-time community and youth work student).

(Bowl 2003: 89)

Students in her study also experience worrying levels of lack of clarity about what is expected of them, despite having been given plenty of advice in course documentation:
‘The hardship was not understanding. When they give you an assignment and say it was on this handout. But my difficulty is not understanding what to do at first ... I think that there’s a lack of my reading ability, which I can’t blame anyone for. I can only blame myself because I don’t like reading. And if you don’t read, you’re not going to learn certain things. So I suppose that’s to do with me ... it’s reading as well as putting what you read into your essay. You can read it and understand it. I can read and understand it, but then you have to incorporate it into your own words. But in the words they want you to say it in, not just: She said this, and this is the way it should be. The words, the proper language. Maybe it’s because I have difficulty pronouncing certain words. I avoid using them as they’re not familiar to me. When I’m writing, I find that because I’m not familiar with those words, it’s hard to write them ... I haven’t really gone into it, because I don’t want them to say, you’re not supposed to be on this course, or anything like that. I’ve come too far now for them to say that, so I don’t like raising the issue’ (Helen, brought up in Jamaica).

(Bowl 2003: 90)

**Using formative feedback to help students develop academic skills**

We are used to hearing much about the problems students experience with getting inside the academic discourse and discovering how best to undertake academic writing in ways that often don’t come naturally to second-chance or late achieving students. However, there seems to be a real crisis about reading among students, and one of the problems emerging about formative assessment is the danger that those very students who are feeling swamped by all the reading required of them, will be the ones who find themselves directed towards yet more reading of formative feedback, whether this is tutor- or peer-initiated.

In the context of widening participation, perhaps we need to reconsider our expectations about the amount of reading we require of our students. When less than 10 per cent of the 18–30 population participated in higher education, it may have been reasonable to expect that our students would be likely to have well-developed skills relating to academic reading. With approaching 50 per cent of the 18–30 population in higher education, it should not surprise us that a significant proportion of our students have not attained this level of expertise in reading for academic purposes by the time they come to study with us. Can we train all these students to the necessary extent? Or should we perhaps be considering reducing our expectations regarding academic reading, and focusing on the quality of reading rather than the quantity or breadth of reading?

**So what’s to be done?**

Yorke (2002) provides us with confidence that we can actually make a difference to the dismal picture of dropout and perceptions of failure:

Whereas a higher education institution can not do much about students’ background circumstances, it is probable that there is more academic failure in UK higher education than there should be. There seems to be scope in institutions for improving the ways in which they support students’ learning – and hence for reducing the incidence of academic failure. In the end, this comes down to an orientation towards the enhancement of the quality of the student experience.

(Yorke 2002: 39)
There is a case to be made for institutions to consider spending considerable time and resources on students undertaking their first programmes of study to help them understand the purposes of formative feedback and how their own self-beliefs can impact on the ways they receive it. Inevitably this would eat into available time for content delivery, which academic staff no doubt would be unwilling to see slimmed down, but if we are serious about retaining students as a key means of survival in an increasingly competitive world, then tough decisions might have to be made.

**Quality of feedback**

If ‘assessment is the engine that drives learning’ (John Cowan), then the ways in which we give feedback are important in gearing and lubricating the engine so that maximum effect is achieved from the effort put in by all concerned. This section of the chapter explores a variety of ways in which feedback can be given to students, and includes many suggestions for optimising the usefulness of such feedback.

How can we best give feedback to students? We can select from a wide range of processes, but we also need to address as many as possible of a range of qualities and attributes in our strategy for providing feedback.

For example, feedback needs to be:

- **Timely** – the sooner the better. There has been plenty of research into how long after the learning event it takes for the effects of feedback to be significantly eroded. Ideally feedback should be received within a day or two, and even better almost straightaway, as is possible (for example) in some computer-aided learning situations, and equally in some face-to-face contexts. When marked work is returned to students weeks (or even months) after submission, feedback is often totally ignored because it bears little relevance to students’ current needs then. Many institutions nowadays specify in their Student Charters that work should be returned within two to three weeks, enabling students to derive greater benefits from feedback. When feedback is received very quickly, it is much more effective, as students can still remember exactly what they were thinking as they addressed each task.

- **Intimate and individual.** Feedback needs to fit each student’s achievement, individual nature and personality. Global ways of compiling and distributing feedback can reduce the extent of ownership which students take over the feedback they receive, even when the quality and amount of feedback is increased. Each student is still a person.

- **Empowering.** If feedback is intended to strengthen and consolidate learning, we need to make sure it doesn’t dampen learning down. This is easier to ensure when feedback is positive of course, but we need to look carefully at how best we can make critical feedback equally empowering to students. We must not forget that often feedback is given and received in a system where power is loaded towards the provider of the feedback rather than the recipient – for example where we are driving assessment systems.

- **Opening doors, not closing them.** In this respect, we have to be particularly careful with the words we use when giving feedback to students. Clearly, words with such ‘final language’ implications as ‘weak’ or ‘poor’ cause irretrievable breakdowns in the communication between assessor and student. To a lesser extent, even positive words such as ‘excellent’ can cause problems when feedback on the next piece of work is only ‘very good’ – why wasn’t it excellent again? In all such cases it is better to praise exactly what was very good or excellent in a little more detail, rather than take the short cut of just using the adjectives themselves.
Manageable. There are two sides to this. From our point of view, designing and delivering feedback to students could easily consume all the time and energy we have – it is an endless task. But also from students’ point of view, getting too much feedback can result in them not being able to sort out the important feedback from the routine feedback, reducing their opportunity to benefit from the feedback they need most.

The suggestions below unpack how you can set about trying to ensure that the feedback you provide for your students addresses the factors listed above. Furthermore, some of the suggestions below are intended to help you to maintain high-quality feedback to your students without consuming inordinate amounts of your precious time and energy.

1. **Try to do more than put ticks.** Tempting as it is to put ticks beside things that are correct or good, ticks don’t give much real feedback. It takes a little longer to add short phrases such as ‘good point’, ‘I agree with this’, ‘yes, this is it’, ‘spot on’, and so on, but such feedback comments do much more to motivate students than just ticks. Think about how students will feel when they get marked work back. Students can be in states of heightened emotion at such points. If their scripts are covered with comments in red ink (even when it is all praise) it is rather intimidating for them at first.

2. **Avoid putting crosses if possible.** Students often have negative feelings about crosses on their work, carried forward from schooldays. Short phrases such as ‘no’, ‘not quite’, ‘but this wouldn’t work’, and so on can be much better ways of alerting students to things that are wrong.

3. **Try to make your writing legible.** If there is not going to be room to make a detailed comment directly on the script, put code numbers or asterisks, and write your feedback on a separate sheet. A useful compromise is to put feedback comments on ‘post-it’ notes stuck to appropriate parts of a script, but it’s worth still using a code, asterisk or some such device so that if students remove the ‘post-it’ notes as they read through their work, they can still work out exactly which points your comments apply to.

4. **Try giving some feedback before you start assessing.** For example, when a class hands in a piece of work, you can issue at once handouts of model answers and discussions of the main things that may have caused problems. Students can read such information while their own efforts are still fresh in their minds, and can derive a great deal of feedback straightaway. You can then concentrate, while assessing, on giving them additional feedback individually, without going into detail on things that you have already addressed in the general discussion comments you have already given them.

5. **Give feedback to groups of students sometimes.** This helps students become aware that they are not alone in making mistakes, and allows them to learn from the successes and failures of others.

6. **Let students argue.** When giving one-to-one feedback, it is often useful to allow students the opportunity to interrogate you and challenge your comments (orally or in writing) so that any issues which are unclear can be resolved.

7. **Feedback should be realistic.** When making suggestions for improvement of student work, consider carefully whether they can be achieved. It may not have been possible (for example) for students to gain access to certain resources or books in the time available.

8. **Feedback should be linked to wealth!** Check that you are not giving feedback on
Feedback and competence development

In Chapter 1 I included a model tracking the development of conscious competence. Feedback is important in all four ‘states’ represented in the diagram in Figure 2.1 on the next page.

Feedback addressing conscious competence

Giving students feedback on things they can already do well, and know they’re already competent at doing, is trickier than may seem obvious! When students know that they have done something well, any feedback which smacks of ‘faint praise’ can be quite damning. However, if we wax too lyrical in our praise, it can be seen as condescending. We need to pit our wits towards helping students to take ownership of their successes in this scenario, for example:

‘I’m sure you already realise you’ve done a really good job with this …’ or
‘Do stop for a moment and think about how well you’ve done this, and how useful it will be for you to continue to hone these skills – don’t lose them!’
**Feedback addressing conscious uncompetence**

We’re more practised at giving this sort of feedback. Much of the feedback we routinely give students is directed towards helping them to become better at things they already know they can’t yet do. We can help by giving them suggestions about what to do first in their attempts to move things upwards out of the ‘transit’ box on the diagram. We can help them prioritise which things are worth trying to move, and which are not important enough to bother with.

**Feedback addressing unconscious uncompetence**

This is by far the most importance area for feedback. One of the main points of having assessed coursework is to use this sort of feedback to help students find out much more about what they didn’t yet know that they couldn’t yet do. In other words, we use feedback to help students to move things out of their danger box and into their transit box, on the way towards the target box.

It could be said that the art of teaching lies in helping students to explore their danger box, and to identify important elements hiding there, bringing them out into the open, then moving them towards conscious competence.

The fact that this is an everyday part of helping students to learn does not mean that it is an easy part. For a start, we are talking about giving feedback addressing unconscious uncompetences. Therefore, the first hurdle is gently alerting students to things that they didn’t know were there. There is an element of surprise. Some of the surprises will be unpleasant ones – where (for example) students had thought that they were consciously competent in the aspect concerned. It’s the ‘bad news’ box. The good news is that the things identified won’t be bad news any more, once moved.

---

*Figure 2.1 Linking feedback to competence development*
Feedback addressing unconscious competence

This is another surprise box, but this time it’s a ‘good news’ box. For example, part-time mature students bring to their educational experience a wide range of unconscious competences. These are things that they are good at, but don’t know how useful and important the things themselves could turn out to be. For example, they’re often really skilled at time-management and task-management. Their life experience has often allowed them to develop skills at handling a number of different agendas at once, and prioritising between competing demands.

Moving these unconscious competences towards the conscious level almost always results in an increase of confidence and self-esteem. If you’ve just been helped to see that you’re actually very good at something that you hadn’t ever suspected was among your strengths, would you not feel good about it?

Reducing your load: short cuts to good feedback

Keep records carefully ...

Keeping good records of assessment takes time, but can save time in the long run. The following suggestions may help you organise your record-keeping.

1 Be meticulous. However tired you are at the end of a marking session, record all the marks immediately (or indeed continuously as you go along). Then put the marks in a different place to the scripts. Then should any disasters befall you (briefcase stolen, house burned down, and so on) there is the chance that you will still have the marks even if you don’t have the scripts any longer (or vice versa).

2 Be systematic. Use class lists, when available, as the basis of your records. Otherwise make your own class lists as you go along. File all records of assessment in places where you can find them again. It is possible to spend as much time looking for missing marksheets as it took to do the original assessment!

3 Use technology to produce assessment records. Keep marks on a grid on a computer, or use a spreadsheet, and save by date as a new file every time you add to it, so you are always confident that you are working with the most recent version.

4 Use technology to save you from number-crunching. The use of computer spreadsheet programs can allow the machine to do all of the subtotalling, averaging and data handling for you. If you are afraid to set up a system for yourself, a computer-loving colleague or a member of information systems support staff will be delighted to start you off.

5 Use other people. Some universities employ administrative staff to issue and collect in work for assessment, and to make up assessment lists and input the data into computers. Partners, friends and even young children can help you check your addition of marks, and help you record the data.
Reduce your burden ...

Straightforward ways to lighten your assessment and feedback load are suggested below.

1 Reduce the number of your assignments. Are all of them strictly necessary, and is it possible to combine some of them, and completely delete others?

2 Use shorter assignments. Often we ask for 2000, 3000 or 5000 word assignments or reports, when a fraction of the length can be just as acceptable. Some essays or long reports could be replaced by shorter reviews, articles, memorandum reports or summaries. Projects can be assessed by poster displays instead of reports, and exam papers can include some sections of multiple-choice questions particularly where these could be marked by optical mark scanners, or using computer managed assessment directly.

3 Use assignment return sheets. These can be pro formas which contain the assessment criteria for an assignment, with spaces for ticks/crosses, grades, marks and brief comments. They enable rapid feedback on ‘routine’ assessment matters, providing more time for individual comment to students when necessary on deeper aspects of their work.

4 Consider using statement banks. These are a means whereby your frequently repeated comments can be written once each, then printed or emailed to students, or put onto transparencies or slides for discussion in a subsequent lecture.

5 Involve students in self- or peer-assessment. Start small, and explain what you are doing and why. Involving students in some of their assessment can provide them with very positive learning experiences.

6 Mark some exercises in class time using self- or peer-marking. This is sometimes useful when students have prepared work expecting tutor-assessment, to the standard that they wish to be seen by you.

7 Don’t count all assessments. For example, give students the option that their best five out of eight assignments will count as their coursework mark. Students satisfied with their first five need not undertake the other three at all then.

And when you still find yourself overloaded ...

No one wants to have to cope with huge piles of coursework scripts or exam papers. However, not all factors may be within your control, and you may still end up overloaded. The following wrinkles may be somewhat soothing at such times!

1 Put the great unmarked pile under your desk. It is very discouraging to be continually reminded of the magnitude of the overall task. Put only a handful of scripts or assignments in sight – about as many as you might expect to deal with in about an hour.

2 Set yourself progressive targets. Plan to accomplish a bit more at each stage than you need to. Build in safety margins. This allows you some insurance against unforeseen disasters (and children), and can allow you to gradually earn some time off as a bonus.

3 Make an even better marking scheme. Often, it only becomes possible to make a really good marking scheme after you’ve found out the ways that candidates are actually answering the questions. Put the marking scheme where you can see it easily. It can be useful to paste it up with sticky tack above your desk or table, so you don’t have to rummage through your papers looking for it every time you need it.
Involving students in their own assessment

Nothing affects students more than assessment, yet they often claim that they are in the dark as to what goes on in the minds of their assessors and examiners. Involving students in peer- and self-assessment can let them in to the assessment culture they must survive. Increasingly peer-assessment is being used to involve students more closely in their learning and its evaluation, and to help to enable students really understand what is required of them. It is not a ‘quick fix’ solution to reduce staff marking time, as it is intensive in its use of lecturer time at the briefing and development stages. It can have enormous benefits in terms of learning gain. The following suggestions may help you get started with student peer-assessment.

Why consider using student peer-assessment?

Introducing student peer-assessment can seem a daunting and hazardous prospect, if you’re surrounded by an assessment culture where lecturers undertake all of the assessing. There are, however, several good reasons why the prospect should not be seen as so formidable, and some of these are proposed below.

1 Students are doing it already. Students are continuously peer-assessing in fact. One of the most significant sources of answers to students’ pervading question: ‘How am I doing?’ is the feedback they get about their own learning achievements and performances by comparing with those of others. It is true that feedback from tutors is regarded as more authoritative, but there is less such feedback available from tutors than from fellow students. Setting up and facilitating peer-assessment therefore legitimises and makes respectable something that most students are already engaged in.

2 Students find out more about our assessment cultures. One of the biggest dangers with assessment is that students often don’t really know how their assessment works. They often approach both exams and tutor-marked coursework like black holes that they might be sucked into! Getting involved in peer-assessment makes the assessment culture much more transparent, and students gain a better idea of exactly what will be expected of them in their efforts to demonstrate their achievement of the intended learning outcomes.

3 We can’t do as much assessing as we used to do. With more students, heavier teaching loads, and shorter timescales (sometimes caused by moves to modularisation and semesterisation), the amount of assessment that lecturers can cope with is limited. While it is to be hoped that our assessment will still be valid, fair and reliable, it remains the case that the amount
of feedback to students that lecturers can give is less per capita. Peer-assessment, when facilitated well, can be a vehicle for getting much more feedback to students.

4 **Students learn more deeply when they have a sense of ownership of the agenda.** When peer-assessment is employed using assessment criteria that are devised by the students themselves, the sense of ownership of the criteria helps them to apply their criteria much more objectively than when they are applying tutors’ criteria to each other’s work.

5 **The act of assessing is one of the deepest learning experiences.** Applying criteria to someone else’s work is one of the most productive ways of developing and deepening understanding of the subject matter involved in the process. ‘Measuring’ or ‘judging’ are far more rigorous processes than simply reading, listening or watching.

6 **Peer-assessment allows students to learn from each other’s successes.** Students involved in peer-assessment can not fail to take notice of instances where the work they are assessing exceeds their own efforts. When this learning-from-each-other is legitimised and encouraged, students can benefit a great deal from the work of the most able in the group.

7 **Peer-assessment allows students to learn from each other’s weaknesses.** Students peer-assessing are likely to discover all sorts of mistakes that they did not make themselves. This can be really useful for them, as their awareness of ‘what not to do’ increases, and they become much less likely to fall into traps that might otherwise have caused them problems in their future work.

---

**Getting students to formulate their peer-assessment criteria**

As mentioned already, peer-assessment works at its best when students own the assessment criteria. Furthermore, it is important that the criteria are clearly understood by all the students, and their understanding is shared. The best way of developing a set of good criteria is to involve the students from the outset in the process. It is crucial not to put words in students’ mouths during this process, otherwise the assessment agenda can revert to academic terminology which students don’t understand. The following processes can be used to generate a set of peer-assessment criteria ‘from scratch’. I have used this process with groups of nearly 200 students, as well as with more intimate groups of 20 upwards.

It really does not matter what the task that students are going to peer-assess involves. The process below will be described in terms of students peer-assessing ‘a presentation’, but the process could be identical for generating student-owned assessment criteria for ‘an essay’, ‘a report’, ‘a poster display’, ‘an interview’, ‘an annotated bibliography’, ‘a student-devised exam paper’, and countless other assessment possibilities.

It is possible to go through all of the processes listed below, with a group of over 100 students, in less than an hour. The more often you do this with students, the faster and better you will become at it (and at taking short cuts where appropriate, or tailoring the steps to your own subject, and to the particular students, and so on).

In practice, you are very unlikely to need to build in all eighteen of the steps outlined in the list below in any given instance of negotiating criteria with a group of students. Usually, at least some of the processes below may be skipped, but it is worth thinking through the implications of all of the stages before making your own decision about which are most relevant to the particular conditions under which you are planning to facilitate peer-assessment.
1 **Brainstorming:** Ask all students to jot down individually a few key words in response to: ‘What makes a really good 10-minute presentation? Jot down some of the things you would look for in an excellent example of one’.

2 **Sharing:** Get students to work in groups. Even in a large lecture theatre, they can work in groups of four or five with their near neighbours. Alternatively, if students are free to move around the room where the exercise is happening, they can be put into random groups (alphabetical, or by birthday month, or allowed to form self-selecting groups). Ask the groups to share and discuss for a few minutes all of their ideas for a good presentation.

3 **Prioritising:** Ask the groups to make a shortlist of (say) ‘the most important five features of a good 10-minute presentation’. Ask each group to appoint a scribe to note down the shortlist.

4 **Editing:** Get the groups to look carefully at the wording of each item on their shortlists. For example, tell them that when they report back an item from their list, if you can’t tell exactly what it means, you will ask them to tell you ‘what it really means is ...’. Maybe mention that some of the more academic words such as ‘coherence’, ‘structure’ and ‘delivery’ may need some translation into everyday words (maybe along the lines of ‘hangs well together, one point following on logically to the next’, ‘good interest-catching opening, logical order for the middle, and firm, solid conclusion’, and ‘clearly spoken, well-illustrated, backed-up by facts or figures’). However, don’t put too many words of any kind into students’ minds, let them think of their own words.

5 **Re-prioritising:** Remind the groups about the shortlisting process, and to get their five features into order of priority. This may have changed during the editing process, and meanings became clearer.

6 **Turning features into checklist questions:** Suggest that the groups now edit each of their features into a question format. For example, ‘was there a good finish?’, ‘how well was the material researched?’, and so on. The point of this is to pave the way for a checklist of criteria that will be more straightforward as a basis for making judgements.

7 **Collecting the most important questions in the room:** Now start collecting ‘top’ feature-questions. Ask each group in turn for the thing that came top of its list. Write these up, one at a time, on a flipchart or overhead transparency, so that the whole class can see the emerging list of criteria. Where one group’s highest-rating point is very similar to one that has already been given, either put a tick beside the original one (to acknowledge that the same point has been rated as important by more than one group), or (better) adjust the wording slightly so that the flipcharted criterion reflects both of the sources equally. Continue this process until each of the groups has reported its top criterion.

8 **Fleshing out the agenda:** Now go back round the groups (in reverse order) asking for ‘the second-most-important thing on your list’. At this stage, the overlaps begin to occur thick and fast, but there will still emerge new and different checklist-questions based on further features identified by the groups. Use ticks (maybe in a different colour from the overlaps of top-rated questions) to make the degree of concurrence visible to the whole group as the picture continues to unfold. With a large class, you may need to use more than one flipchart-sheet (or overhead transparency), but it is important to try to keep all of the agenda that is unfolding visible to the whole class. This means posting up filled flipcharts where everyone can see them, or alternating the transparencies so that students remember what has already come up.
9 Any other business? If the degree of overlap has increased significantly, and after gaining all the second-round contributions, the flow of new ideas has slowed down, it is worth asking the whole group for ‘any fairly important things that still aren’t represented on your list?’ Usually, there will be a further two or three significant contributions at this stage.

10 Numbering the agenda: When all of the criteria-questions have been noted down, number them. Simply write numbers beside each criterion, in the order that they were given. During this stage, if you notice that two criteria are more-or-less the same, it can be worth asking the class whether you can clump them together.

11 Weighting individually: Ask students to work individually again next. Ask them to weight each criterion, using an agreed total number of marks. Choosing the total number needs care! If there are ten criteria, 100 marks would be too tempting regarding the possibility of some students just giving each criterion ten marks, and avoiding the real business of making prioritising decisions again. Thirteen criteria and sixty marks works better, for example. Ask every student to ensure that the total marks number adds up to the agreed figure. Legitimise students regarding ignoring any criteria that they individually don’t think are important: ‘If you think it’s irrelevant, just score it zero’.

12 Recording everyone’s weighting publicly: The next stage is to record everyone’s marks on the flipcharts or transparencies. This means starting with criterion number 1, and writing beneath it everyone’s marks-rating. It’s worth establishing a reporting-back order round the room first, so that every student knows who to follow (and encouraging students to nudge anyone who has lost concentration and is failing to give you a score!). ‘Can you shout them out as fast as I can write them up?’ usually keeps everyone (including you) working at speed.

13 Optional separating: It can be worth starting with two flipcharts from the outset. For example, you may wish to record separately the criteria relating to content and those relating to structure. This may pave the way for peer-assessment grids which help to separate such dimensions.

14 Discussing divergent views: Then go through all of the remaining criteria in the same way. Don’t worry that sometimes consecutive scores for the same criterion will be quite divergent. When this happens, it will be a rich agenda for discussion later, and if you’re writing the scores up in the same order each time, it’s not too hard to pinpoint the particular individual who gave an unusually high or low rating to any criterion. You can, for example, ask the student who rated criterion 8 highest to argue briefly with the student who rated it lowest, and see what the causes of the divergence may be.

15 Averaging: Next, average out all the scores. If there are students with calculators in the group, the average rating may be forthcoming from the group without any prompting. Otherwise, it’s usually possible to do some averaging and rounding up or down to the nearest whole number just intuitively by looking at the numbers. Ask the whole group, ‘Does criterion 7 get a five or a six please? Hands up those who make it a five?’ and so on.

16 Shedding weak criteria: Look back at the whole range of criteria and ratings. At this point, there will usually be one or more criteria that can safely be dropped from the agenda. They may have seemed like a good idea at the time to some of the students, but the visible ratings tell their own story.

17 Confirming ownership: ‘Are you all happy to proceed with the averaged-out version of the ratings, and with these criteria?’ is the question to ask next. Mostly,
The list of processes above may appear daunting, but in fact it is quite a lot easier to do in practice than it is to write out a description of it! Also, some of the steps are in fact very quick to do. Furthermore, as the culture of peer-assessment becomes better known to students, they themselves become better at generating and weighting criteria, and more skilled at applying them well.

Setting up self-assessment tutor dialogues

Think of the following scenario. A piece of coursework is to be handed in and tutor-assessed. This could be just about anything, ranging from a practical report, a fieldwork report, a dissertation, and even an essay or set of answers based on a problems sheet.

Imagine that students are briefed to self-assess their efforts at the point of submitting the work for tutor assessment, and are supplied with a pro forma for this self-assessment, of no more than two pages length. Suppose that the pro forma consists of a dozen or so short, structured questions, asking students to make particular reflective comments upon the work they are handing in, and that the principal purposes behind these questions are to:

- cause students to reflect on what they have done;
- give tutors assessing their work additional information about ‘where each student is’ in relation to the tasks they have just attempted;
- form a productive agenda to help tutors to focus their feedback most usefully;
- save tutors’ time by helping them to avoid telling students things about their submitted work, which they know all too clearly already;
- give students a sense of ownership of the most important elements of feedback which they are going to receive on the work they have submitted.

there will be no dissent. Just occasionally, a student with a different view of the ratings may wish to speak out against the consensus. It is worth then offering that any individuals who feel strongly about the ratings can choose to be peer-assessed by their own idiosyncratic rating scales, but that these must now be shared with the whole group for approval. Students rarely wish to do this, particularly if the feeling of ownership of the set of weighted criteria is strong in the group as a whole.

Administrating: Turn the criteria-questions into a grid, with the criteria down the left-hand side, and the weighting numbers in a column alongside them, with spaces for students to write in their peer-assessment ratings. If students are going to be asked to peer-assess several instances of the task involved (for example maybe ten short presentations) the grids could be marked up so that students used the same grid for the successive presentations (see Figure 2.2). Alternatively, if the peer-assessment grids are going to be used for a small number of assessments (for example, where all students mark three essays or reports, and each of theirs is to be marked by three students), it is worth having separate sheets, with a column for individual feedback comments relating to the score awarded for each of the criteria (see Figure 2.3).
Peer-assessment: grid for multiple examples

<table>
<thead>
<tr>
<th>Example being assessed</th>
<th>Mark out of</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 4</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 8</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 2.2* Example of a grid where students peer-assess A to H (for example) presentations
### Peer-assessment with feedback: grid for a single example

<table>
<thead>
<tr>
<th>Example being assessed</th>
<th>Mark</th>
<th>Score</th>
<th>Feedback comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 2</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criterion 8</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 2.3* Pro forma for individual peer-assessments of (for example) essays or reports, with feedback.
Some ideas for self-assessment agendas

Each of the suggestions below could take the form of a relatively small box on the pro forma, requiring students to give their own reply to the question, but allowing space for tutors to add a sentence of two in response to each student’s reply. Sometimes, of course, tutors would wish to (or need to) enclose additional response information on separate sheets – often pre-prepared handout materials dealing with anticipated problem areas or frequently made errors. A reminder: the menu of questions below is exactly that – a menu – from which individual assessors will need to select carefully only a few questions, those which are most relevant to the nature of the assessed task. Also, for every separate task, it is vitally important that the self-assessment questionnaires are patently task-specific, and that students don’t see the same (or similar) questionnaires more than once. (We all know how ‘surface’ students’ responses become to repetitively used course evaluation questionnaires, and how limited is the value of the feedback we receive from such instruments!).

For each of the questions I include below, I’ve added a sentence or two about why or when it may prove useful to assessors and students. Some parts of the menu below are much more obvious than others, and I believe it is the less-common questions that are most likely to set up deep tutor–student dialogue.

- What do you honestly consider will be a fair score or grade for the work you are handing in?
  - Most students are surprisingly good at estimating the worth of their work. Only those students who are more than 5 per cent out (or one grade point) need any detailed feedback on any differences between the actual scores and their own estimates – saves tutors’ time.

- What do you think was the thing you did best in this assignment?
  - Assessors know soon enough what students actually did best, but that’s not the same as knowing what they think they have done well. Where both are the same thing there’s no need for any response from assessors, but on the occasions where students did something else much better (or did the original thing quite poorly) feedback is vital, and very useful to students.

- What did you find the hardest part of this assignment?
  - Assessors know soon enough what students do least well, but that’s not always the thing they found hardest. When a student cites something that was completely mastered – in other words, the assignment gives no clue that this was a struggle – it is quite essential that the student is congratulated on the achievement involved, for example a few words such as ‘you say you found this hard, but you’ve completely cracked it – well done!’ go a long way.

- If you had the chance to do this assignment again from scratch, how (if at all) might you decide to go about it differently?
  - This question can save assessors hours! Students usually know what is wrong with the approach they have engaged in. Let them tell you about this! This saves you having to go on at length telling them about it. Moreover, when students themselves have diagnosed the weaknesses in their approach, the ownership of the potential changes to approach lie with them, rather than us having to take control of this.

- How difficult (or easy) did you find this assignment?
  - Don’t use number scales! Provide words or phrases which students can underline or ring. Use student language, such as ‘dead easy’, ‘tough in parts’, ‘straightforward’, ‘a real pain’, ‘took longer than it was worth’, ‘hard but helped me learn’, and so on.
What was the most important thing that you learned about the subject through doing this assignment?
- Answers to this question give us a lot of information about the extent to which the assignment is delivering learning payoff to students.

What was the most important thing that you learned about yourself while doing this assignment?
- Such a question gives us information about how well (or badly) the assignment may be contributing to students’ development of key transferable skills, including self-organisation.

What do you think are the most important things I am looking for in this assignment?
- This question can be sobering for assessors – it can show us how students perceive our activities, and it can often show us a lot about how we are found to be assessing. Students can benefit from feedback on their responses, when their perceptions of the purposes of an assignment have gone adrift.

How has doing this assignment changed your opinions?
- Not all assignments have anything to do with developing students’ views, attitudes or opinions, but some do this, and it is important that we acknowledge this when such issues are intentional. Such a question is better than simply asking ‘has your opinion changed?’, where the expectation is clearly for a ‘yes’ response.

What’s the worst paragraph, and why?
- This question is particularly useful as a feedback dialogue starter when assignments are substantial, such as long reports or dissertations. Students quite often know exactly where they were trying to firm up an idea, but struggling to express it. Their help in bringing to our attention the exact positions of such instances can save us hours in finding them, and can ensure that we have the opportunity to respond helpfully and relevantly to students’ needs.

Conclusions

None of the forms of assessment discussed in this chapter is without its merits or its limitations in the context of assessing various facets of the skills, knowledge and performances of students. The challenges caused by greater numbers of students and increased assessment workloads provide an opportunity to make a radical review of the ways we assess our students. The requirement placed upon us to match assessment criteria to intended learning outcomes gives us further opportunity to adjust our assessment so that we are attempting to measure that which is important, rather than merely that which is relatively straightforward to measure.

In particular, we must ensure that our attempts to meet these challenges do not lead to a retreat from those forms of assessment which are less cost-effective, but which help students to get due credit for a sensible range of the knowledge and skills they demonstrate. Probably the best way to do our students justice is to use as wide as possible a mixture of the assessment methods outlined above, allowing students a range of processes through which to demonstrate their respective strengths and weaknesses. Moreover, the fifteen assessment methods discussed in some detail in this chapter are only a cross-section of those which could be used. Ideally, for each area of students’ learning, we should be asking ‘what is the most appropriate way to measure this fairly, validly, and reliably?’.

Finally, we need to ensure that learning is not simply assessment-driven. It can be argued that presently we have far too much assessment, but that neither the quality nor the diversity of this
assessment is right, and there is a significant shortfall in the amount of formative feedback which can help students towards demonstrating their optimum potential in those assessment elements which count most significantly towards their awards. Students are highly intelligent people; if we confront them with a game where learning is linked to a rigid and monotonous diet of assessment, they will learn according to the rules of that game. To improve their learning, we need to improve our game, not least our feed-forward to students.
Chapter 3

Refreshing your lecturing

**Intended outcomes of this chapter**

When you’ve looked through this chapter, and applied the most appropriate ideas it contains to your teaching, you should be better able to:

- gain confidence in preparing and delivering lectures;
- develop your work with large groups of students so that their learning is more productive in your sessions;
- think consciously about how your students learn in lectures, and about ways you can address the principal factors underpinning successful learning in your lectures;
- make good use of audio–visual aids when giving lectures, not least PowerPoint;
- use handout materials to help to structure students’ learning, both during and after lectures;
- choose from a variety of ways to get feedback on your lectures from your students;
- prepare your large-group teaching so that it will be seen to be successful when your teaching is observed or reviewed.

I have developed this chapter with five groups of colleagues in mind:

1. those who are new to large-group teaching, and who would appreciate a little help on how best to get started on such work;
2. those for whom student class-sizes have expanded recently, and who may wish for some ideas on how to work well with larger groups;
3. experienced colleagues who simply would like to explore whether there are fresh approaches they may wish to try out in their large-group work with students;
4. old hands at lecturing, who may be thinking of introducing computer-based presentation managers to replace overheads or slides;
5. colleagues who already make extensive use of handout materials, who may be concerned that students ‘switch off’ when they know that they will get most of the important information in their handouts.

**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 overheads or PowerPoint slides – and even dimming the lights so the slides are more easily seen – and we are less visible!
- giving out handouts, so that every now and then all the eyes will be looking at printed sheets rather than at us;
- giving students things to do during lectures – for example decisions to make about which of three options – on-screen or in their handouts – 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! Nowadays, 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.

Giving lectures is the most public side of the work of most higher education lecturers. Attending lectures is part of the life of most higher education students. 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.

Given how important lecturing is taken to be, you may be surprised that in Chapter 2 in this book I addressed assessment even before teaching. My justification is simple enough: students can survive bad lectures, but they may be damaged by bad assessment. Whatever else we do, we need to link assessment well to what students are intended to learn; how they learn it, when they learn it and where they learn it are of much less importance. It is also fair to say that despite the fears that new lecturers have about lecturing, the fears they have about wielding a red pen in assessment mode for the first time are often even more substantial.
Later in the chapter, attention is turned to some of the technologies used by most lecturers, starting with overhead projectors, and leading into suggestions for using PowerPoint effectively. The chapter concludes with some suggestions about ways to make the most of the benefits of observing others at work in the lecture room, and to learn from feedback when your own work is observed. Familiarity with teaching observation pays dividends when subject review or other forms of external scrutiny come your way.

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, handouts and a range of electronic learning resources, there are still several things that can best be achieved in large-group sessions with classes. Some 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, and define the standards of students’ performance which will be linked to these outcomes;
to give 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 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.

Most 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 blackboard or screen;
- copying down verbatim things said by the lecturer;
- summarising things discussed by the lecturer;
- gazing out of the windows (if there are any);
- looking at other students;
- 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 the match on a personal radio;
- 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 or ‘digesting’ 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!’.

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 would have been better if they had been issued with the material they copied down, for example in the form of a handout. However, there are problems with straight handouts, in particular the danger that students believe that they have already captured the content of the lecture, and think that they may safely switch off mentally altogether.

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, five 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 – ‘digesting’ it, getting one’s head round it.

![Figure 3.1 Processes underpinning successful learning](image-url)
Below I have tried to link some productive student actions to these five central processes.

- becoming excited about the subject, and enthused (wanting);
- wishing to find out more about things discussed (wanting);
- 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 digesting);
- explaining things to fellow students sitting nearby (doing, digesting, feedback);
- asking questions (seeking feedback);
- working out questions to find out the answers to later (preparing to seek feedback);
- prioritising issues and information (digesting);
- summarising (digesting);
- making notes in a way so that important things ‘stand out from the page’ (digesting, learning by doing);
- answering questions (learning by doing, 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).

**Using handouts to enhance students' learning**

There are many advantages accompanying the use of handout materials. Not least is the fact that in a few pages of handout materials, far more information can be made available to students than they would ever have been able to write down for themselves during the lecture.

The use of handouts in large-group lectures has increased dramatically over the last few years. This is not least due to the advent of better, faster, cheaper photocopying and reprographic technologies. It is also linked with students’ expectations. Furthermore, handout materials provide evidence for quality review purposes, illustrating not only the content of teaching programmes, but also the processes adopted to address student learning in lectures.

However, the dangers accompanying the use of handouts are becoming ever more apparent. For example, students may feel little real ownership of a ‘straight’ handout (as opposed to an ‘interactive’ one, which is more akin to a learning resource). Straight handouts are still ‘other people’s words’ to students. The principal danger is that students can be tempted to switch off mentally, if they believe that they will be receiving (or have already got in their hands) everything important that is being covered in a lecture.

Many advocates of the use of handout materials agree that it’s what students do with the handouts that really matters. Handouts should be learning tools, not just compendia of information. Ownership of knowledge is much more than simply possessing the information.

The following pages contain a checklist against which you can interrogate your own usage of handout materials. I don’t suggest that each handout should achieve all of the factors included in the checklist below – but that across your range of handouts you may find it useful to address most of them in one way or another as seems most appropriate to you in the context of your own discipline.
Table 3.1 Interrogating your handouts

<table>
<thead>
<tr>
<th>Contexts and key questions</th>
<th>Links to effective learning, and further questions</th>
<th>Your notes and action points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting the scene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the intended learning outcomes?</td>
<td>Can students see what they need to be able to achieve?</td>
<td></td>
</tr>
<tr>
<td>How much will students want to achieve these outcomes?</td>
<td>Motivation – wanting to learn.</td>
<td></td>
</tr>
<tr>
<td>Is it clear which of the learning outcomes is the most important one?</td>
<td>Can students see priorities to address in their learning?</td>
<td></td>
</tr>
<tr>
<td>Does the handout show how students’ achievement of the learning outcomes could be measured in due course?</td>
<td>Motivation – needing to learn.</td>
<td></td>
</tr>
<tr>
<td>Does the handout make links between the present agenda, and topics already covered, and/or to be covered in future?</td>
<td>Digesting – gaining a sense of the place of the particular session in the overall picture.</td>
<td></td>
</tr>
<tr>
<td>Is the handout designed on a realistic scale, so that it can be fully used in the timescale available in the session?</td>
<td>If it’s accompanying a one-hour lecture, can it all be covered in 45 minutes or so?</td>
<td></td>
</tr>
<tr>
<td>Learning by doing – interactivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are instructions for tasks clear and helpful?</td>
<td>Can students see exactly what they are intended to be doing?</td>
<td></td>
</tr>
<tr>
<td>Does the handout include some past assessed tasks, for students to practice upon?</td>
<td>Is it encouraging learning by practice?</td>
<td></td>
</tr>
<tr>
<td>Feedback to students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the handout give opportunities for students to gain feedback about their own performance and learning?</td>
<td>(For example, where students have undertaken tasks around the content of the handout, are debriefings clear and useful?) Does this allow useful peer-feedback to be exchanged?</td>
<td></td>
</tr>
<tr>
<td>Can the handout be used to get students to work together in small groups during the session?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the handout include answers or responses giving students feedback on the tasks they attempted using the handout?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth, tone, style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the handout fun?</td>
<td>Will students want to learn from it?</td>
<td>Helping students to distinguish between information and expected knowledge.</td>
</tr>
<tr>
<td>Is the handout a tool for learning, rather than just an information source?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the depth of the content appropriate for the purpose of the session?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contexts and key questions</td>
<td>Links to effective learning, and further questions</td>
<td>Your notes and action points</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Does the handout challenge students’ thinking, rather than just inform them?</td>
<td>Does it help them to make sense of the topic, rather than just know it?</td>
<td></td>
</tr>
<tr>
<td>Is all the information in the handout essential and relevant?</td>
<td>Will it be regarded by students as an important learning resource?</td>
<td></td>
</tr>
<tr>
<td>How clearly are important concepts and rules expressed, if applicable?</td>
<td>Saving students from routine copying of important material.</td>
<td></td>
</tr>
<tr>
<td>Is the language level pitched appropriately for the students concerned?</td>
<td>(making sure that the learning agenda is not obscured by language sophistication or simplicity)</td>
<td></td>
</tr>
<tr>
<td>Is the style thought-provoking rather than just information-providing?</td>
<td>Will students be caused to think for themselves?</td>
<td></td>
</tr>
<tr>
<td>Layout, appearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there dedicated space for students to make notes, write their own thoughts, write their own questions?</td>
<td>Is it encouraging participative learning rather than passive receiving?</td>
<td></td>
</tr>
<tr>
<td>Is the layout clear and attractive?</td>
<td>Will students want to use it again and again?</td>
<td></td>
</tr>
<tr>
<td>Is the design simple?</td>
<td>Can students see the wood from the trees?</td>
<td></td>
</tr>
<tr>
<td>Is the handout sufficiently concise?</td>
<td>Will they be able to use the handout again weeks later, and still remember the context in which it was first used?</td>
<td></td>
</tr>
<tr>
<td>Are there headers and page numbers to help students to navigate the handout again later?</td>
<td>Does it help by triangulating learning using different approaches?</td>
<td></td>
</tr>
<tr>
<td>Does the handout contain pictures, drawings, graphs, diagrams, and so on to add visual impact to the words?</td>
<td>Making sense of what has been learned — gaining understanding.</td>
<td></td>
</tr>
<tr>
<td>Follow-up after the session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the handout contain tasks for students to try after the session?</td>
<td>For example not just ‘read Chapter 3 of …’ but ‘use pp.45–8 of Chapter 3 to decide why …’ and so on.</td>
<td></td>
</tr>
<tr>
<td>Will the handout make a useful revision aid for students?</td>
<td>(or is it just being used yet one more time as it stands?)</td>
<td></td>
</tr>
<tr>
<td>Does the handout cite appropriate reference material for students to follow up after the session?</td>
<td>(Will students find it sufficiently relevant?)</td>
<td></td>
</tr>
<tr>
<td>Are the briefings to external resources active and focused rather than general?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authenticity, quality, topicality, and so on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the handout been frequently changed, edited, updated?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How old is the handout? Could it be regarded as dated?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the content topical and up-to-date?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Refreshing your lecturing

Using handouts: some practical suggestions

The following suggestions summarise some of the ways in which you can ensure that your use of handout materials helps your students to learn effectively during (and after) your lectures. Furthermore, they may help you to take steps to demonstrate the quality of your thinking about how your students learn, through the design of your handouts as artefacts evidencing your approach to teaching.

1. **Make handouts look attractive.** Gone are the days when a plain handwritten or typed summary of a lecture was enough. The quality of the message is now inextricably associated with the quality of the medium; scrappy handouts tend not to be valued.

2. **Use the start of a handout to remind students what its purposes are.** It can be useful to state on each handout the intended learning outcomes of the particular element of work involved.

3. **Use plenty of headings.** There’s little more off-putting than a solid page of unbroken text. Where possible, make headings stand out, by using bold print, or large-size print. When a glance at a handout gives information about the structure of its contents, it has already started to help people learn.

4. **Use white space.** For students to develop a sense of ownership of handouts, they need to have room to write their own notes onto them. Space between paragraphs, space at the top and bottom of pages, or a wide margin on one side are all ways of giving them this possibility of ownership.

5. **Make handouts interactive.** In other words, include tasks and activities for students to do, either in the group session where the handout was issued, or as later follow-up activities.

6. **Include ‘committed space’ for students to do things in handouts.** Structured tasks are best, such as ‘think of six reasons why the economy is in recession and list them below’. The fact that space has been provided for students’ answers helps persuade them (often subconsciously) to have a try at the tasks rather than simply skip them.

7. **Use tasks as chances for students to learn by doing, and to learn by getting...**
things wrong. Multiple-choice questions are useful for this. The handout can serve as a useful reminder of ‘wrong’ options chosen, as well as a pleasant reminder of ‘correct’ choices.

8 Use handouts to get students making notes, not just taking notes. Use handouts to avoid the wasteful process of students simply writing down things you say, or transcribing things they see on the screen or board. Copying things down is a low-level learning activity. Having such information already in handout form allows you to spend face-to-face time getting your students probing into the meaning of the information, interpreting it, questioning it, extrapolating from it, analysing it, and so on.

9 Work out what you intend students to add to the handout during your session. For example, leave spaces for individual ‘brainstorms’ (e.g. ‘list five symptoms of anaemia’), and for the products of buzz-group discussions (e.g. putting some factors in order of importance). The aim should be that the handout students take away at the end of the session is much more valuable than the blank one they were given at the start.

10 Include annotated bibliographies in handout materials. A few words about what to look for in each particular source can make a big difference to the ways in which students follow up references.

11 Where possible, store your handout materials on disk. Go for small print runs. It is then easy to make considerable adjustments and additions to handouts each successive time you use them. Avoid the waste associated with piles of handouts which you’ve subsequently replaced with updated, improved versions.

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 five underpinning processes: wanting, needing, doing, feedback and digesting. 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 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 include:

• radiating infectious enthusiasm for the subject;
• posing interesting questions which excite students’ curiosity;
• helping students to see how much they can already do, increasing their confidence;
• 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 identify the difference between what they need to know, and those things that are simply nice to know;
• relating materials being taught to course objectives and exam questions (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. Some of the approaches with which we can help students to take ownership of their particular learning needs include:

- explaining what students may be required to do to demonstrate their learning of the topics covered by the lecture;
- helping students to see the purpose of learning and 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 students spending some 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 decisions – for example picking the best option from several alternatives shown on the screen or in their handouts, and working out why other options are less good or even incorrect;
- solve problems – using information given to them on the screen or board, or in their handouts;
- work out what the important issues or questions are, using information given by the lecturer, or from their own experience;
- engage 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 high, by facilitating student actions including getting students to:

- compare notes 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, 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;
- explain things to each other, or arguing with each other;
• receive feedback from the lecturer, on decisions they have reached or options they have selected;
• do self-assessment exercises built into interactive handout materials (at their own pace and in their own way), then turning to the back of their handouts to find feedback responses designed to let them see how well they had tackled the questions.

Lectures and digesting – making sense of what is being learned

Sadly, many students are only too willing to connect lectures to indigestion – especially 1200–1300 lectures – when they are hungry not for concepts but for food! However, the digesting stage of the learning process can be embraced by lecturers, in ways including:

• 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.

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’ve been looking at, however, it might be wiser to rephrase this along the following lines:

1  alert them 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, 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 been doing, and the feedback they’ve derived (such as by reminding them of the intended learning outcomes that they should now have at least started to achieve).

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

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’
  - ‘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’;
- giving a checklist of points that will be covered in the lecture;
- posing a list of questions that the lecture will address;
- providing the exam question on last year’s paper to which the material you are about to cover relates.

In other words, it’s productive to use the first two or three minutes 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 in print in a handout, and/or on the screen or board. 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 the outcomes are 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 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

It’s so easy for time to run out, so that we feel our only option is to stop the lecture in mid flow. 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 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.

Some ways of coming to a robust, recognisable conclusion include:

- go back to the agenda of intended learning outcomes, and briefly summarise how each has been addressed (this helps students with the digesting stage of their learning);
- 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 a deliberate 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.

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.

Ways of holding students’ attention till the very end include:

• at the end of each lecture, putting up an overhead slide with the task briefing for students to note down, for example for their preparation for future tutorials on the topic;
• giving out slips of paper with printed task briefings already on them (students are unlikely to begin slipping out from the lecture if they know an important, further handout – however small – is still to be issued at the end).

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.

**Planning 60 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). 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. The possibility of giving a 60-minute lecture (or even of facilitating a 60-minute learning experience) is remote! 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.

A 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.
Refreshing your lecturing

1000 (or earlier, if the room is empty): arrive on the dot if not earlier — punctuality and professionalism are closely connected in many people's minds. Get your handouts ready, and get the overhead or 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 the board if necessary, and so on. If you're using video or slides, data projection, 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 Maybe (if you are quite ready to start) chat with some of the students who arrive first — make them feel good about being punctual. Start circulating handouts. 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 Do 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 replacing your papers into your case or bag, switching off the projector, cleaning the board, 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 such as 'Sorry, but I really must go now'; '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 an overhead projector. 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:

1 to help you to keep your cool when using visual aids;
2 to help you to design your use of such aids keeping your students’ learning from them in mind.

These tips are dos and don’ts based on views gathered from countless colleagues and students. Some of them 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 suggestions which will trigger you to experiment with how you use technology in your lectures.

### Working with overhead projectors

The overhead projector was until recently one of the most common ways of displaying visual information to students, particularly in large-group situations, but has now been overtaken by data projection of PowerPoint slides, which is still of course ‘overhead’ projection. We’ll look at specific suggestions for using PowerPoint shortly, but for now let’s stay with overhead projectors. Two major advantages of overhead projection are that you can face your audience as you speak, and you do not need to darken the room. The following guidelines may help your students to get the most from your use of the overhead projector.

1 **Know your machine.** Most machines have a focus control, but this is located differently on different types of projector. Most machines also have a red–blue adjustment lever (or fringe control). It’s well worth your time to take steps to become familiar with the particular machine you’re going to work with. Don’t be afraid to move it to get it into good focus, across the whole of the screen area. When you can, adjust the height and positioning of the projector to avoid ‘keystoning’ (the top of the image being a different width from the bottom).

2 **Ensure that your transparencies will fit any projector.** Many projectors have a plate of approximately A4 size (and can usually be arranged for vertical or lateral display). Some projectors have square screens, wider but less deep vertically than A4 size.

3 **Get the machine position right.** The aim is to ensure that all your students can see the screen without anything obstructing their vision (particularly you!). Put on a slide, and sit in various seats in the room (before the students are there) so that you know that the screen is clearly visible, and that the average overhead will be easily seen.

4 **Be ready for problems!** If the bulb should suddenly go, is there a ‘switch-able’ spare? If there is, check in any case that this works. Alternatively, have a spare projector (which you know works) sitting inconspicuously in a corner of the room.

5 **When all else fails ...** Have one or two exercises up your sleeve which do not depend at all on the availability of an overhead projector. Plan these so that while your students are engaged with them you give yourself the time to arrange a new projector.

6 **‘The medium is the message’.** Good-quality overheads can add credibility to your messages. It’s worth using desktop publishing programmes to make your principal overhead transparencies look professional and believable. With inkjet and laser colour printers, it’s nowadays
refreshing your lecturing

7 Be careful with coloured print or writing. Some colours, especially red, are harder than you might imagine to see from the back of a large room. Throw away any orange or yellow ones from your set of overhead pens – unless you’re using them for colouring in blocks on diagrams or flowcharts for example.

8 Don’t use typewritten overheads. To be clearly visible, most fonts need to be at sizes ‘18’, ‘24’ or larger – considerably bigger and bolder than typical typewritten materials. Make sure that each transparency you prepare will be visible from the back of the largest room you are likely to use, even by someone without perfect eyesight.

9 Keep the number of words down. A good overhead transparency only needs to contain the main ideas, not the details. You can add the details as you discuss the main points on the transparencies. Your own ‘crib’ notes can then be written onto a paper copy of each transparency.

10 Use landscape rather than portrait orientation. This helps you to make the best use of the top half of the screen, which is usually more easily visible to most of your audience.

11 Watch students’ eyes. As soon as you notice students having to move their head positions to see something on one of your transparencies, it’s worth trying to move that part up so that they can see it without moving their gaze.

12 Get your transparencies into the right order before your lecture. There’s nothing worse than watching a lecturer sifting and sorting to try and find the right overhead. It’s sometimes worth arranging them into two sets: ones you will definitely use, and ones you might wish to use if time permits, or if anticipated questions arise.

13 Use the top half of the screen. By sliding your transparencies ‘up’, you can normally make the most important pieces of information appear towards the top of the screen – more easily visible by students at your sessions.

14 Try not to read out your overheads! 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.

15 Give people time to take notes if they wish. Sometimes, you may have copies of your transparencies in handout materials you issue to students. Otherwise, expect that at least some students will want to jot down the main points they see on the screen, and make sure that they’ve done this before you move on to another transparency.

16 Minimise passive transcribing by students. Copying down words from transparencies is not the most productive of learning activities. Where possible, issue handout materials which already contain the wording from your principal overhead transparencies.

17 Don’t point at the screen itself. This would mean losing eye contact with your students. Use a pen or pencil to rest on the transparency, indicating the part you’re talking about.

18 Be prepared to add things to your transparencies during discussions. This ability to edit slides ‘live’ is an advantage of overhead projectors over computer-based presentation managers, and can help your students to feel that their comments are important and valued. With transparencies produced from inkjet printers, however, don’t write on your original; put a blank sheet of acetate over it!

19 Don’t over-use ‘progressive reveal’ techniques (showing transparencies a bit at a time by gradually moving a masking sheet of paper). Some students feel manipulated if they are continually ‘controlled’ in this way. It can be better to build up a complex overhead using multiple overlays.
Using PowerPoint effectively

Microsoft’s PowerPoint presentation software package has become so endemic that in many institutions even the data projector is called ‘a PowerPoint’. Advice on how to design and use PowerPoint presentations is widely available through commercial training packages (including online materials), through institutional training programmes and elsewhere. In practice, many lecturers including myself are happy to admit that we’ve learned more about PowerPoint from our students’ presentations, than from any other source.

First of all, however, have you thought through your reasons for using PowerPoint in your lectures? Here are some reasons people give – you can decide which are closest to your own.

- **Because you want to make a good impression on your audience.** Some people may think that if you are just using old-fashioned ways of giving presentations in your teaching that your message itself may be outdated. However, the quality of your use of the medium is actually more important than simply choosing an up-to-date medium.

- **Because you want to be able to edit your presentation easily and frequently.** PowerPoint presentations are very easy (and very inexpensive) to edit, even to restructure completely. It is much easier to adjust your presentation after every experience of giving it, than it would be to prepare a new set of overhead transparencies each time.

- **Because you want your handout material to relate directly to your presentation.** In PowerPoint, for example, you can print off handout pages containing multiple slides. You can also annotate individual slides to make handouts with additional notes and background information. The strongest advantage of printing out your slides as handout materials is that your students then don’t need to do menial tasks such as simply copying your slides into their own notes, but can do more active things such as writing their own notes onto their printouts of your slides.

- **Because you want to show things that can’t be shown using traditional methods.** For example, if you want to show your students pictures, moving images or graphics which would be difficult or impossible to do using overhead transparencies, you can be fairly sure that you are justified in making your presentations computer-aided.

- **Because you want to be able to have all of your teaching presentations available.** A CD-ROM or memory stick or even a floppy disk can carry hundreds of slides of presentation material. If your teaching repertoire is wide and varied, it might be impossible to carry it all around with you on overheads or handouts. Carrying a memory stick or CD-ROM is much more feasible, and you can customise a new presentation from your repertoire quite easily once you have had some practice at editing, and print off those handouts you need locally.

- **Because you want your students to be able to have another look at your presentation later.** You can give students your PowerPoint presentation on disk, to work through at a machine in the resources centre, or at home. You can email the presentation to students, or place it on an intranet or even the Internet.
**Use of colour**

Now that we can, it is very tempting to use every colour in the rainbow! However, not all colours are equally visible from the back of a large room (and indeed there are issues for students with visual impairments or who cannot readily discriminate colours from one another). Even for those with normal colour vision, yellow and orange are often problematic, and text or numbers in red are very difficult for many people to discern at a distance, although they might be perfectly easy to discern at near or middle distances. The same text in the same size in black or another dark colour may cause no such problems when viewed from a distance.

If using PowerPoint or similar packages, there are a number of ready-prepared layouts for use which are easy to customise, but if you are printing onto overheads, remember that colour printing is expensive and can be time-consuming, so should not be undertaken lightly. Students may be very familiar with most of the most common designs, which might be a novelty to new users but for the students may be a bore.

**Fonts**

Most on-screen words these days are word-processed – whether for PowerPoint slides, websites, or well-produced overhead transparencies. Word-processing packages nowadays arm us with a plethora of different fonts (typefaces), and it becomes very tempting to make full use of the range at our disposal – but at our peril! For a start, it can be very irritating for readers to see several different fonts on a single slide. While this may be satisfactory for those occasions where we want to emphasise a particular word here and there by putting it into a different font, it is now accepted that it is best to keep the changes to a minimum. Additionally, over-elaborate fonts can provide difficulties for students with visual impairments or dyslexia. With PowerPoint slides, it can be useful to have one particular font (and colour) for the title, and then to continue (for example with sub-topics or bullet points) in a different font or colour. It is widely accepted now that the sans-serif fonts (for example Arial and Comic Sans MS) minimise problems for people with various visual difficulties, so fonts with ‘twiddly-bits’ (serifs) such as Times New Roman or New York should be avoided on slides.

**Live links**

These should be used with caution, as delays and unusable links can be annoying to audiences. 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 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’ 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, an hour or two (let alone a week or two) after our lecture? It’s easy enough to give students printouts of our PowerPoint slides themselves, for example using the software’s handout options of printing three-per-page with room for them to write notes alongside, or six-per-page if all they need are the slides themselves. But if we’re linking to other things such as web pages, we can’t realistically print all these out too – in any case, we may be doing a web search and moving around, and this will be different every time. And, like any other handouts, they aren’t really being learned from unless we’re getting students to do something with them.

We can, however, put the PowerPoint sequences, containing the links, onto an intranet, so that students can repeat the tour for themselves, and go on their own diversions. 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.

Don’t panic?

What about ‘Now you see it, now it is gone altogether!’? Just about everyone we 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;
- a fire in the building, which means you’ve got to evacuate Theatre 2, leaving your laptop with all your stuff in 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;
- nothing happens when you press ‘next slide’ on the remote control;
- the bulb blows in the data projector up on the ceiling;
- 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;
• 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 floppy disk 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 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 bale 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. Have it on an overhead, so you can show it if it’s not the overhead projector which is out of action – then they can remind themselves of what they’re doing while you have a go at sorting the problem out for a moment or two.
• 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 it 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, 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.

**Some don’ts for PowerPoint! ...**

Any presentation medium can be used well or badly. The following suggestions should help you to avoid some of the most common pitfalls with the most common of these packages, Microsoft’s PowerPoint.

1. **Don’t just use PowerPoint because everyone else seems to be using it.** This may be a reason for making at least some of your presentation computer-aided, but it is worth thinking hard about whether computers provide the best medium for the exact purposes of each element of your presentations. It is better to mix and match, rather than to switch blindly to a different way of supporting your presentations.

2. **Don’t just use PowerPoint because the equipment happens to be there.** Some institutions lay on data projection systems as a matter of routine. It is still possible to use overhead projectors, markerboards and flipcharts too! Sometimes, these may be pushed out of sight to make room for the computer and projector, but they are usually not far away.

3. **Don’t cause ‘death by bullet point’!** Even though PowerPoint can introduce bullet points to slides in a variety of ways (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.

4. **Don’t underestimate the problems that can arise.** You may not be able to get the room dark enough for students to see your presentation properly. There may be compatibility problems between the software version you have used to create your presentation, and the version on the computer through which you wish to show it. The image size on your laptop may not be compatible with that required by the data projector. The resolution of the projection equipment may not be sufficient to show fine details of images that you carefully placed into your presentation.

5. **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.

6. **Don’t use it just like an overhead projector substitute!** Simply transferring the contents of your overhead transparencies into a PowerPoint presentation does not make full use of the medium. Try to do other things with PowerPoint, for example making good use of the possibilities of moving images, web links, graphics, and so on.

7. **Don’t forget that it’s not that bright!** Except in well-equipped lecture theatres, most data projection equipment is not nearly as bright as a good overhead projector. This means that you may need to take particular care with room lighting, daylight from windows, and (worst of all) direct sunlight.

8. **Don’t forget to check the focus before you start.** Some projection systems are fine for video projection, but turn out to be too fuzzy for PowerPoint projection. Modern systems have easy ways of adjusting the focus, but older systems may need to be set up in considerable
Refreshing your lecturing

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.

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.

Don’t put too much on any slide. There still seem to be few PowerPoint presentations where all of the slides are perfectly readable from the back of the room. It is better to have twice as many slides, rather than to cram lots of information onto each slide. It usually takes two or more slides to project the same amount of information that would have taken one overhead transparency.

Don’t put important text in the lower half of slides. Unless all members of your audience have an uninterrupted view of the screen, people sitting at the back may have to peer around their nearer neighbours to read any text at the bottom of the screen. Unlike overhead projection, you can’t simply move a transparency up the platen to make the final points visible to people at the back.

Don’t use ‘portrait’ layout. You will usually have the choice between landscape and portrait, so use landscape to make the most of the top part of the screen. You may already have found that the same applies to overhead transparencies.

Don’t import tables or text files 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 handouts, rather than to try to show it to them on-screen.

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 when you turn down the lights).

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, so that each new slide makes its own impact.

Don’t leave a slide on when you’ve moved on to talk about something else. It is better to switch the projection off, rather than to leave up information that people have already thought about. If you’re within reach of the computer keyboard, pressing ‘B’ on most systems causes the display to go black, and pressing ‘B’ again brings the display back. This is far simpler and safer than switching the projector to standby, and risking having to wait for it to warm up again when you want to project your next slide. An alternative is to insert a
18 Don’t talk to the screen! With overhead projectors, it’s easy to develop good habits, including looking at the transparency rather than at the screen, and avoiding turning your back on your audience. With projected images, you may have no alternative but to watch 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 rather than the projection screen, the problem can be partly solved.

19 Don’t go backwards for too long! If you need to return to a slide you showed much earlier, it is better to 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. 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 this, so that you can navigate your entire presentation in any order at will.

20 Don’t forget to rehearse your presentation. With overhead transparencies you always know what is coming next; with presentation managers 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.

21 Don’t underestimate the potential of remote controls surprising you! Many systems allow you to change slides with a remote control connected to your computer, or to the projection equipment. Pressing the wrong button on this can switch the system to something quite different (for example video input), and can mean that you can find yourself unable to get back to your presentation without losing your cool. It is best to find out in advance which buttons not to press, and possibly even to place some adhesive tape over them to reduce the possibility of pressing them.

22 Don’t forget to check your spelling. PowerPoint, for example, can do this for you, but you have to instruct the software appropriately. Be careful not to let the software replace words automatically, or you will get some strange slides if you are using unfamiliar words.

23 Don’t fail to get feedback on your presentation before you run it. It is really useful to get someone else to watch your slides, and to ask about anything that isn’t clear, or point out anything that could irritate an audience. It’s also useful to check your timing, and the overall length of your presentation in practice.

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 sometimes alert you to where to insert an additional slide or two. It is also useful to have 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 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.
Peer-observation of lecturing

The final part of this chapter is about making the most of what you can learn about lecturing by being observed by colleagues, and (even more sometimes) by observing your own colleagues at work. Many institutions build teaching observation into quality assurance procedures as a matter of routine. In some, however, a stranger in the classroom or lecture theatre is less common, and may even be regarded as threatening.

It is useful to couple peer-observation of your lectures with self-evaluation of the same lectures. The real benefits come when you combine both for a particular lecture, and after both you, and your observer, have written down your observations and reflections, then sit down together to compare notes, and discuss some of the finer details which may have applied to the particular lecture.

The suggestions which follow now are intended to help you to see the benefits of taking part in a peer-observation system. In particular, they aim to help you to get the most out of seeing others teach, and getting feedback from colleagues on your own teaching.

1 **Value feedback from your colleagues.** It is useful to get used to taking critical feedback from someone you know, as preparation to taking it well from someone you don’t know. It is useful to encourage actively staff from other parts of the institution, who already have some experience regarding quality visits, to make this experience available to you.

2 **Don’t allow practising to go wrong.** Sometimes it is even harder to take critical feedback from someone you know than from someone vested with authority from outside. The criticism may be just as valid, however!

3 **Accept observation as normal.** This means that when the practice is really needed, prior to a real quality-audit visit for example, it is much easier to find the time for it to happen. It also means that many of the potential problems will have already been recognised and dealt with.

4 **Make use of opportunities to be observed, in staff development programmes.** The sooner that you become accustomed to the experience of other people watching your teaching performance, the greater becomes your confidence at handling such situations.

5 **Make appropriate use of existing checklists.** Your institution may well have specific checklists relating to key features of lectures or classroom work, on aspects such as ‘planning and preparation’, ‘use of...
resources’, ‘involving students’, ‘responding to individual needs’, and so on.

6 **Lead in new colleagues gently.** Avoid the situation of the performances of new staff being observed against a framework of detailed criteria intended for practised and experienced teachers.

7 **Make sure that not all of the emphasis is placed on presentation skills.** Include room for the quality of handouts, overheads, media elements, and class exercises to be covered in the observation criteria. This can help spread the load, so that colleagues are not overly anxious about their presentation skills.

8 **Remind yourself that in real teaching you are not being observed every second.** While it is possible that some students will notice slips you may make, you are unlikely (fortunately?) to have the undivided attention of the whole class at any time.

9 **Beware of the possibility of getting into a rut.** When anyone has been teaching a particular topic for a considerable time, it is natural to tend to go on autopilot, and be less aware of what is actually happening during teaching sessions. Teaching observation can act as a powerful aid to refreshing your approach.

10 **Take advantage of team teaching opportunities.** When you are regularly in the position of observing parts of your colleagues’ teaching, and vice versa, a considerable amount of automatic staff development occurs as you learn from each other’s triumphs and disasters.

11 **It doesn’t take long.** Suppose an observer gives you (say) three tips at the end of an hour, this can be very good value compared to just reading a book on teaching practices, where you may not happen to read the things you may most need to find out.

12 **When you’ve observed someone else teach, always give positive feedback first.** Help to put the colleague you are observing at ease by giving the good news first (and indeed making sure there is always some good news!). We are all much more likely to take on board the ‘could do better’ if we have received the positive statements first.

13 **Try to give three positives for every one ‘could do better’.** Even when there is much to comment adversely on, it is important to give sufficient good news. If people are given too much adverse comment, they may lose track of which are the most important parts of the agenda that they need to address.

14 **When you are observed, treat it as free consultancy.** ‘Isn’t it wonderful to have a colleague or friend who finds time to engage in an educational conversation with me?’ is a much better approach than ‘I haven’t time for all this practising’.

15 **Take the attitude that all feedback is potentially useful.** Feedback is an important part of everyday learning, and it is constructive to regard quality visits not so much in terms of the verdicts which may be reached, but in terms of the availability of valuable feedback which they may bring.

16 **Be prepared to receive positive feedback.** In many cultures, there is a sense of embarrassment when receiving praise. This leads people to shrug it off, and to fail to really take on board the value of finding out more about what is regarded as successful. It is worth practising receiving positive feedback, and verbally acknowledging it, and thanking the people who deliver it.

17 **Get practising for receiving negative feedback.** Regard criticism as useful feedback. Avoid the temptations to become hostile, or to justify one’s position, or to make excuses for things that were found to be lacking. When critical feedback is felt to have been openly received and taken note of, the people giving such feedback are much more satisfied that their job has
been done effectively, than when they are not at all sure that the feedback has been listened to and heeded.

18 **Practise eliciting feedback.** Gain skills in drawing out feedback, and get the people giving it to clarify it and expand on it when necessary. ‘What do you consider the best thing about the way I am handling so-and-so?’ and ‘What is the first thing about this that you would suggest I try to change?’ are the sort of questions that help in this process.

19 **Share feedback on your teaching with your students.** They like to feel involved. Ask them what they think of feedback you’ve received. Ask them what actions they might suggest that you consider. Explain why you might be doing something different; this could lead to more feedback.

### Making the most of lectures

This chapter ends with some practical pointers 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.

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 these 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 is learned by students just writing down what the lecturer says, or copying down information from screens or boards. There are more efficient ways of providing students with the information they need for their learning, including the use of handout materials, textbooks and other learning resource materials.

3 **Be punctual, even if some of your students are 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?’

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 overhead, than by trying to qui- eten down the pre-lecture chatter by talking loudly. Do your best to ignore late-comers. 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.** Find out how many students think they can already achieve some of these—and adjust your approach accordingly! Explaining the outcomes at the start of the session, or including them in handout materials given out to students, can help them to know exactly what they should be getting out of the lecture, serving as an agenda against which they can track their individual progress during the minutes which follow.

6 **Help students to place the lecture in context.** Refer back to previous material (ideally with a short summary of the previous lecture at the beginning) and give them forewarning of how this will relate to material they will cover later.
7 Use handout material to spare students from copying down lots of information. It’s better to spend time discussing and elaborating on information that students can already read for themselves.

8 Face the class when using an overhead projector, or PowerPoint in the lecture room. Practise in a lecture room using your transparencies or slides as an agenda, and talking to each point listed on them. By placing a pen on a transparency you can draw attention to the particular point on which you are elaborating, maintaining vital eye contact with your students.

9 Work out some questions which the session will address. Showing these questions as an overhead at 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.

10 Give your students some practice at note-making (rather than just note-taking). Students learn very little just from copying out bits of what they see or hear, and may need quite a lot of help towards summarising, prioritising, and making their notes their own individual learning tools.

11 Get students learning-by-doing. Just about all students get bored 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.

12 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, copying 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.

13 Ask the students how you are doing. From time to time ask ‘How many of you can hear me clearly enough?’, ‘Am I going too fast?’, ‘Is this making sense to you?’. Listen to the answers and try to respond accordingly.

14 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 lecturer can draw conclusions from some of the groups, and give expert-witness feedback when needed.

15 Use lectures to help students make sense of 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.

16 Use lectures to help shape students’ attitudes. The elements of tone of voice, facial expression, 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.

17 Genuinely solicit students’ questions. Don’t just ask ‘any questions’ as you are picking up your papers at the end of a class. Treat students’ questions with courtesy even if they seem very basic to you. Repeat the question so all students can...
hear, and then answer in a way that doesn’t make the questioner feel stupid.

18 **Don’t waffle when stuck!** Don’t try to bluff your way out of it when you don’t know the answers to some of the questions students may ask. Tell the questioners that you’ll find out the answers to their questions before your next lecture with them – they’ll respect you more for this than for trying to invent an answer.

19 **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. Students can be asked to write on slips of paper (or ‘post-it’ notes) questions that they would like you to address at a future session.

20 **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.

21 **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.

22 **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 may also be 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 inspection or other quality assessment procedures.

23 **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.

24 **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 overhead projectors and audio–visual equipment in imaginative ways.

25 **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.

26 **Don’t tolerate poor behaviour.** You don’t have to put up with students talking, eating or fooling around in your lectures. Ask them firmly but courteously to desist, and as a last resort, ask them to leave. If they do not do so, you should leave yourself for a short period to give them a cooling down period.

27 **Don’t feel you’ve got to keep going for the full hour.** Sometimes you will have said all you need to say, and still have 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!

28 **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.

29 **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.

30 **Help the shy or retiring students to have equal opportunity to contribute.** Asking students in large groups to write questions, or ideas, on ‘post-it’ notes 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.

31 **Come to a timely conclusion.** A large-group session must not just fizzle out, but should come to a definite and robust ending. It is also 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.
Intended outcomes of this chapter

When you’ve thought through the suggestions included in this chapter (and tried out the most relevant ones) you should be better able to:

- confront some of the behaviours (student ones and tutor ones) which can reduce the success of small-group work;
- decide the optimum size of student groups for particular collaborative tasks you set;
- choose the best way to establish the group membership for your purposes;
- select from a range of processes such as rounds, buzz-groups, syndicates, snowballing, fishbowls, crossovers, brainstorming and pair-dialogues, to help your students to learn productively and actively in small-group environments.

Why is small-group learning so important?

My aim in this chapter is to help colleagues increase the interest and diversity of the processes used in small-group work with students. A common theme running throughout this chapter is the need to help students to participate fully in small-group situations, so that the learning payoff they derive from such occasions is maximised.

Small-group learning may be more important than we think. When most people think about teaching in universities and colleges, the image that frequently comes to mind is of a large lecture theatre full of students listening intently (or not) to a lecturer in full spate of erudition. Actually, a large proportion of the most meaningful learning in higher education happens when students are working in small groups, in seminars, tutorials, practicals and laboratories. Moreover, even more learning can be happening in small-group situations beyond timetabled sessions, where students interact spontaneously with each other, and learn from each other. With increasing pressure on us all to deliver the curriculum in ever more efficient and effective ways, the means by which we manage small-group teaching, and harness the potential learning payoff, come under close scrutiny. This chapter is intended to help you to explore how we can do this to best effect.

Group learning is about getting people to work together well, in carefully set up learning environments. The human species has evolved on the basis of group learning. Learning from other people is the most instinctive and natural of all the learning contexts we experience, and starts from birth. Although learning can only be done by the learner, and can’t be done ‘to’ the learner, the roles of other people in accelerating and modifying that learning are vitally important. Other people can enhance the quality of our learning, and can also damage it. But which other people?
We hear much of collaborative learning, as if it’s the most natural activity in the world. But it often seems like the least natural, particularly amongst strangers. Sociological research tells us repeatedly that it is human nature not to be involved with people we don’t know. We might make a mistake, or look stupid, or be attacked. We will, however, get involved with people we do know. We’ll help them with their problems and even defend them. One key to working and learning with other people is, therefore, the ability to lower barriers and become friends with would-be strangers, while acknowledging differences and respecting different viewpoints.

Furthermore, much is now said about transferable skills, or key skills, particularly including oral communication skills, problem-solving skills, self-organisation skills, and reflection. Many of these skills can only be learned from, and with, other people, and can not be developed solely by reading and studying what others have written about them. It is now increasingly accepted that the most important outcomes of education and training are about developing people, and not just what people know or understand. Employers and managers plead for employees who are able to work well with others, and organise themselves. Working in small groups can allow students to embrace a range of interactive and collaborative skills which are often hard to develop in individual study situations, and impossible to develop in large-group environments such as lectures. The small-group skills are precisely those required in employment and research, where graduates need to be able to:

- work in teams;
- listen to others’ ideas sympathetically and critically;
- think creatively and originally;
- build on others’ existing work;
- collaborate on projects;
- manage time and processes effectively;
- see projects through to a conclusion;
- cope with the normal difficulties of interactions between human beings.

The last of these may be the most important of all. Learning in groups allows students to develop cohesion with their peers, when classes are becoming so large as to preclude feelings of whole-group identity, particularly under modular schemes where large cohorts of students come together from disparate directions to study together on a unit.

Group learning has never been as important as it now is. Yet we are still in a world where most teachers, educators and trainers are groomed in instruction rather than facilitation. Despite the increased status of group learning, there is nothing fundamentally new in people learning together.

Some lecturers find working with small groups more anxiety-provoking than lecturing, because of the necessity to work with students as individuals rather than in the anonymity of large groups. Sometimes there are worries about student behaviour, that they might become too challenging, disruptive or unfocused. Otherwise, there are often anxieties about organisational issues, like how to run a number of parallel seminars, based on a single lecture, with several tutors and research assistants working with different groups. This chapter addresses some of the reasons for persevering nevertheless, and offers some practical suggestions on overcoming a wide range of difficulties.

**Deciding on group size**

A number of choices exist about the selection of group size and group membership, depending on the context of the group work and the nature of the learning outcomes which are intended to
be achieved by students working in groups. If assessed work is to be an outcome of group work, it is worth thinking in advance how appropriate credit for the overall product can best be coupled with credit for individual contributions to the product, particularly where there is the possibility of the contributions being unequal.

There are no rights or wrongs to the following suggestions about ways of establishing student groups: basically it is best to make informed decisions (or inspirational leaps) based on the context and the occasion. It is useful to consider group size first.

The choice of group size will often depend on the size of the whole class, as well as on the size, shapes, and facilities available in the rooms in which small-group work is carried out. Sometimes, episodes in small-group format can be conducted even in a large, full lecture theatre, with groups being formed between students sitting close enough to participate together. However, the most important occasions where group size is likely to be crucial involve subdividing the students present at seminars, tutorials and practical classes.

**Pairs**

In some regards a pair is not really a group. It is usually relatively easy to group students in twos – either by choosing the pairs yourself, random methods, or friendship pairs. Advantages include a low probability of passenger behaviour, and the relative ease for a pair to arrange meeting schedules. However, pairs are good for small-scale tasks, where both students know each other well. Pairs can also be useful where a stronger student can help a weaker one. Problems can occur when pairs fall out, or either student is absent, or lazy or domineering. It is normally unwise to use the same pairs for long-term tasks, but useful to ring the changes of constitution of pairs over different tasks.

**Couples**

In any class of students, there are likely to be some established couples. When they work together on collaborative work, the chances are that they will put a lot more into group work than ordinary pairs, not least because they are likely to spend more time and energy on the tasks involved. The risks include the possibility of the couple becoming destabilised, which can make further collaborative work much more difficult for them.

**Threes**

Threes can work well, as communication between three people is still easy and work can often be shared out in manageable ways. Threes represent a very popular group size. The likelihood of passenger behaviours is quite low, and trios will often work well together, sharing out tasks appropriately. It is easier for trios to arrange meetings schedules than for larger groups. The most likely problem is for two of the students to work together better than with the third, who can gradually (or suddenly) become, or feel, marginalised. Threes can be difficult if two gang up on one, and the group is still fairly vulnerable if one member is often absent or when present doesn’t take an equal responsibility.

**Fours**

This is still quite small as a group size. Passenger behaviour is possible, but less likely than in larger groups. When subdividing group tasks, it can be useful to split into pairs for some activities,
and single individuals for others. There are three different ways that a quartet can subdivide into pairs, adding variety to successive task distribution possibilities. Fours can be very effective, and can be a good critical mass for sharing out large projects, with opportunities both for delegation and collaboration. Students with different abilities and qualities can play to their own strengths within a foursome, giving each member a chance to contribute something and feel valued. Fours do have a tendency, however, to split into two pairs, and tensions can arise. With four members (or any other even number) there is no possibility of a ‘casting vote’ if the group is evenly split between two courses of action.

**Fives**

Fives have many of the advantages of fours, and are a favoured group size for many tasks, not least because of the ‘casting vote’ opportunity when making decisions. There are sufficient people to provide a range of perspectives, but the group is not of unmanageable proportions. In a group this size, however, a determined slacker may still be able to hide, unless suitable precautions are taken. The possibility of passenger behaviour begins to increase significantly, and it becomes more important for the group to have a leader for each stage of its work. However, because of the odd number, there is usually the possibility of a casting vote when making decisions, rather than the group being stuck equally divided regarding a choice of action. There are many ways that a group of five can subdivide into twos and threes, allowing variety in the division of tasks among its members.

**Sixes**

The possibility of passenger behaviour is yet more significant, and group leadership is more necessary. The group can, however, subdivide into threes or twos, in many different ways. It is now much more difficult to ensure equivalence of tasks for group members.

**Seven to ten or so**

Such numbers are still workable as groups, but the larger the number, the greater the possibility of idlers loafing and shy violets being overshadowed by the more vociferous and pushy members of the group. It can be argued that groups of this size are only really viable if a really substantial task is to be undertaken and if considerable support and advice is given on project and team management. Such groups can still be useful for discussion and debate, before splitting into smaller groups for action. Passengers may be able to avoid making real contributions to the work of the group, and can find themselves outcasts because of this. When it is necessary to set up working groups which are larger than six, the role of the leader needs to change considerably. A skilled facilitator is needed to get a large group collaborating well. It can be advantageous for the facilitator to become somewhat neutral, and to concentrate on achieving consensus and agreement rather than attempting to set the direction of the group.

**Ways of forming groups**

Strict rules on how to form groups cannot be provided, as such decisions depend so strongly on context and purpose. The following discussion points out some of the advantages and disadvantages of different ways of constituting student group membership. There are many different ways
in which you can create groups of students from a larger class. All have their own advantages and disadvantages, and it is probably best to use a mixture of methods so that students experience a healthy level of variety of group composition, and maximise the benefits of learning from and with each other.

**Groups with some historical or social basis**

*Friendship groups*

If you let students select themselves into their own groups, often strategic, high-fliers will quickly locate each other, then the middle ability ones will realise what is happening and form groups among themselves, then the last ones left will tend to be the less able and they will clump together through lack of any alternative. Allowing students to arrange themselves into groups has the advantage that most groups feel a sense of ownership regarding their composition. However, there are often some students ‘left over’ in the process, and they can feel alienated through not having been chosen by their peers. Friendship groups may also differ quite widely in ability level, as high-fliers select to work with like-minded students. This method is effective if you want to be sure that marks will be distributed, but is not such a useful method of group selection if you want peers to support each other.

*Geographical groups*

Simply putting students into groups according to clusters as they are already sitting (or standing) in the larger group is one of the easiest and quickest ways of dividing a class into groups. This is likely to include some friendship groups in any case, but minimises the embarrassment of some students who might not have been selected in a friendship group. The ability distribution may, however, be skewed, as it is not unusual for the students nearest the tutor to be rather higher in motivation compared to those in the most remote corner of the room!

*Alphabetical (family name) groups*

This is one of several random ways of allocating group membership. It is easy to achieve if you already have an alphabetical class list. However, it can happen that students often find themselves in the same group, if several tutors use the same process of group selection. Also, when working with multicultural large classes, several students from the same culture may have the same family name, and some groups may end up as dominated by one culture, which may not be what you intend to occur.

*Other alphabetical groups*

For example, you can form groups on the basis of the last letter of students’ first names. This is likely to make a refreshing change from family-name alphabetical arrangements. Students also get off to a good start in seeing each other’s first names at the outset.

*Random groups*

Many tutors find this to be the easiest and fairest way of selecting groups of students to work together. Using lottery systems or random number generators, students are allocated to the
groups in which they are to work. Problems can arise using this method from difficulties with
group dynamics, particularly if the students have been given no preparation on how to be a good
team member. However, in industrial and commercial contexts, graduates are often required to
work in allocated teams, so this may be regarded as good preparation for real life. The following
ways of randomising group composition can add variety to student group work.

**Number groups**

When students are given a number (for example on a class list), you can easily arrange for differ-
ent combinations of groups for successive tasks, by selecting a variety of number permutations
(including using a random number generator if you have one on your computer). Groups of four
could be ‘1–4, 5–8, ... ’ for task 1, then ‘1, 3, 5, 7 and 2, 4, 6, 8, ... ’ then ‘1, 5, 9, 13’, and so on.

**Class list rotating syndicates**

Where a succession of small-group tasks is to be used, say with group size being four, it can be
worth making a printed list (or overhead transparency) of the whole class, and starting off by
forming groups by writing AAAA, BBBB, CCCC, DDDD, etc. down the list. Next time round,
write ABCD, ABCD, ABCD etc., so that everyone is in an entirely new group. Such rotation can
minimise the problems that can be caused by the occasional difficult or uncooperative student,
whose influence is then spread around, rather than lumbering the same group each time. It is
worth, however, avoiding the grouping being too much influenced by any alphabetical factors;
al too often students find themselves in alphabetically determined situations, and it is useful to
break free of this unwitting constraint in deciding group membership.

**Astrological groups**

When selecting group membership from a large class, it makes a change to organise the selec-
tion on the basis of calendar month of birthdate. Similarly, ‘star signs’ could be used – but not all
students know when (for example) Gemini starts and finishes in the year. This method often
leads to groups of somewhat different sizes, however, and you may have to engineer some trans-
fers if equal group size is needed. Participants from some religions may also find the method
bizarre or inappropriate.

**Crossovers**

When you wish to share systematically the thinking of one group with another, you can ask one
person from each group to move to another group. For example, you can ask the person with the
earliest birthday in the year to move to the next group clockwise round the room, carrying for-
ward the product or notes from the previous group and introducing the thinking behind that to
the next group. The next exchange could be the person with the latest birthday, and so on. When
doing this, you need to make sure that not too many students end up stuck in the same physical
position for too long.

**Coded name labels**

Often we want to mix students up in a systematic way so they work in small groups of different
compositions, and give and receive feedback from many more people than are involved in the
group size they are working in at any given time. One way of predetermining a wide variation in
group membership is to use sticky labels (or just small pieces of paper) to become each student’s
name-badge, also bearing a unique code as follows. A three-digit code of a Greek letter, normal
letter, and a number can lead to the possibility of all students finding themselves in three com-
pletely different groups for successive tasks. Six of each letters and numbers allows an overall
group of 36 students to split into different sixes three times, for example, with each student
working cumulatively with 15 other students.

Imagine that you have, for example, 25 students, and that the table below is your sheet of
sticky labels, and that you write on them codes of one Greek letter, one normal letter, and one
number, as follows.

<table>
<thead>
<tr>
<th>αA1</th>
<th>βA2</th>
<th>γA3</th>
<th>δA4</th>
<th>εA5</th>
</tr>
</thead>
<tbody>
<tr>
<td>αB2</td>
<td>βB3</td>
<td>γB4</td>
<td>δB5</td>
<td>εB1</td>
</tr>
<tr>
<td>αC3</td>
<td>βC4</td>
<td>γC5</td>
<td>δC1</td>
<td>εC2</td>
</tr>
<tr>
<td>αD4</td>
<td>βD5</td>
<td>γD1</td>
<td>δD2</td>
<td>εD3</td>
</tr>
<tr>
<td>αE5</td>
<td>βE1</td>
<td>γE2</td>
<td>δE3</td>
<td>εE4</td>
</tr>
</tbody>
</table>

Figure 4.1 Codes for 25 students

Give these labels out randomly (and ask students to write their names on them, especially when
it will be useful for them to become more familiar with each other’s names). Then you can use
three entirely different group configurations, each with five groups of five, as follows:
grouping by Greek letters;
• grouping by Latinate letters;
• grouping by numbers.

So, in this example, by the third group each student would have worked with 12 different students from the whole group of 25, and would have encountered entirely different students in each successive group.

Where the group tasks are successive stages of a larger whole, there is no need for whole group feedback on the first two tasks, because each individual can act as rapporteur on the outcomes of their previous task in the last configuration. This means that everyone is a rapporteur, and each group can benefit from everything which happened in all the groups without the repetition of plenary report-back. As with snowballing or pyramids, you can make the task at each stage slightly more difficult and ask for a product from the final configuration if desired.

Crossovers are useful in making sure everyone in the group is active and also help to mix students up outside their normal friendship, ethnic or gender groups. It takes a little forethought to get the numbers and letters right for the cohort you are working with. It can be useful to have some templates of the different number–letter combinations, so that you can cut up a sheet of paper or card and give students their individual numbers (this helps avoid the possibility of duplicating numbers when writing them out by hand in the actual session!). You can, however, do crossovers on the spur of the moment using ‘post-it’ labels and quick calculations.

An alternative to sticky labels as above is to use a pack of playing cards, especially when the total number of students in the room is around 50. You then have a large repertoire of ways of getting them into different group configurations.

Further ways of forming groups

Performance-related groups

Sometimes you may wish to set out to balance the ability range in each group, for example by including one high-flier and one low-flier in each group. The groups could then be constituted on the basis of the last marked assignment or test. Alternatively, it can be worth occasionally setting a task where all high-fliers and all low-fliers are put into the same group, with most of the groups randomly middle-fliers, but this (though appreciated by the high-fliers) can be divisive to overall morale.

Skills-based groups

For some group tasks (especially fairly extended ones), it can be worthwhile to try to arrange that each group has at least one member with identified skills and competences (for example, doing a web search, using a word-processing package, leading a presentation, and so on). A short questionnaire can be issued to the whole class, asking students to self-rate themselves on a series of skills, and groups can be constituted on the basis of these.

Hybrid groups

This is a compromise solution. You may sometimes wish to organise students by ability or in learning teams, and may at the same time wish to help them avoid feeling that they are isolated
from everyone they already know. You can permit students to select one other person they would like to work with, and then juggle pairs to ensure some balance of ability. This can work really well, but can be fraught with difficulty, for example, when pair choice is not coincident! It can also make for difficulties if you try to pair up two self-selecting high-fliers with two of the less able students: resentment and conflict can ensue. In order to avoid this problem, one can sometimes pair middle ability pairs, which make up the bulk, with more able and less able pairs, using one’s best judgement on factors such as friendship and cooperative ability. You need to recognise, however, that when group work is assessed, the likely mark achieved by each group can be affected by your choices and may not be seen as fair, even though it works well in adding value to most students’ learning experience.

Learning teams

If your aim is to build upon students’ prior experience and ability, it is possible to select group members with specific criteria in mind. You might suggest groups form themselves (or are formed by the tutor) into teams which include, for example, one with proven competence in numeracy, one with excellent communication skills, an IT specialist, someone fluent in a language other than English, someone with experience in the world of work, and so on. This provides the opportunity for team members to take account of each other’s divergent abilities and to value them. There may be problems with task allocation, however. Do you allocate the task of doing the drawings to the former draughtsperson or to the group member who is inexperienced in this kind of work? Do you give the IT tasks to the technophile or the technophobe? The team’s marks will be better if the former choice is made, but there may be more learning gain if the novice undertakes the task with guidance from the specialist. Will the team work to its strengths, and achieve the intended outcomes well, or should it be encouraged to work to its weaknesses and maximise the learning payoff resulting from the tasks? If group work is assessed, it is no surprise that teams will do the former. Forming learning teams also relies on the students and tutors having a good knowledge of prior abilities and competence and may take some considerable organisation.

Small-group process techniques

The most significant single enemy of small-group work with students is their non-participation. There is a wide range of small-group processes from which we can select a variety of ways to help students to learn actively. A balanced programme of different kinds of activities can then be devised which will promote learning to the satisfaction not only of external quality assessors but also of the students themselves, who are likely to benefit from being stretched. Effective small-group techniques help students derive increased learning payoff from the time students spend working together, by:

- enhancing their motivation to learn, by raising interest levels, and helping them see the relevance of the topics they are working with;
- giving them learning-by-doing opportunities, and allowing them to practise relevant activities, and to learn by trial and error in a safe and supportive environment;
- allowing students to gain a considerable amount of feedback from each other, and from the facilitator of the small-group session;
- helping students make sense of things that they are learning together, particularly by explaining things to each other, and making decisions together.
This chapter continues with some suggestions regarding how you may use each of eight different ways of helping students to be participative in group situations. Some lend themselves to large-group situations, and can be ways of helping interactive learning to occur in packed lecture theatres as well as in smaller-group settings.

1 **Rounds**

Where groups are not too large, say around twenty or fewer, go around everyone in the group and ask them to respond (for example) to a given sentence-starter, or to give a sentence or two about what they want to find out about the topic to be explored. People often use rounds as icebreakers or equally as part of the winding up of a session, when it can be productive to ask students for (for example) ‘one thing you learned, one thing you liked, and one thing you did not like’. Try not to make the round too daunting for students. It helps to provide some guidance on what is expected of them (for example, ‘I want everyone to give their name and then identify one aspect of the course programme they know nothing about but are looking forward to learning about’ or ‘let’s go round and find out which single aspect of today’s session has been most useful for each person’).

In big rounds, students can be quite nervous, so make it clear that it’s acceptable to say ‘pass’ and if people at the beginning have made your point, that concurrence with ideas expressed already is sufficient. Alternatively, ask everyone to write down the point they intend to give, for example on ‘post-it’ notes, and as the round continues stick all the ‘post-it’ notes on a chart or wall, so that they’re all seen to be equally important. Those students who are reticent orally are often less nervous when they’ve already jotted down the point they wish to contribute.

A drawback with rounds is that it can be boring if the group is large, and the answers are repetitive. Contributions late in the round tend not to be valued as they’re adding nothing new, and the contributors can feel their ideas are rejected.

2 **Buzz-groups**

Give pairs, threes, fours or larger subdivisions of the whole class, small, timed tasks which involve them talking to each other, creating a hubbub of noise as they work. Their outcomes can then be shared with the whole group through feedback, on a flip-chart sheet poster, on an overhead projector transparency or otherwise as appropriate. This technique can also work well in large-group lecture situations, though it is not usually appropriate to do more than collect the feedback from selected groups on such occasions, otherwise reporting-back becomes too tedious, repetitive and time consuming. The noise level in a large lecture theatre full of students ‘buzzing’ can be quite alarming for lecturers used only to the sound of one or two voices at a time, but when it is remembered that a lot of learning-by-explaining and learning through feedback is occurring in such a noisy room, the use of the time spent is certain to be accompanied by significant learning payoff.

Buzz-groups often work best when they’re buzzing about several different things at once. For example, in a large-group lecture, provide several buzz-group tasks, and get different groups of students addressing selected tasks. Report-back from buzz-groups is then not tedious or repetitive, and the interest level of the large group can be maintained.

3 **Syndicates**

This is a term often used to describe activities undertaken by groups of students working to a brief, usually issued by the tutor, but under their own direction. Syndicate activities can take
place within the room where a larger group is working, or can be briefed for things that student
groups go off and undertake on their own. For example, students in syndicates can be asked to
undertake literature searches, debate an issue, explore a piece of text, prepare an argument,
design an artefact, prioritise a list of options, prepare an action plan, or many other tasks. To
achieve productively, they will need an explicit brief, appropriate resources and a clear descrip-
tion of the intended outcomes.

Specialist accommodation is not always necessary; syndicates can work in groups spread out
in a large room, or, where facilities permit, go away and use social areas of the campus or desig-
nated areas of the learning resource centre. On crowded campuses, however, don’t just assume
that students will be able to find somewhere suitable to work. If the task is substantial, the tutor
may wish to move from group to group, or may be available on a ‘help desk’ at a central location,
or available by email online at specified times.

It is important to have clear (sometimes quite rigid) deadlines for syndicate report-back, as it
can be very tedious when punctual syndicates have to await tardier colleagues before a plenary
sharing session can begin. Outcomes from syndicate work may be delivered in the form of
assessed work from the group or produced at a plenary meeting of the whole class as report-
backs, or poster displays, and so on.

4 Snowballing

This is also known as pyramiding. Start by giving students an individual task of a fairly simple
nature such as listing features, noting questions, or identifying problems. Then ask them to work
in pairs on a slightly more complex task, such as prioritising issues or suggesting strategies.
Third, ask them to come together in larger groups, fours or sixes for example, and undertake a
task involving, perhaps, synthesis, assimilation or evaluation. Ask them, for example, to draw up
guidelines, or to produce an action plan, or to assess the impact of a particular course of action.
They can then feed back to the whole group if required.

It can be useful to issue sheets of overhead transparency, and brief the groups to report-back
using these to present summaries of their outcomes. If several groups are involved in feedback
on the same final task, it can become somewhat repetitive, and it is often useful to give separate
contributory elements of the overall task to different groups, so that interest levels are main-
tained during the final report-back stage.

5 Fishbowls

Fishbowling ad hoc: ask for a small group of up to half a dozen or so volunteers to sit in the mid-
dle of a larger circle comprising the rest of the group. Give the inner circle a task to undertake
that involves discussion, problem solving or decision-making, with the group around the outside
asking as observers. Usually it is worth having an agreed substitution process, to allow someone
from the outer circle to take the place of someone in the inner group, but only when both agree
on the exchange. Make the task you give the inner circle sufficiently simple in the first instance
to give them the confidence to get started. The levels of the tasks can be enhanced once students
have had practice and become more confident.

Fishbowling post hoc: where several groups have undertaken a task (or some complementary
tasks) in parallel, form the inner circle using one member from each group (a volunteer or a con-
script) and start the inner circle processing the findings of the groups. Arrange that substitution
can occur when necessary or when useful, for example to allow another group member from the
outer circle to come in when the representative already in the inner circle is stuck. This can be a useful method for managing students who are over-dominating a group, because it gives them permission to be the centre of attention for a period of time. After a suitable interval, you can ask others from the outer circle to replace them, thus giving the less vocal ones an opportunity for undisturbed airtime. Fishbowls can also be useful ways of getting representatives from buzz-groups to feed back to the whole group. Some students will find it difficult to be the focus of all eyes and ears, so it is as well not to coerce anyone to take centre stage (although gentle prompting can be valuable). A ‘tag wrestling’ version can be used, with those in the outer circle who want to join in gently tapping the shoulders of people in the middle whom they want to replace, and taking over their chairs and opportunities of talking. Fishbowls can work well with quite large groups too.

6 Brainstorming

This can be a valuable way of stimulating creative free-thinking and is particularly useful when looking for a solution to a problem or in generating diverse ideas. Start with a question like ‘How can we ...?’ or ‘What do we know about ...?’ and encourage the group to call out ideas as fast as you can write them up (perhaps use two scribes on separate boards if the brainstorm flows well). Make it clear that this is supposed to be an exploratory process, so set ground rules along the following lines:

- a large quantity of ideas is desirable, so everyone should be encouraged to input at whatever level they feel comfortable;
- quick snappy responses are more valuable at this stage than long, complex, drawn-out sentences;
- ideas should be noted without comment, either positive or negative: no one should say ‘That wouldn’t work because ...’ or ‘That’s the best idea we’ve heard yet’ while the brainstorm is in progress as this might make people feel foolish about their contributions or unduly narrow the focus of further contributions;
- participants should ‘piggy-back’ on each other’s ideas if they set off a train of thought;
- ‘logic circuits’ should be disengaged, allowing for a freewheeling approach.

It can be useful to generate these rules with the group at the start of the brainstorm, and write them up on a flipchart or overhead transparency so that everyone remains aware of them.

Alternatives to these ground rules include gathering contributions from everyone in turn, and allowing people to say ‘pass’ if they have nothing to add at the time. This helps to prevent the products of the brainstorm being unduly influenced by those members of the group who are most vocal or who have most ideas, though it can be argued that this is not brainstorming in the truest sense. The mass of ideas thus generated can then be used as a basis for selection of an action plan, a programme of development, or a further problem-solving task. One of the most effective ways of following up a brainstorm is to get everyone involved in some sort of prioritisation of the products. For example, everyone can be invited to vote for their own top three of the things written up on the flipcharts, maybe giving three points to what they consider to be the most important point, two for the next most important point, and so on. The numbers can then be added up, and a global view of the prioritisation can be seen. It can be useful to get students to vote ‘privately’ first, so that voting does not become influenced by the initial trends that may be seen as votes begin to point towards favourite items.
7 Pair dialogues: ‘Five (or three) minutes each way’

This can be a useful way of getting students to make sense of their own thinking on a topic or an issue, by explaining and articulating their views uninterrupted for a few minutes. Ask students in pairs to take it in turn alternatively to speak and to listen, talking without being interrupted for a few minutes on a given topic. They might find this quite difficult at first, but it is an excellent way of getting students to articulate their ideas, and also means that the quieter students are given opportunities to speak and be heard in a non-threatening situation.

The art of listening without interrupting (other than with brief prompts to get the speaker back on target if they wander off the topic) is a useful one that many students will need to foster too. The products of such pair work can then feed into other activities.

**Leading and following**

Student group work, particularly when there is not the presence of a tutor, can depend a great deal on the skills which the group leader brings to bear on the group. However, no amount of leadership can work on its own, without a substantial investment in ‘followership’ by those who don’t happen to be leading at the time.

The following discussion highlights some of the important attributes needed to make the most of followership. There will always need to be more followers than leaders. We all know the problems that occur when too many people try to lead a group! The suggestions below may help you to ensure that your leaders have skilled followers. They may also help to optimise the learning that can be achieved through well thought-out following.

1 **Brief groups about the importance of followership.** It can be important to legitimise followership as a vital factor to underpin the success of group work.

2 **Explain that followership should not be regarded as weakness.** When leadership is rotating between group members, they should regard their work when not leading as every bit as important as when they are directing the actions of the group.

3 **Accept that followership requires well developed skills and attributes.** For example, patience may be needed. When it takes a little time for the purpose or wisdom of a leadership decision to become apparent, it is sometimes harder to wait for this to happen than to jump in and try to steer the group, or argue with the decision.

4 **More followers than leaders are needed!** It is virtually impossible to have a successful group where all members are adopting leading stances at the same time. Though the credit for successful group work is often attributed to the leader, it is often the followers who actually own the success. It is more than good sense to acknowledge this right from the start of any group-work situation.

5 **Followership is a valuable, transferable key skill.** In all walks of life, people need to be followers at least for some of the time. It can be useful to employ group-work situations to help people to develop skills that will make them good followers in other contexts of their lives and careers.

6 **Good followership is not the same as being ‘easily led’.** Being ‘easily led’ usually is taken to imply that people are led into doing things against their better judgement. Good followership is closer to being easily led when the direction of the task in hand coincides quite closely to individuals’ own judgement.
7 Followership should not be blind obedience! Encourage group members to think about how they are following, why they are following, for how long they are going to be content with following, and what they are learning through following.

8 Suggest that group members experiment with a ‘followership log’. This could be private notes to themselves of their experiences of being led, but it is more important to make notes on their feelings as followers than to write down criticisms of the actions of the leaders. Whether the logs are treated as private or shared notes can be decided later by everyone involved in a group.

9 Legitimise followership notes as authentic evidence of the operation of a group. Such notes can tell their own stories regarding the relative contributions of members of the group, and the group processes that worked well, and those which worked badly. When it is known that followership records will count towards the evidence of achievement of a group, leadership itself is often done more sensitively and effectively.

10 Followership is vital training for leadership. People who have been active, reflective followers can bring their experience of followership to bear on their future leadership activities. Having consciously reflected on the experience of following informs leadership approaches, and makes their own leadership easier for others to follow.

11 Good followership is partly about refraining from nit-picking. When people have too strong a desire to promote their individuality, it often manifests itself in the form of expending energy in trying to achieve unimportant minor adjustments to the main processes going on in group work. Good followership involves adopting restraint about minor quibbles, and saving interventions for those occasions where it is important not to follow without question.

What goes wrong in small groups?
Small-group teaching can provide excellent opportunities for participants to get to know each other, come to grips with their subject and learn actively and yet small-group format classes are often seen by students as of questionable value compared to lectures and one-to-one sessions. Talking to students, they often express confusion about the tasks involved and uncertainty about their role, as well as lack of confidence about participating. They criticise tutors for inconsistency of approach and treatment, for disorganisation and lack of structure and for hogging the sessions with their own views and opinions.

When things go wrong, sometimes it’s the fault of the group members themselves. Sometimes the blame can be directed at the facilitator. In this section, I look in turn at some of the most common ‘damaging behaviours’, and offer for each a few suggestions that can alleviate the problems that can result from them.

Group member behaviours which damage group work
The following section looks at a range of student behaviours which can damage or even destroy group work. These are based on the experience of many facilitators. For each of these behaviours, some tactics are offered below as to how facilitators can reduce the effects on group work.
Group members being late

Sometimes lateness is unavoidable, but even then it is seen as time-wasting for the group members who have managed to be punctual. Here are some approaches from which facilitators can select, to reduce the problem.

1. **Lead the group towards including an appropriate ground rule on punctuality.** If the group members feel a sense of ownership of such a ground rule, they are more likely to honour it.

2. **Point out that punctuality is related to courtesy.** Remind group members that when one of them is late, it is an act of discourtesy to all the other people who have been kept waiting, including the group facilitator if present.

3. **Lead by example – don’t be late yourself!** If the facilitator is late, it is not surprising that group members can fall into bad habits. Your own actions are seen as a reflection of how you value group learning.

4. **Make the beginning of group sessions well worth being there for.** If group members realise that they are likely to miss something quite important in the early minutes of a group session, they are likely to try harder to be punctual.

5. **Give out something useful at the start of the session.** For example, issue a handout setting the scene for the session, or return marked assignments straightaway as the session starts.

6. **Avoid queuing.** If the place where a group meeting is due to be held is frequently still occupied at the starting time for the group session, it can be worth rescheduling the group for five or ten minutes later, so that a prompt, punctual start can be made then, without those who arrive early having to hang around.

Group members not turning up at all

This is one of the most common complaints made by facilitators. Student non-attendance can have a serious effect on group work, and a variety of approaches (and incentives) can be used to address the problem, including those listed below.

1. **Ensure that it really is worth turning up.** If group members are not getting a lot out of group sessions, they naturally value them less, and this can lead to them being lower priority than they could have been.

2. **Keep records of attendance.** Simply making notes of who’s there and who’s not gives the message that you’re really expecting students to turn up and join in. If keeping records isn’t enough, see below ...

3. **Assess attendance.** For example, state that 10 per cent of the coursework element of a programme of study will be based solely on attendance. This is one way of making quite dramatic improvements in attendance at small-group sessions. However, the downside of this way of inducing students to attend is that some group members may be there in body but not in spirit, and can undermine the success of the group work.

4. **Issue something during each session.** Students don’t like to miss handouts, task briefings, or the return of assessed work. It is important to make missed paperwork available to students who could not have avoided missing a session, but don’t be too ready to do so for those who have no real reason for absence.

5. **Cover some syllabus elements only in small-group sessions.** When students know that these elements will be assessed alongside those covered in lectures, and
so on, their willingness to attend the small-group sessions increases.

6 **Don’t cancel small-group sessions.** Students are quick to pick up the message that something which has been cancelled could not have been too important in the first place. This attitude then spreads to other people’s small-group sessions.

**Group members not preparing**

Group members can get far more out of small-group sessions if they have done at least some preparation for them. However, many teachers and facilitators complain that students still arrive without having thought in advance about what the session will be covering. It is difficult to cause every group member to come prepared, and over-zealous attempts to do this are likely to cause unprepared students to decide not to come at all. The following suggestions may help you to strike a workable balance between getting well-prepared students, and frightening them off.

1 **Help students to structure their preparation.** For example, issuing an interactive handout for them to complete and bring to the forthcoming session is better than just asking them to ‘read Chapter 3 of Smith and Jones’. You could ask them to ‘research your own answers to the following seven questions using Chapter 3’ instead, and leave spaces beneath each question for them to make notes as they read.

2 **Don’t fail to build on their preparations.** If group members go to the trouble of preparing for a session, and then nothing is done with the work they have done, they are discouraged from preparing for the next session.

3 **Try starting each session with a quick quiz.** Ask everyone one or two short, specific questions, and perhaps ask respondents themselves to nominate the recipient of your next question. This is a way of building on the preparation work that students have done, and making sure that everyone is included, rather than just those who are most forthcoming when you ask questions.

4 **Consider asking them to hand in their preparations sometimes.** This does not necessarily mean that you have to assess them, but you could sift through them while group members were busy with an activity, to gather a quick impression of who was taking preparation seriously. The fact that you did this occasionally would lead to students not wishing to be found lacking should it happen again, and lead to better levels of preparation.

5 **Get them to peer-assess their preparations sometimes.** This has the advantage that they can find out how their own learning is going, compared to other students. It also helps them learn from feedback from each other, and the act of giving a fellow student feedback is just as useful as receiving feedback.

**Group members not doing their jobs**

A lot of time can be wasted when group members go off on tangents to their intended tasks, or procrastinate about starting the next stage of their work. Work-avoidance is human nature at least for some of the time for some people! The following approaches may help you to keep your group members on task.
Making small-group teaching work

1. **Check that it really is disruption.** If you’re a passing spectator to different groups, you may happen to arrive at one particular group just at the moment when one of its members is expressing a strong feeling, or arguing a point relatively forcefully. This may be fine with the other members of the group, and it gives the wrong message if the facilitator assumes the worst.

2. **Find out why a person is being disruptive.** Sometimes there are identifiable reasons for such behaviour, for example when a group as a whole has become dysfunctional, or when the task briefing is being interpreted in different ways by group members.

3. **Set structured tasks, with staged deadlines.** Most effort is expended as the deadline approaches, especially if students will be seen to have slipped if their task is not completed by a deadline. Act as timekeeper if you are facilitating group work: gentle reminders such as ‘six minutes to go, please’ can cause a lot of work to be done.

**Group members being disruptive**

Group work is often damaged by one or more participants whose behaviour slows down or diverts the work of others. Disruption is more of a problem in small-group contexts than in formal lectures, for example, as it takes less courage to be disruptive in informal settings. Sometimes there is no easy solution for disruptive behaviour, but the following suggestions may help you to solve some such occurrences.

1. **Check that it really is disruption.** If you’re a passing spectator to different groups, you may happen to arrive at one particular group just at the moment when one of its members is expressing a strong feeling, or arguing a point relatively forcefully. This may be fine with the other members of the group, and it gives the wrong message if the facilitator assumes the worst.

2. **Find out why a person is being disruptive.** Sometimes there are identifiable reasons for such behaviour, for example when a group as a whole has become dysfunctional, or when the task briefing is being interpreted in different ways by group members.

3. **Watch for the same group member being disruptive repeatedly.** It is then usually worth talking to the person concerned, to find out why this may be happening. If this does not improve the situation, it may be necessary to reconstitute the membership of groups for successive tasks, so that the disruptive element is fairly distributed across a wider range of students, rather than a particular group becoming disadvantaged by recurring disruption.

**A group member dominating**

These can be among the most serious enemies of effective group learning. They need to be handled with considerable sensitivity, as their ‘taking over’ the work of a group may be well-intentioned.
There are many ways in which group learning facilitators can damage group work. Sometimes facilitators know about the things they do which undermine the success of group work, but more often they simply are not aware that things could be improved. When facilitators know they have a bad habit, it would be tempting to simply advise ‘stop doing it!’, but often this could lead to the reply ‘yes, but how?’. The following list of facilitator ‘faults’ is rather longer than the students’ damaging behaviours already discussed, but it can be argued that facilitators are able to address their own shortcomings even more directly than they can help students to address theirs. As before, each situation is annotated with some suggested tactics for eliminating or reducing the various kinds of damage which can occur.

**Facilitator ignoring non-participants**

It is tempting to ignore non-participants, hoping either that they will find their own way towards active participation, or that other group members will coax them out of inactivity. Alternatively, facilitators sometimes take the understandable view that ‘if they don’t join in, they won’t get as much out of the group work, and that’s really up to them to decide’. However, there are indeed some straightforward steps, from which facilitators may select, to make positive interventions to address the problem of non-participation as and when they see it.
Remind the whole group of the benefits of equal participation. This is less embarrassing to the non-participants themselves, and can be sufficient to spur them into a greater degree of involvement.

Clarify the group learning briefing. Place greater emphasis on the processes to be engaged in by the group, and less on the product that the group as a whole is to deliver.

Consider making the assessment of contribution to the work of the group more explicit. When non-participants know that participation counts, they are more likely to join in.

Confront a non-participant directly. This is best done tactfully of course. The simple fact that it was noticed that participation was not enough is often enough to ensure that the situation does not arise again.

Try to find out if there is a good reason for non-participation. There often is. Sometimes, for example, a non-participant may find it difficult to work with one or more particular people in a group situation, because of pre-existing disagreements between them. It may then be necessary to consider reconstituting the groups, or see whether a little ‘group therapy’ will sort out the problem.

Explore whether non-participation could be a cry for help. The act of not joining in to the work of a group can be a manifestation of something that is going badly for non-participants, possibly in an entirely different area of their learning or their lives in general.

Check, with care, whether the problem is with the work rather than the group. Non-participation can sometimes arise because of the nature of the task, rather than being anything to do with the composition or behaviour of the group. For example, if the group-learning task involves something to do with researching the consumption of alcoholic beverages, it is not impossible that someone whose religion forbids alcohol resorts to non-participation.

Check whether non-participation could be a reaction against the facilitator. If someone does not like the way that you are organising some group learning, their reaction could be not to join in.

Have a quiet word with the domineer. This is often enough to solve the problem. Having been seen to be too domineering is usually enough to make a domineer stop and think.

Get the whole group to do a process review. For example, give them a relatively straightforward collaborative task to do, then ask them all to review who contributed most, why this happened, whether this was fair, and whether this is what they want to happen with the next (more important) group-learning task.

Watch out for why people dominate. Sometimes, it’s because they are more confident, and it’s important not to damage this confidence. It can be better to acknowledge group members’ confidence and experience, and gently suggest to them that they need to help others to develop the same, by being able to participate fully in the actions of the group.
Facilitator not having prepared adequately

We’ve already explored some of the tactics that can be used to solve the problem of lack of preparation by group members. This time, the issue is lack of preparation by the facilitator. The short answer is, of course, ‘prepare’. However, the results of this preparation need to be visible to group members. The following approaches can help to ensure that group members can see that you are taking group work as seriously as you want them to do.

1 Make it obvious that you have prepared specially for the group session. There are many ways of allowing your preparations to be visible, including:

- coming armed with a handout relating to the particular occasion, rather than just any old handout;
- having researched something that has just happened, ready to present to the group as material for them to work on;
- arriving punctually or early, to avoid the impression you were delayed by getting your own act together ready for the session;
- making sure that you have indeed done anything you promised to do at the last meeting of the group.

2 Keep records of group sessions, and have them with you. You would not arrive to give a lecture or presentation without having your notes and resources with you, and doing the same for group sessions gives the message that you take such sessions just as seriously as larger-scale parts of your work.

Facilitator being too didactic or controlling

This is one of the most significant of the facilitator behaviours which can damage group learning, and experienced facilitators can be the most vulnerable! The quality of group learning is greatly enhanced when students themselves have considerable control of the pace and direction of their own learning. The following suggestions may alert you to any danger you could be in.

1 Don’t try to hurry group learning too much. It is particularly tempting, when you know very well how to get the group to where it needs to be, to intervene and point out all the short cuts, tips and wrinkles. It is much better, however, for group students to find their own way to their goals, even when it takes somewhat longer to get there.

2 Hide your knowledge and wisdom sometimes. In other words, allow group members to discover things for themselves, so that they have a strong sense of ownership of the result of their actions. As mentioned previously, this may be slower, but leads to better learning. Don’t, however, make it show that you are withholding help or advice. When you feel that you may be giving this impression, it is worth declaring your rationale, and explaining that it will be much better for your group students to think it out for themselves before you bring your own experience to their aid.

3 Allow group students to learn from mistakes. Tempting as it is to try to stop students from going along every blind alley, the learning payoff from some blind alleys can be high. Help them back from the brick wall at the end of the blind alley, rather than trying to stop them finding out for themselves that there is a brick wall there.

4 Plan processes rather than outcomes. It is well worth spending time organising the ways that group students can work
Facilitator showing lack of cultural sensitivity

This is a serious group-damaging behaviour. In fact, lack of cultural sensitivity can be more dangerous in small-group situations than in large-group ones. It is also one of the hardest areas to find out about. Few people are brave enough to challenge a group-learning facilitator with this crime! It is useful for even the most skilled group-learning facilitators to undertake a regular self-audit on this issue. The following tactics can help.

1 Read about it. There is no shortage of published material on equal opportunities, cultural issues, and so on. Sometimes when reading this literature, one can be surprised by the thought ‘but sometimes I do this too!’.

2 Watch other group-learning facilitators, with this agenda in mind. See what they do to avoid the pitfalls, and also notice when they fall into them. Work out alternative approaches which could have circumvented such problems.

3 Don’t make assumptions. It is particularly dangerous to bring to your role of learning facilitator any preconceptions about the different members of your groups, such as those based on gender, age, ethnic group, perceived social status, and any other area where assumptions may be unwise and unfounded. Treating people with equal respect is an important part of acknowledging and responding to individual difference.

4 Talk to group members individually. When you are working with a mixed group, for example, it is in your informal, individual conversations with members of the group that you are most likely to be alerted to anything which could be offending individuals’ cultural or personal perspectives.

5 Ask directly sometimes. It is important to pick your times wisely, and to select people who you believe will be willing to be frank with you if necessary. Rather than asking too directly (for example, ‘What do I do which could be culturally insensitive?’), it can be useful to lead in more gently, for example, ‘What sorts of learning experiences do you find can be damaged by people who are not sensitive enough culturally?’; ‘How does this happen usually?’; and so on.

Facilitator favouring clones!

This happens more often than most people imagine. It is noticed straightaway by everyone else in the group! It can go entirely unnoticed by the perpetrator. It is, of course, perfectly human to wait for it. To get feedback on important things (such as whether or not you are being too didactic or controlling) there’s no faster way than asking for exactly that.

6 Learn from selected colleagues. Feedback from other group-learning facilitators is always useful. However, it is worth going out of your way to seek feedback from colleagues who have a particular gift for making group learning productive, and being duly selective in the tactics you add to your own collection.
have ‘warmer’ or ‘more empathetic’ feelings and attitudes towards someone who is more like oneself than other people, or who shares significant attitudes, values, and even ‘looks’. In particular, teachers of any sort can be flattered and encouraged when they recognise ‘a disciple’ among a group of people. If you think you could be in danger of indulging in this particular behaviour, think about which of the following approaches may be most helpful to you.

1 Go clone detecting! From time to time, think around the types of people who make up learning groups you work with, and test out whether any of them are more like you are (and particularly more like you were) than the others. Then watch out for any signs that you could be treating them differently (even if only slightly).

2 Don’t over-compensate. It is just as dangerous to be too hard on clones as to favour them. The person concerned may have no idea at all why you are being harder on them than on other people. The people you might (consciously or subconsciously) regard as clones may have no inkling that they are in this special position! Subconsciously, you could be putting them under the same sort of pressures as you put yourself under long ago, and exacting of them the standards you applied to yourself.

**Facilitator talking too much**

This is one of the most common of all group-learning facilitator bad habits. However, it is just about the easiest to do something about. The following suggestions should contain all you need to rectify this problem, if you own it.

1 **Remind yourself that most learning happens by doing, rather than listening.** Concentrate on what your group students themselves do during group sessions, rather than on what you do.

2 **Don’t allow yourself to be tempted into filling every silence.** In any group process, short episodes of silence are necessary components, space for thinking. When you happen to be expert enough to step in with your thoughts, before other people have had time to put theirs together, it is all too easy to be the one to break the silence. What seems to you like a long silence, seems much shorter to people who are busily thinking. Let them think, then help them to put their thoughts into words. When they have ownership of putting together ideas and concepts, their learning is much deeper and more enduring.

3 **Only say some of the things you think.** Being the expert in the group (you probably are!), you’re likely to know more than anyone else about the topic being addressed. You don’t have to reveal all of your knowledge, just some of it. Don’t fall into the trap of feeling you have to defend your expertise, or that you need to justify your position.

4 **Don’t let them let you talk too much!** It’s easier for group members to sit and listen to you than to get on with their own thinking. Sometimes, they can encourage you to fill all of the time, and opt for an easy life.

5 **Present some of your thoughts (particularly longer ones) in print.** Use handouts to input information to the group, but not at the expense of getting group members to think for themselves. You can convey far more information in five minutes through a handout than you could in five minutes’ worth of talking. People can read much faster than you can speak and, in any case, they can read a handout again and again – they can’t replay you speaking (unless they’re recording it – and even then, would they really replay it all again?).
Facilitator not providing clear objectives

In education and training it is increasingly accepted that objectives, or intended learning outcomes, have a vital part to play in ensuring that learning takes place successfully. This is no less true of small-group work than lectures. Moreover, the absence of clear objectives for group work is only too readily taken by students as a signal that the group work can’t really be an important part of their overall learning. The following suggestions may help you to put objectives or statements of intended learning outcomes to good use in facilitating group learning.

1 Work out exactly what you intend each group learning session to achieve. It is best to express this in terms of what you intend students themselves to gain from the session. Make sure that the learning outcomes are expressed in language that students themselves can readily understand, so that they see very clearly what they are intended to achieve.

2 Publish the learning outcomes or objectives in advance. This allows students to see where any particular group session fits in to the overall picture of their learning. It also helps them to see that their group learning counts towards their assessment in due course.

3 Maintain some flexibility. For example, it is useful to have some further objectives for any group session, designed to cover matters arising from previous sessions, or to address students’ questions and needs as identified on an ongoing basis through a programme of study. These additional objectives can be added to the original intentions for the session, and re-prioritised at the start of the session if necessary.

4 Don’t just write the objectives or outcomes – use them! State them (or display them on a slide, or issue them on a hand-out) at the start of each and every group session, even if it is continuing to address a list of intended outcomes which were discussed at previous sessions.

5 Assist students in creating their own objectives. From time to time, ask them ‘what do you need to gain from the coming group session?’, for example giving them each a ‘post-it’ note on which to jot down their replies. Then stick the notes on a chart (or wall, or door, or markerboard), and ask the group to shuffle them into an order of priority, or to group them into overlapping clusters.

A closer look at tutorials

In this chapter so far, we’ve looked in general terms at the processes of students working together. In the next section, let’s think of the most common small-group scenario: that of the academic tutorial, where a tutor is present alongside a small number of students. How many students make a tutorial? It used to be the case, in many universities, where a tutorial was either a one-to-one encounter between a student and a tutor, or a tutor working with a group of no more than four or five students. With present-day class sizes, elements that appear on the timetable as ‘tutorials’ can in some disciplines and in some universities involve significantly larger numbers of students than five.

What’s an academic tutorial?

Everyone who is involved in tutorial work with students agrees that there is no clear dividing line between academic and personal tutorials. Academic tutorials are subject-related, while personal tutorials are normally thought of in terms of development of the ‘whole student’, but either kind
of tutorial is likely to spill over into the other domain. In this chapter, I would like to flag this overlap now at the outset, but then focus on aspects of academic tutorials and other kinds of small-group teaching–learning situations, recognising that quite a lot of the discussion can be translated to personal tutorials too.

There is no agreed definition of a tutorial, and this is probably wise, as tutorials should fulfil any one or more different roles. These may include:

- to provide students with opportunities to learn-by-doing, practising applying things that have been covered in lectures, handouts, and learning packages;
- to address students’ motivation, helping to increase their confidence in their abilities to handle the curriculum successfully;
- to provide students with feedback, from each other as well as from the tutor, helping them to find out more about how their learning is progressing;
- to give teaching staff opportunities to find out what problems students may be encountering with the subjects they are learning;
- to help students ‘digest’ or make sense of the concepts they are learning;
- to allow students to ask questions which they may not be able to ask in large-group sessions.

However, the above description does not amount to a definition of a tutorial, but only serves as a description of some of the processes likely to be involved in the sort of tutorials that help students to get to grips with the curriculum.

**What’s a personal tutorial?**

These are usually regarded as one-to-one encounters between a student and a tutor, but where the purpose is not to extend or deepen the academic understanding of the subjects being studied, but to support the student’s learning in a much broader sense. The tutor may be one of the lecturers involved in the student’s course, or may be a teaching assistant or research assistant with some tutorial duties. Students are often assigned a ‘personal tutor’ for the duration of a year of their course, or for their entire time at university. These tutors are normally expected to exercise a counselling or advising role when necessary, on the wide agenda of anything that may be causing concern to their respective students. However, the success of personal tutorial support is, at best, patchy. Some tutors take it very seriously, and put themselves out to get to know their students well, and to remain well briefed on the progress of each student. For many students, however, their personal tutor is just a name.

A result of this situation is that for most students, the majority of personal tutoring happens in the context of the contact they have with academic staff in those teaching–learning situations where the staff–student ratio is low enough for advice and counselling to be available, and that often means in what are intended to be academic tutorials.

**What can students do before academic tutorials?**

It’s often argued by teaching staff that a problem with tutorials is that students just don’t do the preparatory work they were intended to undertake before attending tutorials. However well-briefed students are, it seems inevitable that some will turn up without having done any such work, and others will decide to miss the tutorials altogether, feeling guilty that they have not put sufficient time or energy into preparing for them.
Some ways of maximising the probability that students will engage with preparatory work include:

- giving work briefings in print rather than orally; this increases the chance that students not present at the briefing will get copies of it;
- issuing tutorial briefings on sheets of a particular colour rather than just on white paper; this helps students not to lose such briefings amongst other papers;
- making briefings sheets interactive: for example include some structured questions with boxed spaces for students to write their answers or conclusions in. This makes it much easier to spot who has done some preparation and who has not – and students don’t like to be seen not to have written something into the boxes;
- arranging that coursework to be handed in for assessment is gathered in at tutorials. This can help to ensure that students attend, if only to hand in their work. It also allows tutorials to be used to discuss problems students may have encountered with the coursework, before they have forgotten exactly what the problems were;
- including in tutorial time activities such as student self-assessment and peer-assessment, depending on preparation that students are required to have done before participating.

It can be worth exploring possibilities of students doing collaborative work before tutorials, such as meeting together (without a tutor) to help identify common problems and questions, to establish an agenda for forthcoming tutorials – or better still, perhaps, for forthcoming large-group sessions.

What can students do during academic tutorials?

It is probably best to start by looking at things that students shouldn’t be doing in academic tutorials. These include activities with low learning payoff, including:

- making notes just by copying down things said by the tutor, or things written on the board or screen;
- spending most of the time listening passively, while one or two students dominate the discussion;
- pretending that they understand what is being discussed, rather than admitting to having problems with the material.

There are many varieties of activity with high learning payoff that students can engage in during academic tutorials. These include (but are by no means restricted to):

- solving problems or doing calculations, either individually or collaboratively;
- discussing different perspectives on an issue;
- working out different ways of approaching a problem or case-study situation;
- applying assessment criteria to their own, or each other’s work;
- marking examples of past students’ assignments or exam answers;
- asking the tutor questions, or working out agendas of matters for future tutorial exploration;
- answering questions posed by each other and by the tutor;
- doing exercises helping them to apply, and make sense of, material covered in lectures;
Practical pointers for group work

Already in this chapter are many suggestions for recognising and responding to some of the things that can go wrong with small group teaching. Some additional tips are included below, adapted from many more in ‘500 Tips on Group Learning’ (Race 2000).

Getting groups started

Once group work has gathered momentum, it is likely to be successful. The greatest challenge is sometimes to get that momentum going. The first few minutes can be crucial, and you will need all of your facilitation skills to minimise the risk of groups drifting aimlessly in these minutes. Take your pick from the following suggestions about getting group work going right from the start of a task.

1 Foster ownership of the task. Wherever possible, try to arrange that the members of the whole group have thought of the issues to be addressed by small-group work. When possible, allow members to choose which group task they wish to engage in. When people have chosen to do a task, they are more likely to attempt it wholeheartedly.

2 Start with a short group icebreaker. Before getting groups under way with the main task, it can be useful to give them a short, ‘fun’ icebreaker so that each group’s members get to know each other, relax, and become confident to work with each other. See the next section for some ideas about icebreakers.

3 Keep the beginning of the task short and simple. To Einstein is attributed ‘everything should be made as simple as possible, but no simpler’. Make sure that the first stage of each group task is something that does not cause argument, and does not take any time to interpret. Once a group is under way, it is possible to make tasks much more challenging.

4 Don’t rely only on oral briefings. Oral briefings are useful, as they can add the emphasis of tone of voice, facial expression, and body language. However, when only oral briefings are given for group-learning tasks, it is often found that after a few minutes different groups are attempting quite different things.

5 Use printed briefings. It is useful to put the overall briefing up on an overhead transparency or PowerPoint slide, but if groups then move away into different syndicate rooms, they can lose sight (and mind) of the exact briefing. It is worth having slips of paper containing exactly the same words as in the original briefing, which groups can take away with them.

6 Visit the groups in turn. It can make a big difference to progress if you spend a couple of minutes just listening to what is happening in a group, chipping in gently with one or two useful suggestions, then moving on. During such visits, you can also remind groups of the deadline for the next report-back stage.

7 Clarify the task when asked. Sometimes, groups will ask you whether you mean one thing or another by the words in the briefing. It is often productive if you are able to reply ‘either of these would be an interesting way of interpreting the task; you choose which interpretation you would prefer to address’. This legitimises the group’s
Icebreakers: some ideas

There are countless descriptions of icebreaking activities in books and articles on training; see particularly the book by Jaques (2000) in ‘Further Reading’. An icebreaker is most needed when members of a group don’t already know each other, and when the group is going to be together for some hours or days. Most icebreakers have the main purpose of helping individuals get to know each other a little better. Here are some ideas to set you thinking about what the most appropriate icebreakers could be for your own groups. Some icebreakers can be very quick, acting as a curtain-raiser for the next activity. Others can be extended into larger-scale activities at the start of a major group project. Don’t try to rush these.

1 **Triumphs, traumas and trivia.** Ask everyone to think of one recent triumph in any area of their lives (which they are willing to share), and ask them to think of a trauma (problem, disaster, and so on), and something trivial – anything that may be interesting or funny. Then ask everyone in turn to share a sentence or so about each. Be aware that this activity often brings out a lot of deep feelings, so keep this for groups whose members need to know each other well, or already do so.

2 **What's on top?** This can be a quick way of finding out where the members of a group are starting from. Ask everyone to prepare a short statement (one sentence) about what is, for them, the most important thing on their mind at the time. This helps people to clear the ground, perhaps if they are (for example) worrying about a sick child, or a driving test, and enables them then to park such issues on one side, before getting down to the real tasks to follow.

3 **What's your name?** Ask everyone in turn to say their (preferred) name, why they were called this name, and what they feel about it. This not only helps group members to learn each other’s names, but also lets them learn a little about each other’s backgrounds, views, and so on. Bear in mind that some people don’t actually like their names much, so make aliases acceptable.

4 **Pack your suitcase.** Ask individuals to list ten items that they would metaphorically pack into a suitcase if they were in a disaster scenario. Emphasise that these items wouldn’t have to literally fit into a suitcase, and could include pets, but
shouldn’t include people. Ask them to mill around a large room, finding a couple of others who share at least two items from their list. This enables them to get into groups of three or four, with plenty to talk about, before you get them started on the actual group work.

5 **What I like, and what I hate.** Ask everyone to identify something that they really like, and something they really loathe. Ask them then to introduce themselves to the rest of the group, naming each thing. This helps people to remember each other’s names, as well as to break down some of the barriers between them.

6 **What do you really want?** Ask everyone to jot down what they particularly want from the session about to start, and to read it out in turn (or stick ‘post-it’ notes on a flipchart, and explain them). This can help group members (and facilitators) to find out where a group is starting from.

7 **What do you already know about the topic?** Ask everyone to jot down, on a ‘post-it’ note, the single most important thing that they already know about the topic that the group is about to explore. Give them a minute or so each to read out their ideas, or make an exhibition of them on a flipchart. This helps to establish ownership of useful ideas within the group, and can help facilitators to avoid telling people things that they already know.

8 **Draw a face.** Ask everyone to draw on a scrap of paper (or ‘post-it’ note) a cartoon ‘face’ showing how they feel at the time (or about the topic they’re going to explore together). You may be surprised at how many ‘smiley faces’ and alternatives that can be drawn.

9 **Provide a picture, with small cartoon figures undertaking a range of activities.** Then ask people to say which activity feels closest to the way they feel at the moment (for example, digging a hole for themselves, sitting at the top of a tree, on the outside looking in, and so on). Use this as a basis for getting to know each other through small-group discussion.

10 **Discover hidden depths.** Ask people in pairs to tell each other ‘one thing not many people know about me’, that they are prepared to share with the group. Then ask each person to tell the group about their partner’s ‘hidden secret’, such as ballroom dancing, famous friends, ability to build dry stone walls, or whatever. This is a particularly good exercise when introducing new members to a group who already know each other, or when a new leader joins a well-established group.

11 **Make a junk sculpture.** Give groups of four or five people materials such as newspaper, disposable cups, string, Sellotape, plastic straws, and so on. Ask them to design and produce either the highest possible tower, a bridge between two chairs that would carry a toy car, or some other form of visible output. Ask them to think, while on task, about the group processes involved (who led, who actually did the work, who had little to contribute, and so on), then ask them to unpack these thoughts and share in plenary their summarised conclusions about the group processes.

12 **Develop verbal skills.** Ask students in pairs to sit back to back. Give one of each pair a simple line drawing comprising squares, triangles, rectangles and circles. Without letting their partner see the original, ask those holding the drawings to describe what is on the page, using verbal instructions only, so that their partners can draw the original on a fresh sheet of paper. After a fixed time, let them compare the originals with the copies, and ask them to discuss what the task showed them about verbal communication. A similar task can also be designed, using plastic construction bricks.

13 **Make a tableau.** Ask groups of about seven or eight students to decide on a theme for their tableau (for example the
Learning and using names

People in general tend to take more notice of people they know. Your students will take more notice of you if they feel that they know you – and above all – that you know them. This is particularly important when you work with small groups of students, as they are much more likely to expect you to know who they are! Getting their names right is a useful step towards building up the sort of relationship which fosters learning. The following suggestions provide some general advice on how to improve your ‘hit rate’ of correct name-calling in small-group work.

1 Learn all the easy names first. If you have a group with three Peters in, make sure you know them first and which one is which! You then have a three in twenty (say) chance of getting the first name right!

2 Make a conscious effort to learn three or four names a session. This way you should build up a reasonable ability to talk to people by name within the first few weeks in small-group work.

3 Take particular care with difficult names. If you have names that you find difficult or unusual to say, write them out clearly and check how to say them, then write it phonetically in a way you will recognise over the top. Use the name as often as you can until you’ve mastered it, regularly checking that you’ve got it right.

4 Consider students’ feelings. Think how you feel when someone gets your name wrong – especially someone you would have expected to know it. One of the problems with university teaching is that new students can feel quite anonymous and alone, especially when part of a large class.

5 Use preferred names. At the beginning of the course, ask students ‘what do you want to be called’? The names they give you will be more accurate than your printed class-lists, and you’ll quickly find

14 Organise a treasure hunt. Give each group a map of the training centre or campus, and a set of tasks to complete across the location. For example, task elements can include collecting information from a display area, checking out a reference item via the Internet, collecting prices for specific items from the catering outlet, drawing a room plan of a difficult-to-locate study area, and so on. Different groups should undertake the tasks in a different order, so that individual locations (and people) are not mobbed by hosts arriving at the same time. Give a time limit for the treasure hunt, and award prizes for all who complete on time. This activity helps people to get to know each other and their learning environment at the same time.

15 Which of these are ‘you’? Give everyone a handout sheet containing (say) twenty statements about the topic to be explored. Ask each participant to pick out the three that are most applicable to them. Then ask everyone in turn to disclose their top choice, asking the rest to show whether they too were among their own choices.

16 Interview your neighbour. Ask participants in pairs to interview each other for (say) three minutes, making notes of key points that they may wish to report back in summary of the interview. Then do a round asking everyone to introduce their neighbour to the rest of the group.
Conflict in group work

Much has been written about the stages that are quite normal in group work. For example, it is common for groups to progress through stages of ‘forming, storming, norming, and conforming’ – not necessarily in one particular order! The following suggestions may help you to minimise the dangers associated with conflict in group work, and to maximise the benefits that can be drawn from people who sometimes disagree.

1 **Legitimise conflict.** It is important to acknowledge that people don’t have to agree all of the time, and to open up agreed processes by which areas of disagreement can be explored and resolved (or be agreed to remain areas of disagreement). Ensure, however, that the groups have ground rules for conflict resolution, so that they strive to avoid slanging matches and power games.

2 **Establish the causes of conflict.** When conflict has broken out in a group, it is easy for the root causes to become subsumed in an escalation of feeling. It can be productive to backtrack to the exact instance which initiated the conflict, and to analyse it further.

3 **Encourage groups to put the conflict into written words.** Writing up the issues, problems, or areas of disagreement on a flipchart or marker-board can help to get them out of people’s systems. Conflict feelings are often much stronger when the conflict is still bottled up, and has not yet been clearly expressed or acknowledged. When something is ‘up on the wall’, it often looks less daunting, and a person who felt strongly about it may be more satisfied. The ‘on the wall’ issues can be returned to later when the

---

out whether Victoria wants to be called Vicky, Jaswinder – Jaz, Cedric – Rick, etc.

6 **Use labels.** At early stages it’s useful to give students sticky labels to write their names on in bold felt-tip pen. This gives you the chance to call them by the name they prefer – and gives them the chance to start getting to know each other.

7 **Help students to learn each other’s names.** In groups with up to about twenty students, try a round as follows: ‘Tell us your name, and tell us something about your name’. This can be a good ice-breaker, and can be very memorable too, helping people develop association links with the names involved.

8 **Help students to get to know each other better.** An alternative round is to get the students sitting in a circle. Ask one to say his or her name, then the person to the left to say ‘I am ... and this is ...’. Carry on round the circle, adding one name at each stage, till someone goes right round the circle correctly. A further alternative is to ask students to introduce themselves, stating first their names, and then two ‘likes’ and two ‘dislikes’, so some memorable details help associate the person with the name.

9 **Use your list of names to quiz students.** To help you to get to know their names, once you have a complete list of the names, ask people from your list at random some (easy) questions, not to catch them out, but to help you to put names to faces.

10 **Consider using place cards.** In places where small groups of students are sitting in particular places for a while, it is useful to give the students each a ‘place card’ (a folded A5 sheet of card serves well) and to write their names on both sides of the card, and place the cards in front of them. Cards can be seen at a distance much better than labels. This allows you to address individuals by name, and also helps them to get to know each other.
group has had more time to think about them.

4 Establish the ownership of the conflict. Who feels it? Whom is being affected by it? Distinguish between individual issues, and ones that affect the whole group.

5 Distinguish between people, actions and opinions. When unpacking the causes of conflict in a group situation, it is useful to focus on actions and principles. Try to resolve any actions which proved to cause conflict. Try to agree principles. If the conflict is caused by different opinions, it can help to accept people’s entitlement to their opinions, and leave it open to people to reconsider their opinions if and when they feel ready to do so.

6 Use conflict creatively. It can be useful to use brainstorming to obtain a wider range of views, or a broader range of possible actions that can be considered by the group. Sometimes, the one or two strong views which may have caused conflict in a group look much more reasonable when the full range of possibilities is aired, and areas of agreement are found to be closer than they seemed to be.

7 Capture the learning from conflict. When conflict has occurred, it can be beneficial to ask everyone to decide constructive things they have learned about themselves from the conflict, and to agree on principles which the whole group can apply to future activities to minimise the damage from similar causes of conflict arising again.

8 Refuse to allow conflict to destroy group work. You may wish sometimes to tell groups that achievement of consensus is an aim, or a norm, or alternatively you may wish to ask groups to establish only the extent of the consensus they achieve.

9 Consider arbitration processes. When conflict is absolutely irresolvable, the facilitator may need to set up a ‘court of appeal’ for desperate situations. The fact that such a process is available often helps groups to sort out their own problems without having to resort to it.

10 Make it OK to escape. When people know that they can get out of an impossible situation, they don’t feel trapped, and in fact are more likely to work their own way out of the conflict. It can be useful to allow people to drop out of a group, and move into another one, but only as a last resort. Beware of the possible effects of someone who is seen as a conflict generator entering a group which has so far worked without conflict!

Gender issues in group work

When problems occur in groups due to gender issues, they can be felt more deeply than problems arising from almost any other cause. The following suggestions may help you to avoid some problems of this sort from arising in the first place, or to alert group members themselves to the potential problems, so that they can work round them in their own group work.

1 Think about gender when forming groups. There are advantages and disadvantages for single sex groups, depending on the balance of the sexes, and other issues including culturally sensitive ones. In some cultures, females may be much happier, for religious reasons, working in single sex groups. However, in other cases it may be helpful in terms of future employment to gently encourage them to get used to working with members of the opposite sex.

2 Try to avoid gender domination of groups. This can happen because of majority gender composition of groups. If this is inevitable because of the overall gender balance of the whole group, try to manage group composition so that
minority participants don’t feel isolated. If it is unavoidable, address the issue directly when setting ground rules.

3 **Decide when single gender groups might be more appropriate.** For group work on gender-sensitive issues, such as child abuse, it can be best to set out to form single sex groups.

4 **Require appropriate behaviour.** For group work to be effective, all participants need to behave in a professional way, with standards that would be expected in an effective working environment. Outlaw sexist or offensive behaviour, and emphasise that one person’s ‘joke’ or ‘tease’ can be another person’s humiliation.

5 **Decide when to stick with existing group compositions.** When a set of groups is working well, without any gender-related or other problems, don’t just change the group composition without a good reason.

6 **Set ground rules for talking and listening.** It can be useful to agree on ground rules which will ensure that all group participants (irrespective of gender) are heard, and not talked down or over by other participants.

7 **Avoid setting up excessive competition between male groups and female groups.** When there are gender-specific groups, don’t egg a group of one gender on, by saying words to the effect ‘Come on, you can do better than them’ referring to groups of the other gender.

8 **Be sensitive about role assignment.** For example, try to raise awareness about the dangers of tasks being allocated within groups on the basis of gender stereotypes, such as typing or making arrangements being handled by females, and ‘heavy’ work by males.

9 **Alert groups to be sensitive to leadership issues.** It is often the case that, for example, male members of groups may automatically see themselves as stronger contenders to lead the group than their female counterparts, and put themselves forward. When group members are aware that this is an issue, they are more likely to agree on a more democratic process for deciding who will lead an activity, or who will report back the outcomes.

10 **Avoid sexual preference oppression.** When it is known that group participants have different sexual preferences from the majority of the group, there is a tendency for them to be oppressed in one way or another by the rest of the group. It can be delicate to raise this issue in general briefings, and it may be best to respond to it as a facilitator when it is seen to be likely to occur.
Intended outcomes of this chapter

This chapter is intended to help you to:

- decide what forms of resource-based learning relate best to your students’ learning needs (for example, print-based, computer-based, online, and so on);
- set terms such as ‘open learning’, ‘distance learning’ and ‘flexible learning’ in context;
- choose good reasons for developing resource-based learning components in your teaching;
- decide whether to adopt existing materials, or adapt them to your purposes, or compose new resource-based or online learning materials;
- choose an effective and efficient strategy for developing your own resource-based learning materials;
- interrogate print-based or computer-based learning resource materials using a checklist to check how well they deliver learning payoff for your students.

This chapter is primarily about selecting from the wide range of learning resource materials which may be available in print, on CD-ROM, or online, some of which could be directly relevant to your students’ needs. You may wish to employ resource-based learning materials directly within your own taught course, or turn them into flexible learning pathways for appropriate parts of your curriculum. You may also be considering implementing open or flexible learning as learning provision in their own right. The chapter also includes some suggestions about how to go about designing new resource-based learning materials of your own, and how to adapt existing materials to be more appropriate for your students.

Resource-based flexible learning, in one form or another, is increasingly being used to provide learning pathways within higher education courses in universities, as well as to open up distance learning pathways to students outside the universities. In the UK, the use of resource-based learning is increasing dramatically, as universities and colleges are required to cater for larger numbers of students, with increasingly diverse educational backgrounds, in an environment where communication and information technologies impact ever more greatly on teaching and learning. I will start the chapter, however, by reviewing what is meant by some of the principal terms involved in resource-based learning.
Some terms and buzz-phrases

There are several terms used widely in connection with resource-based, student-centred learning materials, reflecting the ways in which such materials are employed. There exist many definitions of these terms, so it is worth reviewing the meanings of them.

The term distance learning is used when students study at a distance from the provider of the materials. The Open University in the UK is a major provider of distance learning programmes. Though the Open University is principally located in Milton Keynes, it is unusual for students to actually go there. Most students study at home (or at work, or at any other places of their own choice). The Open University provides tutor support for students, using a combination of full-time Open University staff based in various parts of the UK, and a much larger body of part-time tutors, who are often lecturers in conventional colleges and universities. These tutors are used both to provide ongoing support for students studying with the Open University, and to assess students’ coursework. Assessment is usually scheduled to submission deadlines for assignments, and students take formal examinations set by the Open University, usually taking place in examinations centres set up in other universities or colleges. Although the Open University uses print-based learning resource materials widely, increasing use is being made of computer-based resources and online communication, with tutors giving feedback on assessed coursework. The Open University itself is responsible for setting the coursework and exams, moderating the assessment by part-time tutors, and awarding qualifications to students. Similar models of distance learning are extensively used in other parts of the world, notably Canada, Australia and New Zealand.

The term open learning is often used for study programmes involving distance learning, as described above. Implied in the concept of open learning is the opening up of some or all of the following aspects of freedom to students:

- when they do their learning;
- where they do their learning;
- at what pace they learn.

There are further degrees of freedom that vary considerably across the range of programmes operating under the umbrella term of open learning. These include whether students:

- need any qualifications before being accepted onto an open learning programme;
- learn completely independently, or can choose to make use of tutor support;
- have any formal mentoring provision to assist them during their studies;
- can start a particular study module or course at any time (“roll-on, roll-off”) or have fixed start dates and completion dates (usually dictated by examination arrangements);
- can select which parts of the programme they study, and in which (if any) of the assessed elements of the programmes they participate.

In some distance learning programmes, particularly correspondence courses, some or all of these choices are available to students. In others, students are constrained by set start dates and assessment dates, and by the structure of the assessments leading to the award of degrees, diplomas or certificates. The term open learning is therefore predominantly used to reflect the freedoms available to students regarding where, when, at what pace, and how they actually undertake their studies. There are several other terms which overlap with open and distance learning, including independent learning, individualised learning, self-study programmes, self-managed learning, and so on.
The term flexible learning can be used in connection with all of the kinds of study programme mentioned so far in this chapter. Flexibility is about when, where, at what place, and by what processes the learning takes place. The concept of flexible learning extends, however, to the inclusion of open learning, or self-study elements within a conventional college-based programme. For example, students may be attending lectures, workshops, practical sessions and tutorials on a college campus, but at the same time studying selected elements of the curriculum more or less under their own steam, using learning packages (which may be print-based, computer-based or multimedia) to support those parts of their work. The assessment of the flexible learning components may be entirely integrated into the overall assessment of their work, or may be done separately, or any combination of the two.

The term resource-based learning embraces the learning materials that are used in distance, open and flexible learning, but equally applies to the learning that is designed to occur outside formal lectures or classes in universities and colleges. The common factor is that the curriculum is packaged into learning resource materials, from which students learn either individually or in small groups, with some freedom regarding when, where and how fast. The learning resources themselves are designed in many formats, including:

- print-based interactive learning packages;
- traditional textbooks, journal articles, and so on, addressed by interactive study guides;
- computer-based learning materials, supplied to students on-disk;
- multimedia computer-based learning materials, using CD-ROM, including video extracts, audio commentaries, and so on;
- online computer-based materials, with electronic communication through a local intranet and/or globally through the Internet.

What are the main components of resource-based learning materials?

The principal components of learning materials vary considerably, depending whether the materials are print-based, computer-based or multimedia, and on whether the materials are designed to be self-sufficient learning resources, or to refer out to existing books, papers and articles, or to be used in conjunction with face-to-face learning situations such as lectures, tutorials or practical sessions. However, it is possible to identify some elements which characterise modern resource-based learning materials, and which differentiate them from more traditional forms of print-based resources such as ‘straight’ textbooks. These elements include:

- statements of the intended learning outcomes or learning objectives;
- structured learning-by-doing elements such as self-assessment questions, tasks, exercises, quizzes, and so on;
- feedback responses on-screen or in print, to the structured learning-by-doing elements;
- open-ended learning-by-doing activities, such as assignments, exercises, readings and practical tasks, to help students to consolidate the learning they are doing from the materials;
- tone and style more user-friendly and informal than in conventional published books and articles;
- tutor-marked assignments, online or submitted on paper, often with details of the marking schemes and assessment criteria.
There may additionally be some of the following components:

- guidance regarding prerequisite knowledge or skills, to help students to judge for themselves whether they are equipped to start work with the learning materials;
- study-guide briefings to read other materials, such as particular sections or chapters of books, journal articles, and so on, usually coupled with tasks for students to do while using these resources;
- pre-prepared feedback discussions on tasks which students have undertaken with learning resource materials;
- links to face-to-face elements of college-based courses, such as lectures, tutorial programmes, and so on;
- study-skills commentaries, to help students undertake their own study of the materials as effectively and efficiently as possible.

In well designed resource-based learning materials, the content itself is broken up into manageable chunks by the interactive elements. It is important that the content is not simply presented in the same way as in a traditional textbook, but is punctuated by learning-by-doing and feedback episodes, and that this is done frequently throughout the materials rather than merely at the end of an element of learning. Tutor-marked assignments may be used when it is necessary to link students’ work on resource-based learning materials into the assessment scheme of a whole course or module, with the purposes being formative, summative or both. There may also be formal exams, or some exam questions in a wider exam which covers the whole of the syllabus of which part is delivered by resource-based learning, to represent the summative assessment of the syllabus area addressed by the materials.

**Adopt, adapt, or start from scratch?**

A wide range of resource-based learning packages already exists, spanning all levels of study from introductory to postgraduate. Many of these can be purchased from publishers and commercial materials providers, or accessed online (or downloaded) from the Internet. Many learning packages have also been developed in-house in particular university departments, or by specialist producers, and it is often possible to come to site-licence arrangements with the producers to purchase them with the view to adopting them as they stand, or to adapting them to fit a particular course or programme. The following checklist may help you to decide whether to adopt such packages, adapt them, or whether you may need to develop some completely new materials for resource-based learning by your students.

- **Are there relevant materials already available?** It is worth checking publishers’ catalogues, and databases of learning materials, held in most university libraries or learning resource centres.
- **Are the intended learning outcomes of available materials sufficiently close to those of your course?** When the learning outcomes converge well, it is an indicator that it may be possible to use at least parts of the materials as they stand.
- **Will the ‘not-invented-here syndrome’ come into play?** When learning materials are brought in from external sources, it is sometimes the case that lecturers (or students) do not feel that the materials are as credible as in-house materials or programmes; any dissatisfaction that lecturers may feel with the materials is quickly passed on to students, damaging in
turn the students’ trust in the materials, and their confidence in the processes of learning from resources.

- **Have you time to develop entirely new materials?** The short answer to this may be likely to be ‘no!’, but some of the ideas in this chapter may help you to see that resource-based learning materials can indeed be developed step by step, and that you may already have quite a lot to start from.

**What have you that you can adapt?**

Lecturers usually have a wide range of materials that can be adapted to take their places in resource-based learning packages. The materials you already have available may include:

- your existing syllabus specification, including identified learning outcomes;
- your own lecture notes;
- handout materials you already use;
- tasks and exercises you already set your students;
- tutorials sheets;
- assignment briefings;
- model answers;
- case-study materials;
- test and exam questions.

In addition to some of these, you may already have some even more important things to draw on, including:

- your experience of teaching the subject involved;
- your knowledge of students’ problems with the subject;
- your experience of helping students with particular problems;
- your experience of assessing students’ learning in the subject.

Many learning resource materials are produced by people who may know the subject involved, but who may lack some of the vital experience regarding teaching, learning and assessing the subject. Not surprisingly, materials that are developed by writers or designers who are not involved directly in teaching a subject rarely work nearly as well as those developed by experienced lecturers.

**A strategy for designing resource-based learning materials**

The following ideas are adapted from a strategy I first proposed in *The Open Learning Handbook* (2nd Edition) (Race 1994), and further developed in *500 Tips on Open and Online Learning* (2005b).

1. **Start with the intended learning outcomes.** Express these in a clear, friendly, jargon-free way. It is best to do this by addressing them directly to the students who will use the materials. For example, it is useful to use wording along the lines of:

   - ‘When you’ve worked through Section 6 of this package, you’ll be able to:
     - explain why ...;
     - list five factors which influence ...;
     - predict when ... is most likely to occur;
     - design a process to enable ...’
The main aim should be that students will know exactly what they are intended to be able to do when they will have completed their work on each flexible learning element. It is important to avoid words such as ‘understand’ or ‘know’, as these don’t tell students enough detail regarding how they could be expected or required to demonstrate their understanding or knowledge.

2 Think of tasks, activities and exercises which will give students learning-by-doing experience. Try not to simply use tasks which require students to recall things they have just learned, but rather use tasks which help them to extend and build on their learning as they work through the resource-based learning materials. It is better to draft out twenty tasks, then to use only three in the materials, than to try to make each task good enough at the outset to include in the materials.

3 Decide which of the tasks you can already respond to. For example, if you have thought of a multiple-choice question, you can probably respond separately to students choosing each of the options. A congratulatory response may be appropriate for students who choose the best option (often referred to as the ‘key’). More importantly, for each of the other options (the ‘distractors’) you can probably respond with a direct message to students who make the mistakes or misunderstandings which may have led them to choose any of these distractors. The tasks where you can respond in print (or on-screen in computer-based packages) are the basis of structured self-assessment questions.

4 Decide which tasks you can’t directly respond to. These could be the tasks where the human judgement of a lecturer or tutor may be necessary to work out what help students may need, or where students will need detailed feedback on what they have done well and on what they may have missed. These tasks may well be best as tutor-marked assignment questions.

5 Write draft feedback responses to the self-assessment tasks. You will almost certainly want to edit and polish these responses when you have feedback from students on your first draft of the learning materials, but it is well worth writing these responses in some detail if necessary before putting together the whole of an element of material.

6 Link together self-assessment questions and feedback responses. Check that your feedback responses address as many as possible of the problems which students may have when they attempt the questions.

7 Link each feedback response to the next self-assessment question. To move students on from your response to one particular self-assessment question, to be ready to attempt the next one, you will usually need to introduce some new ideas or information. This is an element of the content of your resource-based learning materials, but is best kept concise and relevant, so that it specifically serves to bridge only the gap between that response and the next question.

8 Try out the self-assessment questions and feedback responses with ‘live’ students. There is no quicker way of finding out whether the questions and responses will work well, than to use them as class-based exercises in lectures or tutorials, and find out how students react to them. This helps you to select those questions which will work effectively in resource-based learning materials, and to adjust and improve the wording of those which can be made to work with a little attention, and to discard those questions where it may not be straightforward to devise self-sufficient feedback responses.

9 Develop the tutor-marked components (if you are using such components). It
Although the above steps are listed as a sequence, it is best to work on them iteratively, working on one facet of the learning package, then adjusting others to tune them in to what you have done. For example, you can fine-tune your developing learning materials by:

- adjusting learning outcomes to match the actual self-assessment questions that you devise;
- adjusting self-assessment questions when you’ve tried to write responses to them;
- adjusting the lead-in sections preceding self-assessment tasks when you’ve seen how the tasks work in practice;
- adjusting the feedback to self-assessment questions when you’ve seen how the questions work with some live students in a lecture or tutorial;
- developing the tutor-marked components when you see how students are getting on with the self-assessment elements;

and so on.

There is no substitute for student feedback as an aid to developing effective flexible learning materials. However, in the next section of this chapter, I present a checklist which you can use as you write your own materials, but which you can also use to help you to gauge the quality of existing published materials.

**A quality checklist for resource-based learning materials**

When selecting learning resource materials from the plethora which may be on offer, it is useful to know what questions to ask to ensure that they will serve their purpose well. Even more important, when designing new learning resource materials of your own, or adapting those which are already available, it is important to have in mind at all times the ways that the materials are intended to function, and how students will react to them. In the sections that follow, I have identified a series of questions to pose, and some clarifications or suggestions arising from many of the questions. Most of the questions can be applied to all the interactive learning material formats, from print-based flexible learning packages to the various forms of online, web-based and computer-based learning formats (adapted from Race 2005b).

**Intended learning outcomes**

1. **Is there a clear indication of any prerequisite knowledge or skills?** If not, you may usefully compose a specification of what is being taken for granted regarding the starting point of the materials. It is particularly important that when flexible learning elements are being used within college-based traditional courses, students should know where the related learning outcomes fit in to the overall picture of their courses.

2. **Are the intended learning outcomes stated clearly and unambiguously?** This is where you may wish to ‘translate’ the
stated intended outcomes of particular learning packages, making them more directly relevant to the students who will use them. This can often be done by adding ‘for example, ...’ illustrations showing how and when the intended outcomes will be relevant to their own situations.

3 **Are the intended outcomes presented in a meaningful and friendly way?** (i.e. *not* ‘the expected learning outcomes of this module are that the student will ...’!). I suggest that it is preferable to write learning outcomes using language such as ‘When you’ve worked through Section 3, you’ll be able to ...’. It is important that students develop a sense of ownership of the intended learning outcomes, and it is worthwhile making sure that the outcomes as presented to them make them feel involved, and that the expressed outcomes don’t just belong to the learning package or module.

4 **Are the intended learning outcomes relevant to your students’ needs?** If you’re designing materials of your own, such relevance can be under your control. With adopted or published materials, however, it is usual that only *some* of the intended outcomes are directly relevant, and you will need to spell out to your students exactly which these are, along with advice about whether or not they should spend time on other parts of the materials where the intended outcomes are not directly useful to them.

5 **Do the intended learning outcomes avoid jargon which may not be known to students before starting the material?** It is of course normal for new terms and concepts to be introduced in any kind of learning, but it is best if this is done in ways that avoid frightening off students at the outset. It may remain necessary to include unfamiliar words in the intended outcomes of a learning package, but this can still allow for such words to be explained there and then, legitimising a starting point of ‘not yet knowing’ such words. Adding a few words in brackets along the lines of ‘(this means in practice that ...’)’ can be a useful way ahead in such cases.

**Structure, layout and learning design**

6 **Is it really learning material?** In other words, is it avoiding just being information? Especially in the case of online learning, the danger of just presenting screen-after-screen of information needs to be avoided. The most common – and most severe – criticism of many online learning materials is that ‘it’s just an online book!’.

7 **How well does the material cater for different learning preferences?** For example, does it range appropriately from text, illustrations and appropriate use of other media when appropriate? If it’s online or computer-based, is it possible to print out appropriate parts easily for students who prefer to study things on paper?

8 **Do the various components provide a complete and effective learning environment?** For example, in online learning situations, are there paper-based materials to work with alongside the on-screen components? Are there suitable opportunities for communication with other students and with tutors, face-to-face or virtually? Are there opportunities for students to receive ongoing feedback on their progress?

9 **Is the material visually attractive, thereby helping students to want to learn from it?** It is not always possible to choose the materials that *look* best, however. Sometimes the best-looking materials may be too expensive, or they
may not be sufficiently relevant to learning needs. At the end of the day, it is the materials that work best that are cost-effective, so compromises may have to be made on visual attractiveness.

10 **Is the material designed to minimise difficulties for students with disabilities?** In the UK, for example, SENDA (the Special Educational Needs and Disabilities Act, 2001) requires that ‘reasonable adjustments’ are built-in to educational provision, in an anticipatory manner. There is a lot of help available on how best to do this, for example TechDis in the UK (see www.techdis.ac.uk) provides a great deal of information and advice on how best to make on-screen learning materials address and cater for a range of disabilities.

11 **Does it allow differentiation?** In other words, can the material be equally useful to high-fliers who already know a lot about the subject concerned, and to low-fliers who are quite new to the subject? Does it prevent the low-fliers from feeling inferior? Are there suitable pathways through the material for students of different ability or motivation, allowing all to feel they are getting something useful from the material in a given time?

12 **In print-based materials, is there sufficient white space?** In such materials this is needed for students to write their own notes, answer questions posed by the materials, do calculations and exercises which help them make sense of the ideas they have been reading about, and so on. A learning package which allows – or insists on – students writing all over it, is likely to be more effective at promoting effective learning-by-doing.

13 **In online or computer-based materials, is there plenty of activity?** Students need to be able to practise, try things out, make mistakes, and get feedback from the materials. Their learning is much more linked to what they do while working through the materials than merely to what they see on-screen.

14 **Is it easy for students to find their way backwards and forwards?** Can they navigate their way through the materials? This is sometimes called ‘signposting’ and includes good use of headings in print-based materials, or effective menus in on-screen materials and online learning delivered through virtual learning environments. Either way, well-signposted materials allow students to get quickly to anything they want to consolidate (or ‘digest’) as well as helping them to scan ahead to get the feel of what’s to come.

15 **Can students bookmark things and return to them at will later?** With print-based materials this is easy enough – many students use highlighter pens to remind them of important or tricky bits, or stick ‘post-it’ notes to pages so they can find them again quickly. Equivalent processes are perfectly possible to arrange in electronic packages.

16 **Is the material broken into manageable chunks?** Students’ concentration spans are finite. We all know how fickle concentration is at face-to-face training sessions. The same applies when students are learning from resource materials. If an important topic goes on for page after page – or screen after screen, we should not be surprised if concentration is lost. Frequent headings, subheadings, tasks and activities can all help to avoid students falling into a state of limbo when working through learning packages.

17 **Does the material avoid any sudden jumps in level?** A sudden jump can cause ‘shut-the-package’ or ‘log off from the machine’ cues to students working on their own. It is just about impossible for authors of learning materials to tell when they have gone one step too far too fast. The first people to discover such sudden jumps are always the students who can’t understand why the material has suddenly
left them floundering. In well-piloted materials, such difficulties will have been ironed out long before the packages reach their published forms, but too many materials have not allowed for this vital process to happen.

**Learning by doing – practice, repetition, trial and error**

18 *Are there plenty of things for students to do?* For example, I suggest that there should be something to do in sight on each double-page spread in print-based materials, or something to do on most screens in online learning materials. If we accept that learning mostly happens by practising, making decisions, or having a go at exercises, it is only natural that effective interactive learning materials are essentially packaged-up learning-by-doing.

19 *Is the material encouraging deep learning rather than surface learning?* The key to this is the extent to which students are helped to make sense of what they are doing when they try tasks or answer questions. It is therefore important that they are helped to stop and reflect on their attempts rather than simply press on with further learning-by-doing, except where the activity is primarily designed for practice and repetition.

20 *Is good use made of self-assessment opportunities?* It is important that much of the learning-by-doing leads on to feedback, allowing students to self-assess how well they have answered the questions or attempted the various tasks as they learn. This means that in the best learning materials, the tasks, questions and exercises need to be structured, so that feedback can be given to whatever students are likely to do with them.

21 *Are the tasks clear and unambiguous?* In live sessions, if a task isn’t clear to students, someone will ask about it, and clarification will follow. With packaged learning resources, it is crucial to make sure that people working on their own do not have to waste time and energy working out exactly what the instructions mean every time they come to some learning-by-doing. Shortening the sentence length of questions and activities can often make a huge difference to how well students get their heads around the meanings of the tasks.

22 *Are the questions and tasks inviting?* Is it clear to students that it’s valuable for them to have a go rather than skip the tasks or activities? It is sometimes an art to make tasks so interesting that no one is tempted to give them a miss, especially if they are quite difficult ones. However, it helps if you can make the tasks as relevant as possible to students’ own backgrounds and experiences.

23 *Are the tasks sufficiently important?* Learning-by-doing should not be there simply for its own sake. There should be at least some useful learning payoff associated with each task students attempt. An exception can be when the odd task is included for entertainment rather than for learning – which can be useful when done appropriately.

24 *Is the comfort of privacy used well?* One of the strongest advantages of open learning – whether online or on paper – is that people can be free to learn by trial and error, without the embarrassment of someone like a tutor seeing their mistakes. Self-assessment tasks can allow students to find out whether or not they have mastered something, and gain feedback about how their learning is progressing.

25 *What about students who know they can already do the tasks easily?* If such students are forced to work through tasks they can already achieve perfectly well, they can get bored and frustrated. In print-
Resource-based and online learning

Based materials students will choose to skip these tasks, but in some computer-based materials they can’t move on till they have done each task and can find this tedious. It is of course possible to avoid this situation by having diagnostic exercises which allow students who have already mastered something to move further on into the materials without going through all the tasks designed for their counterparts who need them.

26 In print-based materials, is there enough space for students to write their answers? In such materials, it is important to get students writing. If they just think about writing something, but don’t do it, they may well forget what they might have written!

27 In on-screen materials, will students be caused to put fingers-to-keyboard, or use the mouse? It is important to ensure that students continue to make decisions, for example by choosing an option in a multiple-choice exercise, so that they can then receive feedback directly relating to what they have just done. Online learning-by-doing can also make good use of drag-and-drop, text entry, number entry, and a wide range of activities with much higher learning payoff than simply moving on to the next screen.

28 Cumulatively, does the learning-by-doing test students’ achievement of the intended outcomes? Perhaps one of the most significant dangers of resource-based learning materials is that it is often easier to design tasks and exercises on unimportant topics, than it is to ensure that students’ activities focus on the things that are involved in them achieving the intended learning outcomes. To eliminate this danger, it is useful to check that each and every intended learning outcome is cross-linked to one or more self-assessment questions or activities, so that students get practice in everything that is important.

29 Does the learning-by-doing prepare students for future assessment? When students have worked diligently through a package, the learning-by-doing they have engaged in should collectively prepare them for any assessments that they are heading towards – whether it be tutor-marked assignments, exams, practical tests, and so on.

In-built structured feedback to students

30 Is feedback immediate? One of the advantages of online learning or computer-based learning packages is that immediate on-screen feedback can appear every time students make a decision, or select an option, or enter a number, and so on. Even in print-based materials, responses to questions and activities can be included elsewhere in the materials (out of sight of the tasks themselves) so that students can quickly check up on whether they were successful when they attempted the tasks.

31 Does feedback really respond to what students have done? For example, when they have had a go at a self-assessment question, does the feedback they receive give them more than just the correct answer to the questions? If students don’t give the correct answer to a question, telling them the right answer is of very limited value; students need feedback on what was wrong with their own attempt at answering the question. In open learning materials of all forms, feedback needs to be available to students in predetermined ways, on-screen or in print.

32 Does the feedback remind students of exactly what they actually did? Ideally, the original task, question or activity
should still be in sight while students view the feedback to what they did with it. With print-based materials, this can be done by reprinting the tasks or questions wherever the feedback responses are located. With on-screen materials, it is best that the task or question – and the choice or decision students made – remains visible on screen when the feedback responses appear.

33 **Do the feedback responses meet each student’s need to find out:**

‘**Was I right?**’

‘**If not, why not?**’.

When students get a self-assessment question or activity right, it is quite straightforward to provide them with appropriate feedback. It’s when they get them wrong that they need all the help we can give them. In particular, they need not only to know what the correct answer should have been, but also what was wrong with their own answers. Multiple-choice question formats are particularly useful here, as they allow different students making different mistakes each to receive individual feedback on their own attempts at such questions.

34 **Do feedback responses provide appropriate praise without patronising students?** It’s easy enough to start a response on-screen or in print with words such as ‘well done’. However, there are many different ways of affirming, and saying ‘splendid’ may be fine if the task was difficult and we really want to praise students who got it right, but the same ‘splendid’ can come across as patronising if students felt that it was an easy question. In such cases ‘yes indeed’ or ‘correct’ may be more appropriate starting points for confirmatory feedback.

35 **Do feedback responses include something that will help students who got things wrong not to feel like complete idiots?** One of the problems of working alone with resource-based learning materials is that people who get things wrong may feel they are the only people ever to have made such mistakes! When a difficult question or task is likely to cause students to make mistakes or to pick incorrect options, it helps them a lot if there are some words of comfort, such as ‘this was a tough one!’ or ‘most people get this wrong at first’.

**Introductions, summaries and reviews**

36 **Is each part introduced in an interesting, stimulating way?** The first few pages of print-based material – and the first screen or two of on-screen material are critical. There’s no second chance to make a good first impression! If students are put off a topic by the way it starts, they may never recover that vital ‘want’ to learn it.

37 **Do introductions inspire confidence?** Attitudes are set early in any learning experience. Confidence is perhaps the single most important pre-determinant of success. When students start something feeling that they can indeed succeed, they are much more likely to continue to be motivated even when the material becomes more testing.

38 **Do the introductions alert students to the way the materials are designed to work?** Learning resource materials should not assume that all students have developed the kinds of study-skills needed for open learning – particularly those associated with taking responsibility for their own learning. Authors of open learning materials need to share with students the way that they intend the optimum learning payoff to be achieved. When students know how they are intended to be learning, there’s more chance they’ll use suitable approaches.
Are students able to get stuck into the learning quickly? Despite what’s said above about the need to help students to see how the materials are intended to be used, most students want to get straight into actually doing something. With print-based materials, introductory study-skills guidance presented at the start can easily be skipped then returned to later, but in on-screen materials it is important not to trap students in such introductions when some of them will be wanting to cut to the chase of the materials.

Are there clear and useful summaries or reviews? Do these help students to make sense of and consolidate what they have learned? In any good face-to-face session, lecturers take care to cover the main points more than once, and to remind students towards the end of the session about the most important things they should remember. When designing learning resource materials, authors sometimes think that it’s enough to put across the main points well – and only once! Summaries and reviews are every bit as essential in good learning materials as they are in live sessions.

Do summaries and reviews provide useful ways for students to revise the material quickly and effectively? A summary or review helps students to identify the essential learning points they should have mastered. Once they have done this, it should not take much to help them retain such mastery, and they may well not need to work through the whole package ever again if they can polish their grasp of the subject just by reading summaries or reviews.

Can summaries provide a fast-track function for high-fliers? Those students who already have achieved particular intended learning outcomes may only need to remind themselves of those elements of knowledge, rather than work through tasks and exercises they can already achieve. Summaries can be particularly useful to them to check out what they can already do, and move on quickly to parts of the material which will deliver further learning payoff to them.

The subject matter itself

Is it correct? The best-designed learning materials will be useless if there is anything seriously wrong with the subject matter itself. While it may be perfectly acceptable that the material may be presented in a different way than you may have chosen to use yourself, it is useful to check out that there is nothing that would be mis-learned from the materials.

Is the material readable, fluent and unambiguous? When students are working on their own, there is no one for them to ask when something is not clear, though virtual communication to a tutor, for example, can compensate for this in online materials. Good learning resource materials depend a lot on the messages getting across. Those people who never use a short word when they can think of a longer alternative, should not be allowed to create learning resource materials! Similarly, short sentences tend to get messages across more effectively than long sentences, particularly on-screen.

Is the material relevant? For example, does the content of the material keep closely to the intended learning outcomes as stated? It can be all too easy for the creators of learning resource materials to get carried away with their pet subjects, and go into far more detail than is reasonable. This is fine so long as students know that they’re looking at an optional extra at the time, and can skip it if they wish.

Is the tone ‘involving’ where possible? In task briefings and feedback in particular
there plenty of use of ‘you’ for the student, ‘I’ for the author, ‘we’ for the student and author together? This is a matter of style. Some writers find it hard to communicate in an informal, friendly manner – it is quite different from the style they might use to write journal articles or scholarly texts. There is plenty of evidence that communication works best in learning materials when students feel involved, and when they feel that the learning package is ‘talking’ to them on the page – or on the screen – in a natural and relaxed way.

Visual learning – diagrams, charts, pictures, tables, and so on

47 **Is each non-text component as self-explanatory as possible?** In face-to-face training sessions, students gain all sorts of clues as to what any illustrations (for example overheads or slides) actually mean. Lecturers’ tone-of-voice and facial expressions do much to add to the explanation, as well as the words they use when explaining directly. With learning packages, it is important that such explanation is provided when necessary in print or on-screen.

48 **Do the students know what to do with each illustration?** They need to know whether they need to learn it, label or complete it, to note it in passing, or to pick out the trend, or even nothing at all. In a face-to-face session, when lecturers show (for example) a table of data, someone is likely to ask, ‘Do we have to remember these figures?’. If the same table of data is included in learning materials, the same question still applies, but there is no one to reply to it. Therefore, good learning resource materials need to anticipate all such questions, and clarify to students exactly what the expectations are regarding diagrams, charts, and so on. It only takes a few words of explanation to do this, along such lines as, ‘you don’t have to remember these figures, but you do need to be able to pick out the main trend’ or ‘you don’t have to be able to draw one of these, but you need to be able to recognise one when you see one’.

49 **Is it possible to continue to see an illustration, while learning more about what it means?** In print-based materials it helps if explanations are placed while the figure relating to them is still in sight. With on-screen explanations, it can be useful to continue to show the appropriate figure as a ‘thumbnail’, so that students still remember what they’re making sense of during discussion or explanations. It is then also useful if they can (for example) double-click the illustration on-screen to restore it to its full size while they think again about it at any point.

50 **Is the material sufficiently illustrated?** A sketch can be more useful than 1000 words. One of the problem areas with some learning materials is that they’re written all in words, at the expense of visual ways of communicating important messages. On-screen materials are usually better in this respect, not least because of the relative ease of including pictures and illustrations. However, sometimes they are badly chosen, and small print on the illustrations may not be readable on-screen.
Some further checklist questions

51 Does the material ensure that the average student will achieve the intended learning outcomes? This of course is one of the most important questions we can ask of any learning package. If the answer is “no!”, it’s probably worth looking for a better package.

52 Will most students be able to work through the material in a reasonable time? Some things take longer working under one’s own steam – others are quicker that way. It is useful to have a good idea how long it will take on average for students to work through each element of a learning sequence, but to recognise and accept that some will take much longer, and some much less time.

53 Will the average student enjoy using the material? In some ways this is the ultimate question. When students ‘can’t bring themselves to log off from the programme on the computer’ or ‘can’t put the package down, because it is so interesting to work through it’ there’s not usually much wrong with the learning materials.

54 How up to date is the material covered? How quickly will it date? Will it have an adequate shelf-life as a learning resource, and will the upfront costs of purchasing it or developing it be justified?

55 Who will do updating as necessary? With online and computer-based materials, updating can be done quite easily by whoever designed the material, but not necessarily easily by other people using the materials. With print-based materials, updating is likely to involve revising and reprinting substantial elements, but it may be possible to prepare supplementary sheets and handouts to bridge gaps in the short term.

56 How significant is the ‘not invented here’ syndrome? Can you work with the differences between the approach used in the material and your own approach? Can you integrate comfortably and seamlessly the two approaches with your students? If you criticise or put down learning resource materials your students are using, you’re quite likely to destroy their confidence in using the material, along with their trust in the credibility of the content of the material as a whole.

57 Will it be cost-effective? For example, with physical packages, can students realistically be expected to acquire their own copies? Can bulk discounts or shareware arrangements be made? If the material is computer-based, are the numbers of students involved sufficient to justify the costs of making the material available to them? Is it suitable for networking, and is this allowed within copyright arrangements?

58 Can students gain sufficient access to the materials? This is particularly crucial when large groups are involved. Could lack of access to essential resource materials be cited as grounds for appeal by students who may be unsuccessful when assessed on what is covered by the material? This particularly applies to online or computer-based learning, where students may have to be in particular places to work through the materials, for example at networked terminals in a learning resource centre. Are part-time students disproportionately disadvantaged in terms of access to equipment?

59 How best can students integrate the learning payoff they derive from the materials into their overall learning experience? Does the learning associated with the materials link comfortably to other learning formats and situations – for example group work, lectures, work-based learning, and so on? Will appropriate elements of their learning from the learning materials be further developed and consolidated in other learning situations?
Learning from screens?

Resource-based learning is increasingly dominated by computer-based learning packages, and online learning through intranets and the Internet. In all of these contexts, we need to explore how effectively ‘learning from screens’ is likely to take place. We are relatively accustomed to interrogating ‘learning from paper’ in the contexts of handouts, books, articles, and so on, even when it is well known that unless there is substantial learning-by-doing and feedback, the learning payoff from paper can be all too minimal. The next section of this chapter looks critically at ‘learning from screens’, and particularly at some of the questions which can be in students’ minds as they confront any particular screenful of a computer-based learning package, or online sequence.

Perhaps the most important indicator that learning from screens is not happening successfully is if the student at the keyboard looks for the ‘print’ command. In short, if someone learning from a computer-based package needs to print something, it is a signal that it was not possible to do everything that may have been intended with it on-screen.

Some advantages of screens over paper:

- There can be instant feedback on-screen to pre-planned decision-making. For example, choosing an option in a screen-based multiple-choice question can lead to immediate feedback on whether it was the best option to select, and (more importantly), ‘if not, why not?’.
Feedback can be withheld on-screen until some learning-by-doing has happened. For example, the feedback to a selection in a multiple-choice question can be withheld in computer-based learning until students have made their selections. In print-based materials, it can be all too tempting to check out the feedback responses before having made a firm choice.

Computers can add sound to on-screen feedback. Where students can use headphones, for example, the benefits of tone-of-voice can be exploited in feedback responses to students’ keyboard choices.

Computers can route students on to what they need next. For example, if students have succeeded in several on-screen questions, they can be moved on to something which may be more challenging to them (some harder questions), or if they are struggling with the on-screen tasks they can be moved back to some further practice questions.

Computer screens are less likely to cause information overload. Paper, whether in books, articles, or even handouts, tends to get filled up with print. The limit of screen size causes at least some economy of information presentation. However, this advantage can only too easily be thrown away by congested screens of information, especially when what is designed to appear on-screen is too closely linked to what might have otherwise been presented on paper.

Some disadvantages of screens compared to paper:

- ‘Now you see it, now it’s gone!’: visual memory tends to be relatively transient. If something important is on-screen, there is every chance it will evaporate from students’ minds after a few more screens of information.
- Screens can’t be used anywhere. Learning from screens is dependent upon being beside a computer and monitor.
- Screens can’t be spread out around a teaching room or learning space as easily as paper. This means that students can’t move around as freely as they could with print-based learning resources.
- Computer-based learning resources are often less easy to navigate than paper-based learning resources. With a book, handout or article, it is easy to flick backwards and forwards to consolidate what has already been learned, and to spy out the landscape of what is to come. With computer-based learning, this is not always nearly so easy.

Is this screenful actually working?

Imagine a student looking at a single tiny element of a computer-based learning programme, or a single screen of information online on an intranet or the Internet. Any, or all, of the following questions could go through the student’s mind while looking at a single screen of information. In Table 5.1 below, I’ve linked these questions to the five principal processes underpinning effective learning, as outlined in Chapter 1 of this book:

- wanting to learn;
- needing to learn;
- learning by doing;
- learning through feedback;
- digesting (making sense) of what is being learned.
### Table 5.1 Interrogating a computer screenful: questions which could be in learners’ minds

<table>
<thead>
<tr>
<th>Questions which could be going through a students’ mind</th>
<th>Links to the factors underpinning successful learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Why am I seeing this particular screenful?</strong></td>
<td><strong>Wanting to learn:</strong> could be damaged if there is not a good reason for the screenful being there. <strong>Needing to learn:</strong> the rationale for the screenful’s existence should at least confirm what the student needs to get from its presence.</td>
</tr>
<tr>
<td>Why is it there?</td>
<td>Wanting to learn: could be undermined if the purpose of the screenful is not self-evident. <strong>Needing to learn:</strong> if it’s not linked to intended learning outcomes, the message could be that it’s not needed, and not important enough to think about.</td>
</tr>
<tr>
<td>Can I just skip it?</td>
<td><strong>Learning by doing:</strong> this is addressed when the screenful is an interactive one, in one way or another. The doing could be practice, learning by mistakes, or more sophisticated, for example requiring quite a bit of thought before action.</td>
</tr>
<tr>
<td><strong>What are the intended learning outcomes associated with this particular screenful?</strong></td>
<td><strong>Wanting to learn:</strong> could be undermined if the screenful’s existence should at least confirm what the student needs to get from its presence. <strong>Needing to learn:</strong> if it’s not linked to intended learning outcomes, the message could be that it’s not needed, and not important enough to think about.</td>
</tr>
<tr>
<td>If there aren’t any, why is it there at all?</td>
<td><strong>Learning by doing:</strong> this is addressed when the screenful is an interactive one, in one way or another. The doing could be practice, learning by mistakes, or more sophisticated, for example requiring quite a bit of thought before action.</td>
</tr>
<tr>
<td><strong>What exactly am I supposed to do with this bit?</strong></td>
<td><strong>Learning by doing:</strong> this is addressed when the screenful is an interactive one, in one way or another. The doing could be practice, learning by mistakes, or more sophisticated, for example requiring quite a bit of thought before action.</td>
</tr>
<tr>
<td><strong>How am I supposed to handle it?</strong> Am I intended to be jotting down my thoughts? Are there on-screen tasks for me to do, such as picking options, entering text, entering numbers, clicking boxes, moving objects around on-screen, and so on?</td>
<td><strong>Wanting to learn:</strong> could be undermined if the purpose of the screenful is not self-evident. <strong>Needing to learn:</strong> if it’s not linked to intended learning outcomes, the message could be that it’s not needed, and not important enough to think about.</td>
</tr>
<tr>
<td><strong>Will I be able to get back to this bit if I want to, or need to?</strong> How important is this particular bit? If it’s important, will I have another chance to think about it, without having to go backwards to find it?</td>
<td><strong>Digesting – making sense:</strong> putting the screenful into perspective is an important part of making sense of it. If it’s not clear from the screenful whether it will be important or not, the student may assume it is not important.</td>
</tr>
<tr>
<td><strong>Where does this bit fit into the big picture?</strong> Where does it fit in to the overall intended learning outcomes? How much will it count for in forthcoming assessments?</td>
<td><strong>Wanting to learn, needing to learn, digesting:</strong> if the screenful does not clearly link to the overall learning programme, the student may decide it's just there 'in passing' and learn very little from it.</td>
</tr>
<tr>
<td><strong>How will I tell whether, and when, I’ve succeeded with this bit?</strong> Will I get feedback from the computer itself? Will I have to write down, or key in, something that will lead to later feedback from a tutor? Will I be given something to compare to what I’m asked to do with the screenful?</td>
<td><strong>Learning through feedback:</strong> the availability of feedback to the student, after doing something with what’s on the screen, gives the message that the screenful is important enough to be taken seriously.</td>
</tr>
<tr>
<td><strong>Where is this bit leading me towards?</strong> Where is it taking me from? Can I tell where I’m heading? Am I supposed to remember where I’m coming from, and what I learned from previous screenfuls?</td>
<td><strong>Digesting – making sense:</strong> it is easy to get lost in computer-based scenarios. It is perfectly possible to ensure that each screenful has enough context-setting included, so that this danger is minimised. Unfortunately, this ‘navigational’ agenda is often not addressed well enough.</td>
</tr>
<tr>
<td><strong>Who else is involved?</strong> Will someone be assessing what I’ve got out of this bit? Am I supposed to be doing this on my own, or am I expected to talk to other students about it? Is anyone watching me? Would I treat it differently if they were?</td>
<td>These questions can link to all of the factors underpinning successful learning. Feedback can be forthcoming on-screen, or from a tutor. ‘Learning-by-doing’ can be coupled to discussing the screenful with fellow-students. The additional interaction and feedback can enhance ‘wanting to learn’ and consolidate the ‘needing to learn’ agenda, and aid the ‘making sense’ process.</td>
</tr>
</tbody>
</table>
Table 5.1  Continued

<table>
<thead>
<tr>
<th>Questions which could be going through a students’ mind</th>
<th>Links to the factors underpinning successful learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>What else should I be thinking about while this bit is on-screen?  Should I be looking at printed resources as I go?  Should I be looking at notes I’m making as I go!</td>
<td>These questions can link to all of the factors underpinning successful learning, particularly ‘digesting – making sense’.</td>
</tr>
<tr>
<td>What else am I learning from this bit?  What am I learning over and above what’s on screen at the moment?  How important are these other things I’m thinking about?  Will they be assessed in some way, and if so, when, how, and by whom?  Will I get feedback on these other things I’m thinking about?</td>
<td>These questions can link to all of the processes underpinning successful learning, particularly ‘feedback’ and ‘digesting’. If the further agendas associated with the screenful are interesting, and seen as important, the ‘wanting’ and ‘needing’ to learn aspects are also enhanced.</td>
</tr>
<tr>
<td>What am I learning about myself?  How is this bit helping me to develop as someone who can learn effectively and independently from a computer-based resource?  How am I developing skills at managing my own learning?</td>
<td>Questions like these involve the ‘digesting – making sense’ aspect of learning, as well as developing receptivity to feedback, and the ability to develop one’s own motivation.</td>
</tr>
<tr>
<td>So what?  If there have not been any good reasons for looking at the screenful after thinking through all of the questions above, is there any reason at all for it being there?</td>
<td>Cut! Or present the information in another way, such as on a handout, or in an accompanying manual. If the screenful is not addressing at least some of the questions listed above, it may as well be deleted from the on-screen agenda of the learning package.</td>
</tr>
</tbody>
</table>

Practical pointers on resource-based learning

The following sets of suggestions on resource-based learning have been adapted from relevant parts of 500 Tips on Open and Online Learning (Race 2005b), where there is a great deal more of such advice. Many of these suggestions apply equally to the design of online, computer-based or paper-based resource-based learning.

Which parts of the curriculum lend themselves to resource-based learning?

It is worthwhile to think about which parts of the curriculum best lend themselves to an open or flexible approach, whether online or paper-based. It is useful to start your resource-based learning writing with such parts, and perhaps better still to experiment with adapting existing resources covering such curriculum areas towards a resource-based learning format first. The following suggestions show that such starting points can be based on several different considerations, and are often linked to ways that resource-based learning can augment face-to-face college-based programmes. The following suggestions show that such starting points can be based on several different considerations, and are often linked to ways that open learning can naturally augment face-to-face college-based programmes.
1 Important background material. In face-to-face programmes, a considerable amount of time is often spent near the start, getting everyone up to speed with essential knowledge or skills, to the annoyance of the students who already have these. Making such information the basis of an open learning package can allow those people who need to cover this material before the whole group starts, to do so in their own time and at their own pace, without holding up the rest of the group.

2 ‘Need to know before …’ material. For example, when different students will be attempting different practical exercises at the same time, it could take far too long to cover all the prerequisite material with the whole group before introducing practical work. Designing separate, short open learning elements to pave the way to each practical exercise, can allow these to be issued to students so that the practical work can be started much earlier.

3 ‘Remedial material’. In many face-to-face courses, there are problem-topics which can hold up a whole class while the difficulties are addressed by lecturers or trainers. This can lead to time being wasted, particularly by those students for whom there are no problems with the parts concerned. The availability of open learning packages (print-based or online or both) addressing such areas can allow such packages to be used only by those students who need them, in their own time, so that the progress of the whole group is not impeded.

4 ‘Nice-to-know’ material. While ‘need-to-know’ material is more important, open learning elements can be particularly useful to address ‘nice-to-know’ material, and giving such material to students without spending too much face-to-face time on it. This allows contact time to be saved for helping students with the really important material, and for addressing their problems. Sometimes the ‘nice-to-know’ dimension can be carried online, allowing students with time and energy to spare to enjoy it, without it getting in the way of those with less energy or time.

5 Much-repeated material. If you find yourself often covering the same ground, perhaps with different groups of students in different contexts or courses, it can be worth thinking about packaging-up such material in open learning formats. If you yourself get bored with things you often teach, you’re not going to pass much enthusiasm for these topics on to your students, and it can be mutually beneficial to invest your energy into creating an alternative flexible learning pathway to cover such material. Furthermore, if you’ve taught something really often, you’re the ideal person to know exactly what needs to go online or into a learning package to give students just the right kinds of feedback on their ongoing learning.

6 Material which is best ‘learned-by-doing’. Open learning, whether pen-in-hand or online, is based on students answering questions, and doing tasks and exercises. Therefore it can be a useful starting point for an open learning package to base it on the sorts of activities that you may already be giving your face-to-face students. Standard assignments and activities already in use in traditionally delivered courses and programmes may be adapted quite easily for open learning usage, and have the strong benefit that they are already tried and tested elements of the curriculum.

7 Material where students need individual feedback on their progress. A vital element of open learning is the feedback that students receive when they have attempted to answer questions, or had a try at exercises and activities. The kinds of feedback that you may already give your face-to-face students can be packaged up into open learning materials.
What you say to students looking over their shoulders as they try their hands at tasks and exercises can be just as useful on-screen online, or in print.

8 **Material that you don’t like to teach!** It can be tempting to turn such elements of the curriculum into open learning materials, where students can work on them individually (or in untutored groups), and using face-to-face time more efficiently to address any problems that students find, rather than to teach them from scratch.

9 **Material that students find hard to grasp first time.** In most subjects there are such areas. Developing open learning materials addressing these means that students can go through them on their own, as many times as they need. Effectively, the open learning material becomes their teacher or trainer. Students can then work through such materials at their own pace, and can practise with the learning materials until they master them.

10 **Material which may be needed later, at short notice.** It is often the case that some topics are only really needed by students quite some time after they may have been covered in a course or programme. When such materials are turned into open learning formats, students can polish up their grip on the topics involved just when they need to.

---

**Blended learning**

Essentially, blended learning is about integrating resource-based learning – particularly online learning – seamlessly into the overall learning experience of students. Implementing flexible learning with small groups of students poses few particular problems, provided the learning materials are of good quality, and there is appropriate support for students. However, student numbers continue to grow in college-based courses in many disciplines, and resource constraints have meant that face-to-face time with students has to be more limited than formerly. Learning resource materials can take some of the pressure away, but need to be firmly linked with mainstream teaching, otherwise students may feel that the resource-based elements are peripheral. The following suggestions aim to help you to ensure that such pathways and materials are worth the time and effort that is involved in creating them.

1 **Plan to make the most of economies of scale.** If there are hundreds of students, it can become well worthwhile making good use of online learning and appropriate virtual learning environments. It may be less cost-effective to print large numbers of print-based open learning packages in such contexts. The same virtual learning environment may extend easily right across the provision of the whole institution – but it then becomes all the more important to choose it well in the first place! Investigate what it does – not just how it looks.

2 **Decide which parts of the syllabus to switch to resource-based mode.** A previous section of this book gave suggestions about which parts of the curriculum in general lend themselves to open learning delivery. A further section looked at the categories of students likely to benefit from flexible learning. Combine these two agendas to work out in the context of your own lecture programme which will be the best parts to use, maximising the benefits to the most appropriate cross-section of your class.

3 **Work out the best things to do in lecture times.** It is becoming increasingly common to design open learning materials to replace some of the material that was formerly handled in lectures. It is important to put the remaining occasions
when a whole group is together to optimum usage. Such usage includes guiding and supporting students who are doing some or most of their learning from open learning materials.

4 Make sure that your students don’t regard the resource-based learning as an optional extra. For example, use lecture time to explain to the whole group which learning outcomes are being covered by the flexible learning materials, and what the balance is between what will be covered in class, and the learning that students are required to do on their own. Explain (for example) that if half of the module is being worked on by students in online mode, half of the exam questions will test their achievement of these parts of the module.

5 Reserve some class time to answer students’ questions about the resource-based learning material. It can be useful to use large-group time to collect and address problems that students find, and more efficient use of time than trying to deal with students’ questions by appointment or in surgery-times. Collecting frequently asked questions online, then going through them in a whole-group setting with students can be a useful way of integrating open learning elements properly into the learning programme.

6 Use lectures to ‘spotlight’ rather than to ‘cover’. Decide on the really important elements of the course, where it is worth the whole group having a shared learning experience along with the opportunity for questions and discussion. Explain to students which parts you are going to spotlight in this way, and why. This helps them to see that they have the responsibility for learning the parts that are not going to be spotlighted in this way.

7 Consider using elements of the resource-based learning material as prerequisite for particular lecture sessions. For example, you can ‘require’ students to have worked through a particular section of their materials before attending a specific lecture, and structuring the session such that students who have not done this feel sufficiently disadvantaged or embarrassed that they don’t put themselves in such a position in future.

8 Consider building in to the learning materials short assignments or exercises to be handed in during lecture time. This can help to ensure that students keep up with the intended pace. Sometimes you could actually take in their work and mark it, or take it in just to check how the materials were working, then return it to the class for peer-marking or self-marking.

9 Get students to use the learning materials as a framework for their lecture notes. For example, use some lecture time for students to do particular tasks around information that is already in their open learning materials or provided online. This conditions them to bring the materials to the large-group sessions, and increases the probability that they will have worked on them before the session. It also allows you to set additional follow-up tasks during the session.

10 Turn some lectures into tutorials! For example, choose particular areas for students to learn with the open learning materials, and arrange a follow-up lecture slot that will be devoted to questions and discussion about the material, rather than introducing anything further on such occasions.

11 Turn some lectures into large-group, interactive learning experiences. Interactive handouts can be designed for large-group sessions, where the handouts themselves are in effect miniature open learning packages, including stated intended learning outcomes, tasks and feedback responses. Such large-group sessions not only build upon the principles of
learning-by-doing and learning from feedback, but they also help students themselves to develop approaches which they can extend to working with fully fledged open learning packages.

12 **Explain how, and when, the resource-based learning material content will be assessed.** It can be useful to stage some of the assessment somewhat earlier than the end of the course or module, so that some face-to-face time can be reserved for feedback to the class about any significant problems that were found with the part of the curriculum delivered by open learning.

13 **Consider using online assessment for appropriate parts of the material.** Such assessment can be based on a bank of questions, with each student being given a random selection from the bank on the occasion when they take a test. The tests can be done either in a booked computer laboratory (with invigilation if necessary to minimise possibilities of cheating), or could be networked over a week or two when the purpose of the assessment may be primarily formative. The use of passwords can add to the security of the tests, and the reporting software can save you a considerable amount of time, and avoid you having to do tasks such as marking and making class-score lists manually. Don’t forget, additionally, that online assessment can easily be extended to provide feedback to students during or after the test – so make the most of the opportunity to build into the assessment software feedback messages to show students how they have done – and to save you having to explain it all to them later.

**Which students are particularly helped?**

All sorts of people use resource-based learning in distance-learning mode whether online or paper-based. The following categories of students are included as those who can be particularly helped in different ways. Many parallels may also be drawn to the use of flexible learning elements in college-based programmes, where similar benefits can be delivered to a variety of constituencies of the student population.

1 **High fliers.** Very-able students are often frustrated or bored by traditional class-based programmes, as the pace is normally made to suit the average student and may be much too slow for high-fliers. With open learning, they can speed through the parts they already know, or the topics they find easy and straightforward. They can work through a package concentrating only on the parts that are new to them, or which they find sufficiently challenging.

2 **Low fliers.** The least-able students in a group are often disadvantaged when the pace of delivery of traditional programmes is too fast for them. They can be embarrassed in class situations by being seen not to know things, or not to be able to do tasks that their fellow-students have no difficulty with. With open learning, they can take their time, and practise until they have mastered things. They have the opportunity to spend much longer than other students may take.

3 **Students with special needs.** For example, people with limited mobility may find it hard to get to the venue of a traditional course, but may have few problems when studying at home. Students with other problems may be able to work through open learning materials with the aid of an appropriate helper or supporter.
Open learning is increasingly being used to address the particular needs of diverse groups including carers, prisoners, mentally ill people, religious groups, socially excluded people, and so on. Whether the special needs are linked to disabilities or to educational difficulties, open learning can often be more easily adapted to such students than can large-group or small-group teaching. Not least, the fact that these students can work at their own pace counts significantly. Furthermore, appropriate software can be used to make online learning materials accessible to students with hearing or sight difficulties, where it would sometimes be quite difficult to compensate for their difficulties in live face-to-face teaching.

4 Anxious students. Some people are easily embarrassed if they get things wrong, especially when they are seen to make mistakes. With open learning, they have the opportunity to learn from making mistakes, in the comfort of privacy, as they try self-assessment questions and exercises, and learn from the feedback responses accompanying such components of an interactive learning package.

5 Students with a particular block. Students who have a particular problem with an important component of a course can benefit from open learning, in that they can work as often as they wish through materials designed to give them practice in the topic concerned. It can be useful to incorporate self-assessment exercises, with detailed feedback specially included for those students who have problems with the topic.

6 Students who like working with computers. The new generations of school leavers love computer games – sometimes they take over their lives. The number of older people who enjoy playing with computers is also growing – there are plenty of ‘silver surfers’ around now. All such people can extend their pleasure in working with computers to learning intentionally with them.

7 Students needing to make up an identified shortfall. For example, in science and engineering programmes, it is often found quite suddenly that some students in a group have not got particular maths skills. Rather than hold up the progress of a whole class, self-study components can be issued to those students who need to get up to speed in the areas involved. When the students have a sense of ownership of the need that these materials will address, they make best use of the materials.

8 People learning in a second language. In class situations, such students are disadvantaged in that they may be spending much of their energy simply making sense of the words they hear or see projected on slides, with little time left to make sense of the ideas and concepts. With open learning materials, they can work through them at their own pace, with the aid of a dictionary, or with the help of students already fluent in the language in which the materials are written.

9 Part-time students. These are often people with many competing pressures on their time, or with irregular opportunities for studying, perhaps due to shift work, work away from home, or uneven demands being normal in their jobs. Open learning materials allow them to manage their studying effectively, and to make the most of those periods where they have more time to study. It is worth remembering that most full-time university students in the UK nowadays are actually working significant hours most weeks to support their education, and are in fact part-time students.

10 People who don’t like being taught! Surprisingly, such people are found in college-based courses, but there are many more of these who would not consider going to an educational institution. Open
Writing new resource-based learning materials

The most difficult stage in starting out to design a learning resource can be working out a logical and efficient order in which to approach the separate tasks involved.

Before really getting started on designing open learning resource material, it’s worth looking back, and asking yourself a few basic questions once more. These include:

- Am I the best person to create this material?
- Have I sufficient experience of being an open (or online) learner myself?
- Is there a materials production unit in my institution which can help me?
- Are there any experienced materials editors there whose expertise I can depend upon?
- Is there graphics design help and support?
- Is there already an institutional housestyle?
- Can someone else produce the learning materials, while I simply supply the raw material and notes on how I want it to work in open or online learning mode?

If after asking these questions, you decide to press ahead with designing your own materials, the following suggestions should help you to avoid wasting too much time, and particularly aim to help ensure that the work you do is directly related to composing learning material rather than writing out yet another textbook.

1 **Don’t just start writing subject material.** An open learning package is much more than just the subject matter it contains, and in particular is something for learners to do rather than just something to read.

2 **Get the feel of your target audience.** The better you know the sorts of people who will be your learners, the easier it is to write for them. It is worth spending some time on the suggestions given earlier in this book about making profiles of the main groups which will make up your target audience.

3 **Express your intended learning outcomes.** It is worth making a skeleton of the topics that your material will cover in the form of learning outcomes, at least in draft form, before writing anything else. Having established the intended learning outcomes, you are in a much better position to ensure that the content of your learning material will be developed in a coherent and logical order.

4 **Seek feedback on your draft learning outcomes.** Check that they are seen by colleagues to be at the right level for the material you are designing. In particular, check that they make sense to members of your target audience of learners, and are clear and unambiguous to them. Taking time at the outset to express these outcomes clearly and precisely is a useful investment.
5 **Design questions, tasks and activities, firmly based on your intended learning outcomes.** Some of the outcomes may require several tasks and activities to cover them. It is also useful to plan in draft form activities that will span two or three learning outcomes simultaneously, to help pave the way towards integrating your package and linking the outcomes to each other.

6 **Test your draft questions, tasks and activities.** These will in due course be the basis of the learning-by-doing in your package, and will set the scene for the feedback responses you will design. It is extremely useful to test these questions and tasks first, with anyone you can get to try them out, particularly learners who may be close to your anticipated target audience. Finding out their most common mistakes and difficulties paves the way towards the design of useful feedback responses, and helps you adjust the wording of the tasks to avoid ambiguity or confusion.

7 **Plan your feedback responses.** Decide how best you will let your learners know how well, or how badly, they have done in their attempts at each of your tasks, activities and questions.

8 **Think ahead to assessment.** Work out which of the questions, tasks and activities you have designed will be useful as self-assessment exercises, where feedback responses can be provided to learners in print in the learning package, or on-screen if you’re designing computer-based or online learning. Work out which exercises need the human skills and experience of a tutor to respond to them, and will usefully become components of tutor-marked assignments.

9 **Map out your questions, tasks and activities into a logical sequence.** Along with the matching learning outcomes, this provides you with a strong skeleton on which to proceed to flesh out the content of your open learning material.

10 **Work out your main headings and subheadings.** It is wise to base these firmly on the things that your learners are going to be doing, reflecting the learning outcomes you have devised. This is much better than devising headings purely on the basis of the subjects and topics covered, or on the original syllabus you may have started out with.

11 **Consider using question-headings.** Any piece of information can be regarded as the answer to one or more questions. Question-headings can often alert learners about the purpose of what follows somewhat better than simple topic headings.

12 **Write ‘bridges’.** Most of these will lead from the feedback response you have written for one question, task or activity, into the next activity that your learners will meet. Sometimes these bridges will need to provide new information to set the scene for the next activity. It is important to ensure that these bridges are as short and relevant as you can make them, and that they don’t run off on tangents to the main agenda provided by the skeleton you have already made. This also ensures that you make your writing really efficient, and save your valuable time.

13 **Write the introductions last.** The best time to write any introduction is when you know exactly what you’re introducing. It is much easier to lead in to the first question, task or activity when you know how it (and the feedback associated with it) fits in to the material as a whole, and when you already know how and why you have arranged the sequence of activities in the way you have chosen. Although you may need to write draft introductions when first putting together your package for piloting, it is really useful to revisit these after testing out how learners get on with the activities and feedback responses, and to include in the final version of each introduction suggestions to
learners about how to approach the material that follows, based on what was learned from piloting.

14 **Keep the big picture in sight.** Figure 5.1 shows a diagrammatic illustration of the links between intended learning outcomes, tutor-marked assignments, self-assessment questions, ‘bridges’ and feedback responses. It is important for you to think clearly about exactly which learning context your learners will be in as they meet each element of your materials – for example whether they will be engaged in a task, or receiving feedback on their actions.

**The Internet: harnessing e-information for e-learning**

In a way, the Internet is the ultimate open learning resource – but it is actually just e-information unless it is used actively. There is plenty of freedom. People can use it at times of their own choice, in their own ways, at their own pace, and from anywhere that access to it is available to them. But that said, it is not automatically a vehicle for productive and effective learning. Indeed, it is very easy to become side-tracked by all sorts of fascinating things, and to stray well away from any intended learning outcome. The learning payoff can be zero. The suggestions which follow are not intended as starting points for setting out to deliver learning through the Internet, but rather to help learners to use the Internet to obtain material to use in connection with their studies, such as in assignments they are preparing. The following suggestions may help you to help your students both to enjoy the Internet, and to learn well from it.

1 **Play with the Internet yourself.** You need to pick up your own experience of how it feels to tap into such a vast and varied database, before you can design ways of helping your students to get high learning payoff from using it themselves. Experience for yourself the pleasure of being able to surf the net, and also note how easy it is to surf quite aimlessly.

2 **After you’ve played with it, work with it.** Use the Internet to research something yourself. You may well of course have done this often already, but if not, give it a try before you think of setting your students ‘search and retrieve’ tasks with the Internet. Set yourself a fixed time, perhaps half-an-hour or even less. Choose a topic that you’re going to search for, preferably something a little offbeat. See for yourself how best to use the search engines, and compare the efficiency of different engines. Find out for yourself how to deal with 4,593 references to your chosen topic, and how to improve your searching strategy to whittle them down to the ten that you really want to use!

3 **Do they need it all?** Decide whether you want your students to use the Internet, or an intranet. An intranet is where a networked set of computers talk to each other, often using Internet conventions, but where the content is not open to the rest of the universe. If you are working in an organisation which already has such a network, and if your students can make use of this network effectively, there will be some purposes that will be better served by the intranet. You can also have controlled access to the Internet via an intranet, such as by using hot-links to predetermined external sites.

4 **Don’t just use it as a filing cabinet for your teaching resources!** While it is useful in its own way if your students can have access to your own notes and teaching-learning resources, this is not really using the Internet or an intranet – it may only provide e-information after all. Too many materials designed for use in other
Tutor marked assignment

Aspects of achievement of the intended learning outcomes which need 'human' feedback, i.e. from a tutor

Aspects of achievement of the intended learning outcomes where you can design structured feedback to appear on-screen

Learning by doing, with feedback from an expert, responding to individual strengths and problems, but without the comfort of privacy.

Learning outcomes, carefully worded to be useful to e-learners as a clear indication of the targets they need to achieve. Wording aims to help them to want to achieve them.

Self-assessment questions to provide opportunities for learning by doing, practice, trial and error, repetition.

Only as much 'content' as e-learners need to move from the feedback from one task to their next task.

Feedback responses, addressing 'am I right?', and (particularly) 'if not, why not?'.

---

Figure 5.1  Designing e-learning: a diagrammatical representation of a strategy for developing an element of e-learning adapted from Anderson and Race (2002)
forms are already cluttering up the Internet. If all you intend your students to do is to download your notes and print their own copies, sending them emailed attachments would do the same job much more efficiently.

5 Think carefully about your intended learning outcomes. You may indeed wish to use the Internet as a means whereby your students address the existing intended outcomes associated with their subject material. However, it is also worth considering whether you may wish to add further learning outcomes, to do with the processes of searching, selecting, retrieving and analysing subject material. If so, you may also need to think about whether, and how, these additional learning outcomes may be assessed.

6 Give your students specific things to do using the Internet. Choose these tasks so that it is relevant and important for your students to find and use up-to-the-minute data or news, rather than where the ‘answers’ are already encapsulated in easily accessible books or learning resources.

7 Give students plenty of choice. Consider giving them a menu of tasks and activities. They will feel more ownership if they have a significant degree of freedom in their Internet tasks. Where you have a group of students working on the same syllabus, it can be worth letting them choose different tasks, and then communicating their main findings to each other (and to you) using a computer conference or by email.

8 Let your students know that the process is at least as important as the outcome. The key skills that they can develop using the Internet include designing an effective search, and making decisions about the quality and authenticity of the evidence they find. It is worth designing tasks where you already know of at least some of the evidence you expect them to locate, and remaining open to the fact that they will each uncover at least as much again as you already know about!

9 Consider designing your own interactive pages. You may want to restrict these to an intranet, at least at first. You can then use dialogue boxes to cause your students to answer questions, enter data, and so on. Pave the way towards being able to give students feedback about their work on the intranet, helping them to develop parallel skills to bring to their use of the Internet itself.

10 Consider getting your students to design and enter some web pages. This may be best done restricted to an intranet, at least until your students have picked up sufficient skills to develop pages that are worth putting up for all to see. The act of designing their own web pages is one of the most productive ways to help your students develop their critical skills at evaluating materials already on the Internet.
Intended outcomes of this chapter

When you've dipped into the suggestions offered in this chapter, I hope you will feel able to take more control of some of the following aspects of your overall life in higher education:

- workload management;
- stress management;
- preparing for appraisal;
- managing your feedback from students.

While other chapters in this Toolkit have been directly or indirectly about looking after your students, most of this one is about ensuring that you survive! I am only too aware of the levels of stress that are experienced by many lecturers, due to all manner of causes, many of which are beyond their control, and I hope that the suggestions in this chapter will contain something for everyone, and help to reduce – or at least manage – some of the causes and effects of stress. The chapter continues with a discussion about appraisal – how to prepare for it, and how to approach getting the most from it. Finally, I've included a range of suggestions about how you may go about getting feedback from your students, and analysing it to your (and their) advantage.

Managing your workload

Heavier workloads have become a fact of life for most lecturers. It seems highly unlikely that this situation will change. Managing your workload may increasingly seem like a balancing act between teaching, research and administration. I hope the following suggestions will help you to adjust your balance if necessary.

1 Don't waste energy on trying to turn the clock back! What some people affectionately refer to as ‘the good old days’ are very unlikely to return. One danger is that we spend so much time talking about how much better things once were, that we put even more pressure on the time and energy we have to face today and plan for tomorrow.

2 Prioritise your own workload. It is useful to go through all the tasks and roles that you undertake, asking yourself which are the really important ones, and which are the ones that would not have significant effects on your students if you were to prune them or abandon them.

3 Cut your assessment workload. This does not mean reduce the quality of your
Managing your stress levels

The lecturer’s job can be extremely stressful as staff are put under increasing pressure to teach longer hours and in possibly unfamiliar ways, and to spend longer hours on assessment and record keeping as well as research. At the same time, students are becoming more diverse and have an ever widening range of requirements and expectations. An increasing proportion of staff in higher education are becoming physically ill as a result of stress. There may indeed be very little you can do about many of the causes of stress, but you could be surprised at how much it is possible for us to adapt our responses to stressors. These tips cannot eliminate your stress, but may suggest some strategies to help you deal with it.

1 **Get better at recognising the physical signs of stress.** These include raised heart rate, increased sweating, headaches, dizziness, blurred vision, aching neck and shoulders, skin rashes, and lowered resistance to infection. When people are aware that such symptoms may be caused by stress, it helps them to look to their approaches to work to see if the causes may arise from stress.

2 **Get better at recognising the behavioural effects of stress.** These include increased anxiety, irritability, increased consumption of tobacco or alcohol, sleep...
disturbance, lack of concentration, and inability to deal calmly and efficiently with everyday tasks and situations.

3 **Increase awareness of how the human body reacts to stress.** Essentially this happens in three distinct stages. ‘The alarm reaction stage’ causes defences to be set up and increased release of adrenaline. ‘The resistance stage’ is when the body will resist the stressor, or adapt to the stress conditions. ‘The exhaustion stage’ results when attempts by the body to adapt have failed, and the body succumbs to the effects of stress.

4 **Don’t ignore stress.** There are no prizes for struggling to the point of collapse; indeed, this is the last thing you should be doing. As the symptoms of stress become apparent to you, try to identify the causes of your stress and do something about it.

5 **Get over the myths surrounding stress.** Research has shown that stress should not be regarded as being the same as nervous tension, and is not always a negative response, and that some people do indeed survive well and thrive on stress. In an education organisation, it is more important to manage stress than to try to eliminate it.

6 **Look to the environmental causes of stress.** These include working or living under extremes of temperature, excessive noise, unsuitable lighting, poor ventilation or air quality, poorly laid out work areas, and even the presence of vibration. In your own institution, finding out what people think of such environmental conditions is a good first step towards adjusting them.

7 **Look to the social causes of stress.** These can include insufficient social contact at work, sexual harassment, racial discrimination, ageism, inappropriate management approaches, unhealthy levels of competition, and conflict between colleagues. Any or all of these, when present, can be discovered and identified by asking people about them.

8 **Look to the organisational causes of stress.** These include inappropriately heavy workloads, ineffective communication, excessive supervision or inadequate supervision, lack of relevant training provision, undue concern about promotion or reward systems, and unsatisfactory role perceptions. Once identified, all of these causes can be remedied.

9 **Cultivate the right to feel stress, and to talk about it.** Stress is at its worst when it is bottled up and unresolved. It should be regarded as perfectly natural for people’s stress levels to vary in the normal course of their work. When stress is something that can be discussed, it is much more likely that the causes will be addressed. Talk about your problems. Actually voicing what is stressing you to a colleague, a line manager, the person you are closest too or even your cat can sometimes improve the situation. Bottling it all up through some misplaced sense of fortitude can be dangerous.

10 **Don’t be afraid to go to the doctor.** The worst excesses of stress can be helped by short term medication and medical intervention of some kind. People are often unwilling to resort to a visit to their GP for matters of stress when they wouldn’t hesitate to seek help for a physical ailment. Don’t let such feelings get in the way of finding the kind of support you need.

11 **Take a break.** Often our panics over time management are caused not so much by how much we have to do as much as whether we feel we have sufficient time to do it in. Try to take a real break from time to time, so as to help you get your workload into proportion. A little holiday or a whole weekend without college work occasionally can make you better able to cope with the onslaught on your return.

12 **Overcome powerlessness with action.** When you are stressed out, it is often because you feel totally powerless in the
Managing your appraisal

Most universities and colleges in the UK have in place appraisal programmes that link directly into the overall mission of the institution, the local plans of the school or department, and the needs of each individual. For people who have never been appraised, the process may seem intrusive and threatening. Yet other people may look forward to appraisal as an opportunity to get some feedback on how they are doing. Many people coming into universities, especially from industry, may have very negative experiences of appraisal, which in some contexts is used very much as a management tool to control staff.

How is appraisal organised?

Often the person chosen to appraise you will be your nearest line manager. Ideally it will be someone who knows your work and the context you work in, and also be in a position to make decisions and act on the agreements you make within the performance review process. In some universities, it is possible for you to choose your own appraiser; in others you are allocated an appraiser and it is then not normally possible for you to reject the institution’s choice. As far as possible, many institutions try to respect specific requests for you to be appraised by someone of the same gender or ethnic group as yourself, but this is not always feasible or seen to be desirable. Often there is a pre-appraisal meeting lasting ten to fifteen minutes in which appraiser and appraisee have the chance to set the agenda for the actual appraisal, which then allows time for the appraisee to think about the desired focus of the meeting and to prepare some pre-appraisal documentation.

What sorts of questions may you be asked?

Many universities have a standard pro forma which can be used in preparing for appraisal. Questions could include:

13 Try counselling. Many colleges have someone to whom staff can turn for trained counselling in times of great stress. Otherwise you could look elsewhere through your GP or in the phone book under therapeutic practice or alternative medicine to find someone who can guide and support you through the worst patches. This is often more productive than piling all your stress onto your nearest and dearest who usually have problems of their own!

14 Try not to personalise a situation into hatred and blame. It is easy to fall into the trap of seeing all your stress as being caused by an individual or group of people who have it in for you. Of course it may be the case but usually high stress situations are caused by cock-up rather than conspiracy!

15 Avoid compounding the problem. If things are pretty stressful at work, try to avoid making important life changes at the same time, such as moving to a larger house or starting a family, if these can be deferred for a while.

16 Try to adopt a long-term perspective. It can be really hard to project into the future and to review current stress as part of a much larger pattern, but if you can do it, it helps. Much of what seems really important now will pale into insignificance in a few weeks, months or years time.
What areas of your work do you feel you can associate with a sense of achievement?

What evidence can you supply to demonstrate your achievements? (e.g. student evaluations, comments from peer observations, reports from external assessors.)

Which activities and goals that you had planned to undertake have fallen by the wayside?

What are the particular reasons for these unfulfilled aims?

What support have you received from your line manager and other colleagues during the period under review?

You are also likely to be asked to look forward to the next year and identify:

- your provisional goals for the next twelve months;
- your developmental needs over this period;
- any training or special support you are likely to require to enable you to fulfil your plans;
- what might interfere with your plans to achieve, and what strategies you can adopt to prevent this happening.

If no appraisal pro formas are supplied, it is still a good idea for the appraisee to prepare a short report under these headings to provide areas for discussion.

Your appraisal interview

During your appraisal you should try to review as honestly as you can how well you feel you are doing and where you need to develop. You should not try to sweep your problems away under the carpet, nor should you be afraid to blow your own trumpet about the things of which you have a right to be proud. At the end of the interview, the appraiser should draw the process to a close by summarising briefly what has been said and then should guide you towards drawing up a set of realistic, specific and measurable goals for the next year, with timescales attached and recognition of the training, support and resources that are likely to be needed to help you to achieve them. If your appraiser does not do this for you, then you will need to make sure that you do it anyway.

In many institutions it is normal for a report to be written on the appraisal meeting. Often, this is written by the appraisee and then signed with or without comments by the appraiser. After the appraisal interview, the appraisal report will then provide a useful reference document for the work of the year to come. There is also normally a system in place by which training needs identified during the process are fed into an institution-wide staff development programme.

General suggestions on preparing for your appraisal

Appraisal can be a strong positive power for the good when it is used developmentally to ensure that individuals and groups review their own achievements, set realistic goals for the future and think about how what they are doing fits into their whole institutional programme. The following tips aim to guide you away from allowing appraisal to become merely a tiresome formality, and towards it being an active and dynamic means of coordinating your work and getting the best from yourself and the institution.
1 **Prepare thoughtfully for your review.**
Try to ensure that you have a clear idea prior to the review, of the areas you aim to focus on. After all, it's your appraisal and it's up to you to get the most you can out of the occasion. If you skimp on the preparation, your appraiser may well take cues from you and also take the process less seriously than it deserves.

2 **Try to see both sides of the process.** If you're preparing for review, think about how it feels to be in your position, so that you can help your appraiser to make the process positively developmental. See the appraiser as a guide and support for your process of self-review, rather than as an interrogator who is trying to catch you out.

3 **Collect evidence of achievement.** Bring to the review, or make a list of, concrete examples of outcomes that you have achieved, so that any successes or progress you claim can be backed up with examples. For example, you might bring along student feedback data; printouts of your students’ achievements; examples of your effective organisational and administrative skills; and letters and memos from internal and external colleagues who have acknowledged your efforts. You can also tell your reviewer about examples of your dealing with problems; your contributions to strategic decisions; your promotion of the effective work and reputation of your college. You might like to collect these in a loose-leaf folder with material easily referenced so you can refer to specific elements within the appraisal without too much difficulty in finding them.

4 **Regard the review as an opportunity.** Make it an occasion where you can raise all the important issues you haven’t had time to discuss earlier. Have a mental shopping list of training you would like agreement that you can undertake, or aspects of your job description that you would like to develop further. You may be able to negotiate time or resources for professional training of various kinds. You might wish to gain approval for your participation in local or national activities relevant to your work. Remember that professional development need not involve high expenditure. Opportunities exist for you to undertake personal development through work-shadowing, self-instruction and the use of staff development resource materials without large outlays of cash.

5 **Review your own performance objectively.** Don’t over-claim success, or downgrade your own achievements. Try to analyse what has gone well, and why, as well as what has been less successful, and why. In your preparation, ask colleagues who are not involved in your appraisal to help you realistically evaluate how you are doing. Ask them to help you remember the good parts that might have slipped your memory as well as to give you dispassionate accounts of the perhaps traumatic occurrences that you regard as having gone badly.

6 **Don’t be artificially modest.** Without being boastful, you can use appraisal as an opportunity to celebrate the things of which you are proud. Often people are not fully aware of what individuals have done, and how much of a cooperative activity has in fact been the responsibility of one person. It is amazing how often an appraiser will say, ‘I never realised that you are involved in so many areas’.

7 **Be realistic about your part in areas that have not been successes.** There's no need to shoulder all the blame, but the performance review is a chance to analyse how much responsibility you bear for the projects that have not succeeded, or for the deadlines that have been missed. This is the time for you to learn from the mistakes of the past and look forward to the next era. Avoid seeing your review as raking over old ground or digging up past
errors and mistakes. Use it as a chance to reflect and learn from what went wrong or did not work. Do not use this part of your review to criticise other colleagues or dwell on things over which you (or your manager) have little control (particularly a lack of resources).

8 Write your own private reflective log after your appraisal. Even if you have already produced a more formal report for your appraiser to sign off as part of the appraisal process, it can be helpful to have a more personal record of your own to refer back to. This can include how you felt when discussing your successes or failures, and notes to yourself about how you will go about following up your commitments arising from the review.

9 Remember that it is your review. Don’t allow it to become a one-way process, with your reviewer doing most of the talking. Use it as a proactive opportunity to affect your own working life. See your review as the most appropriate occasion to renegotiate your job description and make it more interesting or rewarding. If you regard the staff review process as a tokenistic activity in which your manager is simply going through the motions, then that is what it is likely to become.

10 Use a part of your review to discuss institution-wide issues that concern you. These might include equal opportunity matters, health and safety issues, or your concerns about teaching, learning and assessment. The review process provides a rare chance for you to have the undivided attention of your line manager.

11 Try to think of appraisal as a process and not an event. Don’t regard the date of your appraisal interview as the be-all and end-all of appraisal. It may be quite a crucial date, but it is only a milestone on a continuing journey.

12 Finish the review with an agreement as to what will happen next. Normally this will involve a confidential written record of the review, together with an agreed action plan that includes deadlines and responsibilities for both you and your line manager. Make sure that you know who is doing what before the end of the meeting. Make notes in your diary so you can follow up agreed actions in due course. Contact your reviewer if you don’t feel an agreed activity has actually been set in train or had any outcome.

13 Review the review process. If you feel that you have been short-changed by your reviewer because you felt rushed, not listened to, or not taken seriously, say so and do not countersign the formal record of the review or action plan. If you are happy with the way things have been done, make this clear too so that your reviewer, in turn, can use your satisfaction as evidence in his or her own review.

Managing your feedback from students

The consumer’s view is being sought more and more, and with students increasingly paying for their tuition, their views need to be taken into account more than ever. Evidence of student feedback is one of the things that anyone reviewing the quality of your teaching is certain to ask to see.

The most serious danger is that from the students’ point of view, giving feedback can become a chore. It is then not taken seriously. The value of obtaining feedback is undermined whenever there is a feeling that the purpose is merely ‘to be seen to be obtaining feedback’. The purpose of feedback should not merely be to make things better next time round. Giving feedback can itself be turned into part of the learning experience – particularly when feedback is the result of group discussions. In this section, I would like to point to four questions we should be asking ourselves at each stage of feedback processes:
Looking after yourself

- Are students developing a feeling of ownership of the feedback they give? (or is it just ticks and jottings on someone else’s questionnaire!?)
- Are we getting the feedback we need from students? (or are we only getting the answers to our questions, rather than the things that students need to be telling us?)
- Is giving feedback a learning experience in itself? (in other words, are students led into some deep and useful thinking about their studies, in the process of providing us with feedback?)
- How are we planning to give students the results of their feedback? (if they see that we’re not actually taking any notice of their feedback, they’re not likely to cooperate with our future attempts to procure feedback from them.)

Feedback on your lectures

There are many ways of getting feedback about the effectiveness of your lecture programme. Some are very simple, and require no special effort on your part.

Body language

You can find out a great deal about how your lectures are going by keeping an eye on the ways your students are behaving. You can easily tell the difference between ‘eyes glazing over’ (or asleep!) and ‘eyes which are interested and alert’. However, you can’t always tell. Some students develop the art of appearing to be interested and alert when they’re actually neither! There are of course body language traits that can alert you to unproductive processes – shuffling, chattering, fidgeting, and so on.

Coursework

Often, it’s only when you assess the coursework associated with a particular topic that you fully discover how the students’ learning really went. This can give you the opportunity to use further large-group teaching occasions to address what you’ve found out about the general state of the group’s learning achievements. (It will be too late, of course, to do anything about discoveries about your students’ learning which will become all too apparent when you mark their exam scripts.)

Informal comments from particular students

Often, you’ll have opportunities to talk informally to some of the students – for example those who happen to come up and ask you questions. However, the feedback you get from these students may not be representative of the feelings of the whole group – the students who ask you questions may be the keenest ones, or the boldest. Any students experiencing real problems with the content of your sessions may not wish to give you any clue that they’re not yet with you.

Peer feedback

Until relatively recently, there used to be too much privacy attached to our performances with large groups in lecture rooms. Now, most institutions of higher education have some sort of policy on
peer observation, sometimes quite informal, but still very useful. Sitting in, regularly, on colleagues’ sessions is one of the most productive ways to gain ideas to use in your own approaches to working with large groups. You’ll find things they do well which you would like to try, and (just as useful) you’ll notice things that they do less well which you will decide to avoid if at all possible. It is really useful if you can identify one or two colleagues where you can develop peer-feedback into something really useful, where you mutually give each other honest and constructive comments about how the sessions are going. Many universities now use peer-observation of lectures to help lecturers not only to develop their teaching, but also to prepare themselves for the external review of the quality of their teaching.

If you are heading towards a teaching quality assessment of the sort where someone from another university may observe you at work with large groups, it can be very useful to rehearse the situation by getting one or two other lecturers – maybe from other disciplines – to observe you quite formally as preparation. This helps you to become accustomed to the presence of outsiders, and also to become more aware of the things that you do that are most effective and interesting.

Feedback from seeing yourself teach

Making your own video is easier than you may think! You can choose the room, time, class, and position that you place the camera, and when you switch it on and off, and no one but you needs to see the video (though it is even more useful if you get a colleague or friend to watch it with you). It can be even better to get a colleague, or a student, to operate the camera, and follow you around and zoom in to show details of your expression or of the visual aids you may use. You can derive a substantial amount of feedback about your own performance just by watching yourself.

Stop, start, continue

A quick and versatile method of gaining feedback – especially from large groups of students – is to give them self-stick notes, and ask them to write the three headings ‘stop’, ‘start’, and ‘continue’ on them as follows:

| Stop ... | Start ... | Continue ... |

You can then ask the class a question along any one of the following lines:

- under each heading, jot down what you’d like me to do in future lectures on this course ... or ...
- tell me what you’d like to stop doing, start doing, and continue doing as we go further in this course ... or ...
- simply write down anything you’d like to tell me under each of the three headings.
A variety of feedback mechanisms

Feedback can be gathered from students in many different ways, including:

- from interviews with individual students;
- from feedback activities with groups of students, for example using nominal group technique sessions;
- from solicited feedback from large groups of students (for example using the ‘stop, start, continue’ agenda on self-stick notes in large-group lectures, as mentioned earlier in this chapter);
- from questionnaires of various types;
- from student representation on programme boards;
- informally (for example through tutorials, seminars, one-to-one chats with students and laboratory work);
- from students’ exam performance (but then it’s too late for some!);
- from students’ coursework performance (and particularly from their reactions to our own feedback to them);
- from information which may be forthcoming from external observers who may be able to discuss with students their experience of courses, e.g. moderators and examiners.

This chapter continues with some illustrations of the advantages and disadvantages of a number of approaches to eliciting feedback from students.

Some limitations of questionnaires

Because it’s easy to administer, the questionnaire has become the dominant method of seeking feedback. Unfortunately, it’s also easy to fall into the temptation to produce statistics based on questionnaire responses. If 84 per cent of students think Dr Smith’s lectures are brilliant, we’re inclined to ignore the 16 per cent who don’t – but they may have very good reasons for disliking the lectures. The problem is not so much with gathering feedback by questionnaire, but with the ways feedback is processed and collated. Some of the factors which limit the value of questionnaire feedback are listed below.

1 The ‘ticky-box’ syndrome. People become conditioned to make instant responses to questions. Getting through the questionnaire quickly becomes a virtue. Responses are made on a surface level of thinking rather than as a result of reflection and critical thinking. (This is not a problem on those occasions where instant reaction is what is wanted, but the feedback we gather is not usually analysed on that basis.)

2 ‘Performing dogs’ syndrome. Many people filling in questionnaires tend to want to please! They can usually tell which responses will please the people giving them the questionnaire, and the people whose work is involved in the issues covered by the questionnaire. If they like the people, they are likely to comment favourably on things, rather than use them to show their real views.

3 Lost learning opportunities. Questionnaires are often used after an event rather than during it. This tends to minimise any real learning outcomes of the process of completing questionnaires. The sense of ownership is reduced, when students don’t see how their responses will be of any direct benefit to themselves, and may only help their successors.

4 The ‘WYSIWYG’ syndrome (what you see is what you get). Questionnaires
Some advantages of questionnaire feedback

Despite the reservations presented above, there are some significant advantages associated with gathering student feedback through questionnaires. The best ways of using questionnaires therefore depend on using the advantages deliberately, while at the same time minimising the effect of the drawbacks.

- **Feedback questionnaires can be anonymous**: this allows students the chance at least of giving negative feedback without the embarrassment of giving it publicly.
- **Feedback questionnaires can be quick**: many things can be covered in a few minutes.
- **Feedback from questionnaires is amenable to statistical analysis**: this is an advantage – but as we’ve mentioned a dangerous one!
- **Feedback from questionnaires can be fed into institutional review and quality procedures**.
- **Questionnaires can be used on a ‘deeper’ level**: it’s possible, for example, to get students to go through a questionnaire twice. The first time they can be briefed to respond as they feel, the second time they can be asked to respond as they would like to feel. This can help to get over the problem of different students preferring different things – the gap between ‘how it is’ and ‘how you’d like it to be’ is often more important – and more revealing – than students reactions to ‘how it is’.

Some ideas on structured questions

Structured (or ‘closed’) questions are of several types including the following:

**Ticking boxes or putting marks on scales**

This can be done with contrasting dimensions at opposite sides of a form:
Alternatively, the terms can be included in a table, for example:

**Table 6.1**

<table>
<thead>
<tr>
<th>Boring</th>
<th></th>
<th>Interesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too fast</td>
<td>Too slow</td>
<td></td>
</tr>
<tr>
<td>Audible</td>
<td>Inaudible</td>
<td></td>
</tr>
<tr>
<td>Visual aids easy to read</td>
<td>Visual aids hard to read</td>
<td></td>
</tr>
<tr>
<td>Aims made clear</td>
<td>Aims hard to work out</td>
<td></td>
</tr>
<tr>
<td>I learned a lot</td>
<td>I didn’t learn anything</td>
<td></td>
</tr>
<tr>
<td>My questions answered</td>
<td>My questions unanswered</td>
<td></td>
</tr>
<tr>
<td>Enjoyable</td>
<td>Not enjoyable</td>
<td></td>
</tr>
</tbody>
</table>

One of the things which can go wrong with such scales is when the factors at each end turn out not to be opposites. Furthermore, if an odd number of columns is used, the middle column represents ‘safe middle ground’, and can cause students to put their responses there when they can’t decide whether something is interesting or boring, and so on. It can be argued that it is better to force them to make a decision by having an even number of columns. Then, those students who really think that something is midway between the extremes have to make a conscious decision, for example to put their tick or cross on the central line.
‘Usefulness’ measures

Various features of the teaching methods or processes can be mentioned at the left hand side of a pro forma, with boxes for ‘very useful’, ‘quite useful’ and ‘not useful’ to tick. The dimensions can include such things as: handout materials, visual aids, worked examples done in class. For example:

### Table 6.2

<table>
<thead>
<tr>
<th>Feature</th>
<th>Very useful</th>
<th>Quite useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slides in lectures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-class exercises</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent study tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Statements with ‘agreement’ measures

A series of statements can be checked against boxes such as ‘strongly agree’, ‘more-or-less agree’, ‘disagree’, ‘strongly disagree’ for example.

The statements can usefully be both positive and negative, to ensure that respondents don’t fall into the pattern of agreeing (or disagreeing) with everything they see. Part of such a questionnaire could be as follows:

### Table 6.3

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Quite agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find your lectures stimulate me to further work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I remain switched-off for most of my time in your lectures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am clear about the intended learning outcomes of each part of this module</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t really know what is expected of me in this subject</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it easy to ask questions in your lectures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find parts of this subject very hard to understand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Number-gradings

This is another form of structuring students’ responses, by asking them to enter numbers to indicate their feelings with regard to a statement or an issue.

E.g. 5 = most useful, 4 = very useful, 3 = quite useful, 2 = of limited use, 1 = of little use, 0 = of no use.

These could be used (for example) for students to record their feelings about the things they do in tutorials, for example:

Table 6.4

<table>
<thead>
<tr>
<th>Processes used in tutorials</th>
<th>More of this please</th>
<th>Just right, thanks!</th>
<th>Less of this please</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practising problem solving</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeing worked examples done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working through case-study materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asking questions of the lecturer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being asked questions by the lecturer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having marked homework discussed individually</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having marked practical work returned and discussed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeing examples of assessment criteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using assessment criteria directly to mark own (or others’) work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practising addressing previous exam questions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prioritising

This sort of structure helps overcome the ‘ticky-box’ syndrome, as it causes students to think more deeply about issues. For example, they can be asked to enter ‘1’ against the best feature of Dr Smith’s classes, ‘2’ against the next-best, and so on. My recommendation regarding getting students to prioritise teaching attributes remains ‘keep it as simple as possible’. Questions and choices need to be clear and unambiguous. This can also be used to find out which topics in a subject area students find the most difficult, for example:

Table 6.5

<table>
<thead>
<tr>
<th>Physical chemistry: rank the topics below from ‘1’ (the one you find most straightforward) to ‘8’ (the one you find most difficult)</th>
<th>Your ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrochemistry</td>
<td></td>
</tr>
<tr>
<td>Chemical kinetics</td>
<td></td>
</tr>
<tr>
<td>Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>Phase equilibria</td>
<td></td>
</tr>
<tr>
<td>Colloid chemistry</td>
<td></td>
</tr>
<tr>
<td>Spectroscopy</td>
<td></td>
</tr>
<tr>
<td>Photochemistry</td>
<td></td>
</tr>
<tr>
<td>Mass transfer</td>
<td></td>
</tr>
</tbody>
</table>
Some ideas for open questions

Open questions allow each student to respond freely to set areas. While such questions can overcome some of the limitations I have mentioned regarding structured questions, the fact that students are entering their responses in their own handwriting can be a deterrent against them expressing negative or critical views, where they may feel that they could be traced and maybe even penalised as a result.

The two most useful features of your lectures are:

1. 
2. 

The two least useful features of your lectures are:

1. 
2. 

Suggestions for improvement:

The three topics I found most difficult to make sense of in this module are:

1. 
2. 
3. 
Computer-analysed feedback

Several software packages exist which allow student feedback to be gathered, and statistically analysed. Students can be asked a series of multiple-choice or multiple-response questions, and their choices of entry can be recorded by the computer, enabling statistical analysis to be done on the responses from large groups of students. The feedback can be made anonymous, or students’ names can be used. It is probably best to use such feedback approaches where a record is kept of which students have given their feedback, but the individual responses are analysed on an anonymous basis. Students are more likely to give feedback using such software, particularly if the process of gathering the feedback can be made more interesting for the students giving it, for example by providing responses back to each student on the basis of each choice they make.

Computer-gathered feedback is not restricted to multiple-choice questions. Open-ended questions can also be included, and the software can sort and print out lists of the responses of a whole class of students to any particular question. Open-ended feedback of this sort, when gathered by computer, may be more reliable than when given in handwriting, as students may feel less under threat regarding their views being noticed and used against them! When very large numbers of students are involved, and sufficient access to computers is difficult to arrange, it is possible to retain the benefits of computer analysis of feedback choices by using paper-based questionnaires designed for optical mark reading.

Suggestions on ways of using questionnaires

So far, I’ve been quite critical about some of the most common methods used to seek and analyse student feedback, and have referred to many of the things which can go wrong with such methods. Next, however, I offer a range of suggestions for developing some of these methods further, taking into account the risks, and aiming to optimise the potential benefits, both to ourselves and to our students.

1 Consider making the use of questionnaires private to individual members of staff. For feedback about lectures (or tutorials, or lab work) I think it best that each lecturer designs and uses his/her individual questionnaire, and obtains feedback for his/her own use privately. This doesn’t mean, however, that the forms are to be filled in ‘privately’ by students – it may well be better to use them as an agenda for group feedback.

2 Make questionnaires ‘short and often, not long and once’. Any feedback form should be short enough not to bore or alienate students. A good guide may be that it should be possible for a group to complete the form in a few minutes or so. This means separate forms for lectures, tutorials, and so on.

3 Use questionnaires for formative rather than summative feedback whenever possible. Seek feedback during a programme, so that something can still be done about matters emerging. Feedback after completion of a programme is still useful, but is not seen by students as so valuable as when they have the chance to suggest changes they themselves will benefit from directly.

4 Employ questionnaires for a wide range of matters to do with our presentation, style and approachability. These aspects of, for example, lecturing, can be gathered in the private mode suggested above. Individual questionnaire components can be selected/composed by each staff member to search for comment about issues that may be of particular concern to the lecturer concerned.
5 Consider ‘more-public’ questionnaires for general issues, and for summative feedback. These can be used to measure feedback relating to non-personal variables, such as:

- relative workload of different topics or modules;
- perceived relevance of topics as seen by students;
- relevance of practical work to theory, as seen by students;
- balance of lectures, tutorials and other teaching/learning situations.

The more ‘public’ sort of questionnaire is more likely to have value when used towards the end of a course or module, and to gather summative feedback, which can be used in reviewing the course or module prior to the next time it will be delivered.

6 Structured questionnaires can have the advantage of anonymity. Even if using a mixed questionnaire containing open-ended questions as well, you may decide to issue the structured and open-ended parts separately because of this factor.

7 Try to avoid surface thinking. Students – and anyone else involved – get bored if they have long questionnaires to complete, and the decisions or comments they make become ‘surface’ rather than considered ones. Even though students may be able to respond to a structured questionnaire of several pages in relatively few minutes, the fact that a questionnaire looks long can induce surface response behaviour.

8 Consider the visual appearance of your questionnaires. Go for a varied layout, with plenty of white space, so that it does not look like a solid list of questions. Use a mixture of response formats, such as deletions or selections from lists of options, yes/no choices, tick-boxes, graduated scales, and so on – make it look interesting to complete.

9 For every part of the questionnaire, have definite purposes, including positive ones. Don’t ask anything that could prove to be superfluous or of passing interest only. Ask about positive experiences as well as searching for weaknesses.

10 Plan your evaluation report before you design your feedback questionnaire. It helps a great deal if you know exactly how you plan to collate and use the responses you will get from your questionnaires. Working out the things you hope to include in your report often alerts you to additional questions you may need to include, and (particularly) to superfluous questions which would not actually generate any information of practical use to you.

11 Make each question simple and unambiguous. If students’ interpretations of the questions vary, the results of a survey are not valid enough to warrant statistical analysis of any sort. In particular, it’s worth ensuring that in structured questions, students are only required to make decisions involving a single factor.

12 Ask yourself ‘what does this question really mean?’. Sometimes, your reply to yourself will contain wording which will work better in your questionnaire than the original idea you started with.

13 Avoid safe middle ground in scales. For example, the scale ‘strongly agree, agree, undecided, disagree, strongly disagree’ may give better results if the ‘undecided’ option is omitted, forcing respondents to make a decision one way or the other (or to write ‘can’t tell’ on the questionnaire, which then has the validity of a conscious decision).

14 Be aware that some respondents will make choices on the basis of those they think they are expected to make. Many respondents set out to ‘please’ the person gathering the feedback, possibly thinking of possible recriminations if critical selections may be traced back to their authors.
15 Keep prioritising questions short and simple. For example if students are asked to rank seven factors in order of value (or importance), it may be easy enough to analyse the best and worst choices, but difficult to make a meaningful analysis of ‘middle ground’.

16 Pilot your draft questionnaire. There is no better way to improve a structured questionnaire than to find out what students actually do with it! Use short print runs for questionnaires, and edit between each use.

17 Remember that students’ responses can be influenced by their mood at the moment of answering the question. Ideally, you may wish to balance this source of variation out in one way or another, for example by issuing a similar questionnaire at another time, and comparing responses, or by including some alternative questions in other parts of your questionnaire which ‘test’ the same agenda so you can be alerted to inconsistency in responses due to swings of mood.

18 Don’t leave big spaces for students to fill in their replies. You can compensate for this restriction later with ‘any other comments?’ space. If students responses are necessarily short, you are more likely to get easily interpreted answers to your questions, which helps make statistical analysis more fruitful.

19 Decide whether you want the questionnaire to be anonymous, optional or respondent-known. With responses involving handwriting, there is always the possibility of tracing respondents, and students may respond differently with this possibility in mind. With computer-based open-ended questionnaires, this dimension is simplified, but not entirely overcome if log-in data could be used to trace respondents.

20 Resist pressures to over-use standard questionnaires. This applies equally to structured or open-ended versions or mixed-mode questionnaires. Students quickly get bored with identical questionnaires, and are likely to fall into a standard mode of response, where there is considerable ‘echo effect’ carried forward from previous decisions and responses. The most useful feedback data is normally generated by specially produced questionnaires relating to a specific course or subject, or a particular aspect of the teaching and learning in that subject.

21 Try to get a good response rate. When questionnaires are filled in during contact time, you are more likely to get everyone’s views. If questionnaires are taken away by students to be sent back later, there is a tendency to get lower response rates, and the students who actually go to the trouble of responding may not be representative of the whole group.

22 Give students some free ranging questions. For example, it’s worth considering asking them, ‘What other questions should be included in future editions of this questionnaire?’ and inviting them to supply their own answers to the questions they think of. Such data is unsuitable for any statistical purposes, but is valuable in qualitative analysis of feedback from students.

23 Work out how you are going to analyse the data from open-ended questions. Sometimes a transcript collecting all responses to a question is necessary before the gist of the feedback can be discerned accurately. In other circumstances, counting the number of times something is mentioned in students’ responses can be a valuable process.

24 Don’t accumulate piles of uninterpreted questionnaire data! It’s best to make a deliberate effort to produce a summary report (even if only for your own private use) for each set of data. A pile of feedback responses quickly becomes out of date as new developments are implemented in courses. Also, it is worth showing students that you take the data seriously enough to analyse it straightaway.
Feedback from interviews with students

Interviews with students can be a valuable source of feedback. However, interviewing students is costly in terms of time and effort; the following suggestions may help you to make it a cost-effective process.

1 Prepare your agenda carefully. To enable you to analyse and collate the feedback you get from students, it is important that they are all asked the same questions in the same way. It is all too tempting to develop the agenda on the basis of the replies of the first few students, so it is usually worth piloting your question list on a few students (not necessarily from the group to be targeted) before starting on a set of ‘real’ interviews.

2 Link interviews with other means of getting feedback from students. If you are already using (or planning to use) structured or open-ended questionnaires, you may find it worthwhile to work out what else you will be particularly looking for in feedback from interviews.

3 Consider the merits of using interviews to follow-up questionnaire feedback. When you have already analysed questionnaire responses by students, you may be able to pinpoint a few issues where you want to ask students more detailed or more personal questions about their experiences with a subject or a course.

4 Consider the alternative possibility of using preliminary interviews to establish the agenda for feedback questionnaires. This would probably not take the form of interviews with the whole group, but with a representative selection of students.

5 You may not be able to interview the whole group. Decide how you are going to select the students you choose to interview. There are many possibilities, each with its own advantages and drawbacks. For example, you could select randomly by name or student number, or you could make a representative selection including high-performers, middle-range-performers and low-achievers in related assessments, or you could ask for volunteers (not, however, the most representative of the possibilities).

6 Remember that students may be anxious. Any kind of interview may feel to students as if there is an assessment dimension present, and this may cause them to be restrained especially when it comes to expressing dissatisfaction.

7 Ask questions which lead students to answer rather than to refrain from comment. For example, asking students ‘was there anything you found unsatisfactory?’ may be less fruitful than asking ‘what was the thing you liked least about the way this module was taught?’.

8 Don’t lead your witnesses! It is one thing to ensure that students feel free to answer questions, but another to lead them towards the answers you want, or the answers they may think you want. ‘Do you like the way I used coloured overheads in my lectures?’ is an obvious example of a leading question!

Feedback from groups of students

Students may be more forthcoming in a group, and you could consider posing the questions (maybe as a handout), leaving the group to come to decisions about how the students wished to answer them, then return to hear their answers. Students have the safety of being able to report minority views or controversial views, without the student who actually speaks such responses having to ‘own’ the view reported. Group interviews can actually save a considerable amount of
time compared to solo interviews, and allow students to compare and contrast their own perspectives. Students in groups can also be helped to prioritise or sequence in order of importance their responses, making their feedback even more valuable. Group interviews can also be used to get students to clarify or explain issues or responses which at first may be unclear.

This can be more useful than feedback from individuals, for the following reasons:

- **Feedback from groups captures discussion, reflection and debate.** This is more useful than only having the reactions of individual students.
- **A group can present negative feedback with less embarrassment than an individual.** Individuals can be more forthcoming in making inputs in a group, when their feedback is then rendered more or less anonymous within the group.
- **Group feedback is likely to range more widely.** Where a questionnaire is used as an agenda for group feedback, the group is more likely to be willing to go beyond the agenda.

It’s essential to make good notes, when interviewing groups of students! After four or five interviews, you may have a good idea of the general nature of responses to your questions, but you could have lost a lot of the specific detail. More recent interview happenings tend to ‘drown’ earlier ones in one’s memory.
Intended outcomes of this chapter
When you’ve explored the ideas in this chapter, and tried out the most appropriate ones in the context of your own teaching and assessment, you should be better able to:

- address equal opportunities issues and work towards inclusive practice;
- tackle or reduce problems associated with plagiarism;
- work more effectively with international students;
- reflect on your own teaching, and capture these reflections.

This chapter opens with three issues and challenges which often overlap in practice – developing inclusive practice to afford students with equal opportunities, problems with plagiarism, and working with international students. The Toolkit ends with some thoughts about reflection, and some questions to help in capturing our reflections on our teaching.

Equal opportunities and inclusive practice

Equal opportunities: what does it mean?
The Staff and Educational Development Association argue that:

Teachers must be concerned that students have equal opportunities, irrespective of disabilities, religion, sexual orientation, race or gender. So, everything that teachers do should be informed by equal opportunities legislation, by institutional policy and knowledge of best practice.

(SEDA 1998)

To this I would also add that higher education inclusive practice should go beyond mere compliance with legislation, in our efforts to avoid discrimination on the grounds of age, social class and cultural heritage.

Much has been written unpacking the term ‘equal opportunities’ and what this means in an education context. Most higher education institutions take equal opportunities very seriously indeed, not least for fear of falling foul of discrimination legislation, and many have well-articulated equal opportunities, although few are explicit about the philosophy that underpins them. Some are based in traditional liberal arts models of adult education, focusing particularly on removing barriers from those historically disadvantaged in terms of access and progression.
Others are founded in more radical approaches aiming to bring about societal changes and recognizing that ‘difference’ is socially constructed, implying a norm from which ‘non-standard’ students deviate. Others again take a pragmatic (and potentially mechanistic) approach, ensuring the university complies with legislation and maximises recruitment from constituencies of students that other higher education institutions have not yet picked up on.

Leicester 1996 has identified four models of equal opportunities thinking as applied to higher education:

1. **Promoting equal opportunities as removing unfair/irrelevant barriers**: so that people can compete equally for higher education. This relates to a liberal model where discrimination is seen as due to barriers which if removed – by legislation or application of resources – produces a ‘level playing field’ which represents fairness.

2. **Promoting equal opportunities as increasing ability and motivation**: this goes beyond removing barriers. Resources are directed to groups who are under-represented in higher education which may be uninterested in it. Resources are spent to increase the aspirations of these groups and improve their chances of competing for education. This, together with removing barriers, is ‘positive action’.

3. **Promoting equal opportunities as the development of ‘respect for all’**: here the concern is not simply for access, but for the promotion of diversity and valuing difference among staff and students. It is concerned with the curriculum, as well as access and teaching. It is also concerned to develop teaching appropriate to need, which may lead to ‘separate’ teaching, for example, single-sex science.

4. **Promoting equal opportunities as social engineering**: in this model the concern is not the educational access and experience of individuals but that of the group. It supports quota systems that recruit students because of their possession of certain characteristics, for example, membership of a gender or ethnic group. This is positive discrimination.

(Adapted from Leicester 1996)

**What’s changed regarding additional needs?**

People with ‘special’ needs have been amongst our students throughout the evolution of post-compulsory education, but in recent years a number of trends and developments have highlighted the problems which some of them face, and the need for us to respond appropriately to their various needs. In addition, over the last twenty years in particular, significant advances have been made regarding detecting and identifying many additional needs, and in how best to make adjustments to teaching, learning environments and assessment instruments and processes so as to minimise any disadvantages which can arise for at least some of the manifestations of additional need. For example, a great deal more is now known about detecting and responding to dyslexia.

Widening participation policies are gradually transforming the spectrum of students in post-compulsory education. It now seems a distant past where only about 5 per cent of the population entered post-compulsory education; nowadays in the UK for example the talk is about no less than 50 per cent of the population having at least some experience of higher education. This means that a different ‘slice’ of the overall population is now present on post-compulsory education programmes and courses. That in turn means that the population in any large lecture group, for example, now contains a proportion of learners who previously would not have been present there. At least some of these students have additional needs of a wide range of types. For example,
any large group of students is likely to have at least some who are affected by some degree of dyslexia. Also, post-compulsory education has become much more accessible to students with visual impairments, hearing impairments, limited mobility and other sources of additional need. There are significant proportions of any population affected by such conditions as diabetes, and epilepsy, and these too are often represented in educational contexts. Alongside this picture, there is now much more known about how best to respond to identified additional needs in the context of programmes which are designed for all students, rather than isolate those with additional needs into separate programmes designed specifically for them.

In addition, however, a wide range of what could be considered as mental health needs are now represented amid any large group of students. These don’t just relate to conditions which are directly associated with cognitive processing, but also include short-term or long-term manifestations of stress, anxiety, depression, and the various conditions resulting from exposure to mind-altering agents, not least alcohol, but also other drugs and medicines.

Student attitudes have also changed significantly in recent years, reflecting the tendency for society as a whole to be more aware of rights, and more likely to resort to law if injustice is felt to have happened. Students are more litigious. This greater sensitivity to customer rights is reflected in students’ expectations of teaching and learning environments and processes. Furthermore, should lack of appropriate attention to any identified additional need end up by disadvantaging particular students when they come to be assessed, appeals and even legal action can come as no surprise.

A further dimension of change is the increased attention paid to feedback from all students, for example the National Student Survey conducted in the UK from 2005, and the ways that quality assurance processes and systems make use of this feedback. External accountability links firmly now to funding provision in one way or another in most post-compulsory education systems and contexts. Within all the feedback from students which is collected, collated and analysed, is included at least some feedback which reflects how those students with additional needs have fared alongside those without such needs. We need to be ready to interpret all feedback as yet one more source of information about such needs.

Meanwhile the relevant legislation has evolved. In 2002 in the UK, the provisions of the Special Educational Needs and Disabilities Act (SENDA) came into affect. This legislation repealed the education exemption which had previously applied to post-compulsory educational provision, bringing the full impact of the 1995 Disabilities Discrimination Act to bear on teaching, learning and assessment in further and higher education. SENDA requires that no students should be disadvantaged because of any additional needs they may have, and that provision (and assessment) should include ‘reasonable adjustments’ so that such students have every opportunity to demonstrate their achievement alongside those without additional needs. Moreover, provision is required to make such adjustments in an anticipatory manner. In other words, since it may reasonably be expected that a significant number of students in any large lecture group may be affected by some degree of dyslexia, provision needs to be adjusted so that these students are disadvantaged as little as is reasonably practicable.

We need also to be aware that not all additional needs have anything to do with something which is ‘wrong’. For example, anyone learning in a second language in which they are not reasonably fluent, can be regarded as working under conditions of an additional need. We may indeed make every effort to help them to improve their fluency in the language concerned, but this often does not allow them to develop their language skills fast enough to keep pace with the growing complexity of language which may arise in the subject matter, or in the wording and design of assessment tasks and activities.
We need to remember not to ignore or undervalue the most significant source of expertise in how best additional needs can be addressed – namely the owners of the needs. Students themselves usually know a great deal about any additional need they have lived with over the years. They know what works for them, and what doesn’t work for them. We need to keep asking them, ‘how best can I help you’ in as many contexts as possible – lectures, group work, individual work, practical work, and preparation for assessment. Very often their answers can not only help us to make adjustments which are really effective for them, but can spare us wasting time and energy making changes which we imagine are going to be useful but which are often of limited value in practice.

When additional needs remain undiagnosed, the problems are more profound. Some additional needs evolve quite gradually, not least some of the mental health variety. When a student has a physical accident and ends up, for example, with mobility problems, at least the problems are apparent, and it is relatively clear what sorts of help may be needed. It is, however, the invisible onset of additional needs which poses the greatest problems for students and tutors alike. Sometimes students may begin a programme of study with no knowledge of having any additional needs, and then it gradually emerges that problems exist. The most frequent triggers are to do with assessment of one kind or another. When students underperform in assessment contexts, the possible causes include the effects of one or more additional needs.

While there is already a wealth of experience relating to how best to accommodate the most commonly identified additional needs, it remains an uphill struggle for subject-based teachers in post-compulsory education to respond to the considerable spectrum of such needs which may be present simultaneously in a given group of students – especially when there are hundreds of students in a group. It is also important to ensure that students without any additional needs are not significantly disadvantaged themselves by the steps which are taken to respond to additional needs. The phrase ‘inclusive practice’ is increasingly used to describe attempts to design teaching, learning and assessment for the whole range of students in a group. In fact, it can be argued that in many cases, whatever helps students with identified additional needs can indeed be of help to all students, as will be shown further in the analysis of particular contexts which follows in this chapter.

**Expert help with additional needs**

Most institutions of post-compulsory education have expert help available both to students with additional needs, and to those teaching them, responding to them and supporting their learning. Large institutions are often able to provide or arrange quite elaborate levels of support when needed, ranging all the way to 24-hour assistance when really needed. The ‘disabilities unit’ or ‘equality unit’ in a large institution will usually contain personnel trained in identifying and responding to specific learning needs, and such people can provide a great deal of help to tutors and lecturers regarding how best to approach handling particular teaching contexts when additional needs are known to be present. It is important that the dimension of additional needs is addressed in staff development and induction programmes, so that at the very least staff become aware of where to find expert help when needed, and at best become able to make reasonable adjustments to all of their teaching approaches to anticipate the presence of the more common additional needs.
Cross-cultural curriculum design

Curriculum design was originally thought of by many as being culturally neutral, since it represented a hidden but dominant discourse that was not explicitly spelled out since it was assumed that students and staff were all ‘people like us’ apart from those who were unusual and different. Subsequently many curriculum designers have begun to acknowledge that an inclusive curriculum needs us to interrogate our own practices to enquire, for example:

- Is the language used in the classroom making inferences about the dominant group that excludes some students from outside this group (e.g. ‘You’ve all grown up using computers everyday ...’)?
- To what extent are the examples and case studies all drawn from contexts in this country, and how far do they reflect the cultural diversity that the students represent?
- Are any of the required activities that form part of the curriculum (e.g. field trips) or social activities, perhaps during induction, going to be problematic for my students in cultural terms, for example informal meetings in pubs or site visits to places of religious worship?
- Are assumptions being made in my classrooms about student mores and behaviour (e.g. references to students as ‘all-night party animals’) that some students would find culturally offensive?
- Are activities requiring stamina and application required of students late in the day during periods of fasting (e.g. Ramadan)?
- Are there activities which are expected of students, such as business lunches or placements that might be problematic for students with dietary restrictions (e.g. halal or kosher)?
- Is inappropriate behaviour by fellow students challenged and halted?

Colleagues in post-compulsory education are only too aware of the ways in which the student communities in educational institutions are changing, as a greater proportion of the population continue their education beyond school. Somehow, however, it is quite difficult for college teachers to pin down what they should be doing to try to respond to the increasing diversity resulting from widening participation, and the greater awareness of the importance of addressing special educational needs, resulting from legislation such as the Special Educational Needs and Disabilities Act in the UK, effective from 2002.

The context for inclusive higher education practice

How can we make the higher education learning experience inclusive? What is the role of staff and educational development? A number of significant developments inform the context for inclusive practice in higher education. Levels of awareness about the issues among lecturing staff have risen substantially in recent years. The Special Educational Needs and Disability Act (SENDA) was published in 2001, and the sector in the UK has benefited from more than five years’ work by organisations such as TechDis, the National Disability Team and various Learning and Teaching Support Network (LTSN) projects.

The context for inclusive practice also includes the competitive internal market in UK higher education. Increasingly, institutions recognise a need to attract disabled students through ensuring that their needs are catered for beyond compliance with legislative requirements.
Making lectures inclusive

When your lecture groups contain students from a number of ethnic and cultural backgrounds, it is important to try to ensure that everyone is included, and that no one is distanced from learning because of their particular history or background. Ryan (Carroll and Ryan 2005) offers the following guidelines towards helping to create supportive learning environments in lectures.

Lecturers need to create the contexts where students feel that their contributions are valued and they are given opportunities to participate and succeed. Lecturers need to:

- provide a range of opportunities for all students to demonstrate their abilities, such as through choice of assessment or group discussion topics or class activities;
- provide negotiable class discussions and assessment tasks and methods so that students can explore their own areas of interest and demonstrate their knowledge and expertise;
- examine whether learning objectives can be met in other, more inclusive, ways such as through different tasks, formats or methods, or in different time frames;
- facilitate contact between home students and students from other cultures through organising and facilitating multicultural group work and discussion.

Carroll and Ryan (2005)

If your work is with a multicultural student population, it will be well worth you exploring this source in much more detail; a wide range of international literature is referenced there.

Inclusive assessment

In this era of increasingly available knowledge, universities are becoming more concerned with assessment and support, and less concerned with the delivery of content. Assessment is often the area where good inclusive practice breaks down, as higher education institutions do not tend to be good at advanced planning when arranging alternative assessments for disabled students. Disabled students want an equivalent experience for fair assessment with no special deals, and the maintenance of standards of achievement is important for all concerned.

The QAA code of practice expects curriculum designers and deliverers to address a range of disabilities including physical and mobility difficulties, hearing impairments, visual impairments, speech impairments, specific learning difficulties including dyslexia, medical conditions and mental health problems. While this may be a statement of the obvious to higher education practitioners today, it seemed quite challenging and problematic when it was first published in 1999. In fact, the code may have represented the first explicit requirement on higher education institutions to address difficulties for which potential students could previously have been excluded from higher education.

The section in the code of practice on the assessment of students states that institutions should consider implementing procedures for agreeing alternative assessment and examination arrangements when necessary that:

- are widely publicised and easy to follow;
- operate with minimum delay;
- allow flexibility in the conduct of assessment;
- protect the rigour and comparability of the assessment;
- are applied consistently across the institution; and
- are not dependent on students’ individual funding arrangements.
The key question is: how is this different from the way we should treat all students? Good practice in inclusive assessment is good for everyone. Promoting inclusive assessment can change practice in general for the better.

In implementing these arrangements, the code suggests that institutions may wish to consider the following adjustments:

- flexibility in the balance between assessed course work and examinations;
- demonstration of achievement in alternative ways, such as through signed presentations or viva voce examinations;
- additional time allowances, rest breaks and rescheduling of examinations; the use of computers, amanuenses, readers and other support in examinations;
- the availability of examinations or of the presentation of assessed work in alternative formats (e.g. modifying carrier language); and
- the provision of alternative rooms and invigilators for those using alternative arrangements.

The section in the code of practice relating to students with disabilities includes a precept on Examination, Assessment and Progression which states that:

Assessment and examination policies, practices and procedures should provide disabled students with the same opportunity as their peers to demonstrate the achievement of learning outcomes.

A further precept invites institutions to consider:

the range and type of assessments used and how these measure appropriately the achievement by students of those skills, areas of knowledge, and attributes as identified as intended learning outcomes for the module or programme, and allow the strengths and weaknesses of the students to be demonstrated.

Again, the key question here is: why not give all students opportunities to demonstrate their achievement in alternative ways that suit them best? Putting this into practice requires designing an assessment strategy that involves a diverse range of methods of assessment (as all forms of assessment disadvantage some students). We need to consider how any students might be disadvantaged, maximise the opportunities for each student to achieve at the highest possible level, and ensure the assurance of appropriate standards for all students.

A needs analysis for assessment requirements should be undertaken as soon as students are involved. This will maximise time available for additional idiosyncratic adjustments to be made for students whose needs had not been foreseen. The health and safety requirements of disabled students who are to be engaged in practicals and field trips should be considered from the outset.

Allowing extra time for disabled students in examinations may not be the best answer. In many instances it may make matters worse. The SPACE (Staff-Student Partnership for Assessment Change and Evaluation) is a three-year HEFCE funded Project, based at the University of Plymouth, developing and promoting alternative forms of assessment as a way of
facilitating a more inclusive approach to assessment. They have found that 71 per cent of the 100 disabled students surveyed were in receipt of special examination arrangements. Of these, 67 per cent of the disabled students surveyed received extra time to complete work. The SPACE team argue that this may not necessarily be the best way of supporting disabled students undertaking assessment and are developing an Inclusive Assessment toolkit. Guidelines developed by SPACE suggest, for example, involving students themselves in designing special examination arrangements and offering alternatives to traditional dissertations including video and oral assessments. Details of the SPACE project can be accessed at http://www.space.ac.uk/assess.php.

In the context of assessing live and practical skills, Pickford and Brown (2006) suggest the following general tips on the design of an inclusive approach:

- build in reasonable adjustments;
- undertake needs analysis;
- make best use of University Disability officers;
- make use of disabled students.

Some reasonable adjustments for assessing live and practical skills for students with dyslexia:

- try to separate the assessment of the content from the assessment of the expression of language;
- when marking students with dyslexia, decide the extent to which spelling/grammar/logical ordering should impact on the marks;
- provide printed instructions for all assignments in advance;
- check which print fonts, sizes and paper colours.

Some reasonable adjustments for assessing students with visual impairments:

- ensure that written materials are available in other media;
- reduce the length of time it may take to make accessible materials available;
- make it easier for students to find what they need in order to attempt the assignment;
- set inclusive assessment briefs.

Some reasonable adjustments for the assessment of students experiencing anxiety and other mental health issues in live and practical assignments:

- consider offering a ‘stop the clock’ facility in time-constrained assessments;
- provide advance organisers for all students in the early stages of higher education programmes;
- consider offering practical assignments with staged completion time and dates;
- think about simplifying the structure of practical tests.

**Designing an inclusive curriculum**

This requires the application of some ‘back to basics’ principles. Demonstrating inclusive curriculum design should be an integral part of all course validation procedures. Inclusivity must start at the first stage of curriculum design, with checks at each subsequent stage and at revalidation. Practical activities in the curriculum will require needs analyses and advance planning for inclusivity.
The QAA code of practice seeks consideration of:

- the proper and sensible links between organisation of the curriculum, its staged delivery through teaching and learning sessions, the specified learning outcomes identified and the appropriate scheduling of assessment;
- how assessment supports student learning; and
- ensuring students have adequate time to reflect on learning before being assessed.

**Fostering inclusive classroom practice**

Arguably the most common locus of discrimination against disabled students can be fellow students. In group work, for example, students may be unwilling to work with a particular class member who does not display good social skills. Student induction and modelling of good practice are crucial in addressing this kind of discrimination at an early stage. We need to work towards a context where it becomes unthinkable for students to discriminate against one another. In this, we should use all available sources of information and advice, including disability officers, national agencies, specialist groups and charities, and disabled students themselves.

**Designing inclusive learning spaces**

Why do we continue to build large lecture theatres in higher education? We need to think from the outset about the nature and purpose of the spaces where learning takes place. This is about more than the provision of wheelchair ramps and spaces and audio loops. Audio loops only work when the kit is used properly. Classroom furniture should be selected by people with training in disability issues. Tables and chairs should be suitable for short, fat and tall, thin people. Rules on food and drink in lecture theatres may need to be reconsidered to accommodate medical requirements. All categories of staff need to be involved in thinking about future planning for inclusivity.

**Designing inclusive e-learning experiences**

Make use of the experts, including organisations like TechDis (www.techdis.ac.uk) as well as disabled users. Professional web designers may need reining in, as a trendy look and feel is often disabling. Individual maverick curriculum designers should be discouraged from going it alone. Good design is good design for all.

**Inclusive curriculum design and delivery**

Staff may need to be weaned off excessively flashy presentations with split screens, lots of moving pictures, tiny text and masses of colour, at least until they have a firm understanding of the accessibility barriers these can create and the need to create alternatives. Good design is good design for all and course teams should scrutinise all course materials with an eye for inclusivity issues.

**The role of staff and educational development**

Ways in which educational developers can change the way that teaching staff in higher education think about inclusive practice include:
• Build in awareness of inclusivity issues in induction for staff and students. Elements of inclusivity should be included in postgraduate and continuing professional development programmes on learning and teaching in higher education.

• Include robust requirements for inclusive practice in institutional assessment and learning and teaching strategies. Questions about inclusivity should be an integral part of the validation and review of all programmes.

• Consult with and involve students and staff with disabilities in our programmes of activity, and build in alternative assessments for disabled students at the design stage, rather than making them ad hoc arrangements at the last minute.

• Make best use of university disability officers and other informed colleagues to build a knowledge base of the needs of disabled students, and make sure that disability committees/working parties are fully integrated into the institution’s systems.

• Use staff development workshops to foster awareness of specific issues, and encourage discussion of the language used when describing disability issues.

• Lobby national agencies and professional and subject bodies to keep disability issues foregrounded.

• But perhaps most importantly, we need to encourage practitioners in higher education to write, publish and read extensively about inclusivity.


**Responding to identified – and unidentified – additional needs**

Despite the fact that in the UK (for example in the context of SENDA) the term ‘special needs’ remains in widespread usage, it is perhaps an unfortunate and discriminatory phrase. Perhaps it would be better if we thought of ‘special’ needs as ‘additional’ needs of particular groups of students, and I have therefore used this approach in the discussion which follows. Teaching in higher education is essentially about responding to the needs of all students, and in various ways this is addressed throughout this *Toolkit*. This section, therefore, is focused on responding to students’ *additional* needs, in other words the particular needs of various categories of student present in differing proportions among the wider populations of learners in further and higher education.

**Dyslexia**

Dyslexia is the most common recorded disability, and is now recognised to be a very significant issue in higher education. Tips for inclusive assessment include (after Brown and Pickford 2006):

• Try to separate the assessment of the content from the assessment of the expression of language.

• When marking students with dyslexia, decide the extent to which spelling/grammar/logical ordering should impact on the marks given.

• Decide the extent to which these aspects of work should be the subject of formative feedback and how it will impact on summative grades.

• Provide printed instructions for all assignments in advance. Check with individual students which print fonts, sizes and paper colours are easiest for them to handle.
• Find out whether affected students may work best on-screen rather than on paper.
• Consider the suitability of mind maps and other alternatives to written communication when students are being assessed on how well they can organise ideas.
• In making tutor comments on students’ work, pay particular attention to the legibility of your own writing.
• Remember that different dyslexic students will be helped by different adjustments.

Extracted from Pickford and Brown (2006).

Mental health needs

This general heading in fact covers a very wide range of needs and conditions, ranging from depression, anxiety, Asperger’s syndrome, mania, to schizophrenia – any of which can have significant or even profound effects on students’ ability to handle various teaching–learning situations. Also, there are the much more common effects which can be regarded as affecting in one way or another students’ ‘state of mind’, including fatigue (often due to working shifts at night to support study) and conditions related to consuming alcohol or other mind-altering agents. Furthermore, most students at some time (and some students for most of the time) are affected by various levels of stress, attributable to a wide range of sources – financial, emotional, self-esteem related, and so on.

Some mental health conditions can be slow-onset, and grow in intensity so gradually that they are not noticed for some time – including by their owners. Other conditions can be precipitated very rapidly by life-changing events or crises.

As with other additional needs, mental health needs of most kinds lie on a continuum, ranging from what we would regard as ‘normal’ (including occasional stress or anxiety) to ‘abnormal’ requiring expert help and support. Borderlines are very difficult to define.

Perhaps the most important difference between mental health needs and physical ones is that students affected by mental health conditions are not necessarily able to give realistic responses to our question, ‘how can I best help you with this?’. Some students may indeed have a firm grasp on exactly how their additional needs can best be addressed, but others may be quite wrong in their view of what is likely to be best for them. That is why it is so important that anyone whose job is about making learning happen in post-compulsory education at least knows the nearest sources of expert help in addressing the more significant mental health problems – counsellors and other appropriately trained personnel, who invariably have their own links to the specialists who may be needed on occasion.

What adjustments may we be able to make to compensate?

While it can be safely assumed that in a lecture theatre full of students, some will at any given time be impeded by one or more mental health needs or conditions, it is quite impossible for a lecturer to know exactly which conditions may need to be addressed. One can’t really ask the students to respond to, ‘hands up those of you who have mental health problems today please’!

However, there are some general ways to respond to the possibility – indeed probability – that in any group of students there will be some mental health needs at any time. An obvious, but nonetheless important, aim is to avoid conflict, temper, distress or highly charged emotional exchanges for all students at all times. For example, it is worth refraining from overreacting to challenging or unexpected behaviours from any students, however irritating they may be to us –
and indeed to the rest of the students in a group. While ‘normal’ students may weather such minor storms perfectly adequately, those with particular mental health needs may get them quite out of proportion.

It is worth aiming to be as approachable as possible, so that students with mental health problems – transient or developing – feel able to come and seek help and advice. In any case, it is really useful to get to know the support systems and mechanisms of your own institution really well, so that you know exactly where to go to find expert help when needed by your students. Getting to know the people providing such support is really useful, and allows you to seek their advice informally before deciding whether a particular student’s problem is one which would take you out of your own depth.

**Hidden and visible disabilities**

In some ways, our task is more straightforward when the disability is visible to us. When a student arrives in a wheelchair, or with a guide dog, we are immediately prompted into thinking, ‘how best can I help this person?’ in the context of our own teaching material, learning environment, and so on. It is all the more helpful when the owner of the disability is already an expert in how best we can respond to their situation. Other disabilities, however, are hidden. We’ve already thought about this in the context of at least some of the mental health problems, but there are physical disabilities which can also be quite hidden.

Diabetes, for example, is likely to be represented in any lecture theatre full of students. While it is indeed rare for a diabetic student to collapse into a coma in a lecture, it is far from rare for a diabetic to lose concentration during a lecture (or practical class, or seminar, or whatever) at a time when blood sugars may be running low – before lunch, for example. Despite the notices on the doors of many teaching rooms in post-compulsory education about ‘no eating or drinking in this room’, the most satisfactory solution for a diabetic’s problem in a pre-lunch break teaching session may well be to eat a banana or have a suitable drink. Indeed, confident diabetics may well come up to you and explain that they may need to take such action from time to time. It is worth making sure that our response to any such unexpected behaviours is restrained.

We need to be similarly open-minded to the possible reasons why students who could be suffering from back pain, hypertension, heart conditions, epilepsy and all sorts of other physical conditions including common colds and doses of influenza, might behave in our teaching–learning environments – including leaving altogether unexpectedly. If someone walks out, it is not necessarily the case that we have been boring the person concerned!

**Towards inclusive practice: conclusions**

This section has ranged widely around the consequences of widening participation, particularly the greater spread of ability within cohorts of students, and the increased presence of various additional needs. In former times when post-compulsory education was designed for a relatively elite proportion of the population at large, cohorts of students were much more homogeneous than nowadays. There are two distinct approaches to coping with the changed situation:

- to try to help all students to fit in to the educational contexts they encounter;
- to try to adjust the educational environment to be more suitable to all the students whose needs it is intended to address.
The most important common factor throughout this section has been that responding well to students with identifiable ‘special needs’ is usually good for everyone else too. When we improve our task briefings by using clearer sentences and shorter words to help dyslexic students, it helps everyone else too. When we make best use of tone of voice to help students with visibility impairments, it helps well-sighted students too. When we make good use of visual aids to help students with hearing impairments, it helps students with good hearing too. In short, inclusive practice is good for everyone.

Plagiarism
This is becoming one of the most significant problems which coursework assessors find themselves facing. Indeed, the difficulties associated with plagiarism are so severe that there is considerable pressure to retreat into the relative safety of traditional unseen written exams once again, and we are coming round full circle to resorting to assessment processes and instruments which can guarantee authenticity but at the expense of validity.

However, probably too much of the energy which is being put into tackling plagiarism is devoted to detecting the symptoms and punishing those found guilty of unfairly passing off other people’s work as their own. After all, where are the moral and ethical borderlines? In many parts of the world, to quote back a teacher’s words in an exam answer or coursework assignment is culturally accepted as ‘honouring the teacher’. When students from these cultures, who happen to be continuing their studies in the UK, find themselves accused of plagiarism, they are surprised at our attitude. Prevention is better than the cure. We need to be much more careful to explain exactly what is acceptable, and what is not. While some students may indeed deliberately engage in plagiarism, many others find themselves in trouble because they were not fully aware of how they are expected to treat other people’s work. Sometimes they simply do not fully understand how they are expected to cite others’ work in their own discussions, or how to follow the appropriate referencing conventions.

It is also worth facing up to the difficulty of the question, ‘where are the borderlines between originality and authenticity?’ In a sense, true originality is extremely rare. In most disciplines, it is seldom possible to write anything without having already been influenced by what has been done before, what has been read, what has been heard, and so on. There is, however, another aspect of authenticity – the extent to which the work being assessed relates to the real world beyond post-compulsory education. In this respect, authenticity is about making assessed tasks as close as possible to the performances which students will need to develop in their lives and careers in the real world.

There has been a huge increase in the amount published about plagiarism in recent years. If you spend some time looking at the www.jiscpas.ac.uk website for example, you will realise that plagiarism is now a topic which is engaging the minds of many writers and academics. The growth in plagiarism can partly be attributed to the ease with which others’ work can now be downloaded from the Internet (or copied electronically), and pasted into one’s own work with consummate ease. Another factor is the widening participation drives currently underway in many parts of the world, resulting in many more students in classes, and reducing the odds at plagiarism being noticed, especially when work is being marked by several lecturers in parallel.

Plagiarism detection software has become ever more sophisticated – to the extent where it can be really useful to scholarly writers themselves when they wish to track quickly the exact source of a quotation they wish to use with due acknowledgement to the source.

Some basic advice on plagiarism problems is offered by Race et al. (2005) as follows.
However, in the light of the growing importance of plagiarism, there are now detailed case studies galore on detecting plagiarism, dealing with it when found, and also on strategies to minimise the occurrence of the problem.

Since ‘inadvertent’ plagiarism is a major problem in its own right – for example when students from different cultural backgrounds fall into danger through using other authors’ words without due acknowledgement – most institutions have already produced helpful guidance for all students, alerting them to the boundaries which apply to correct citing and referencing of others’ work. It is therefore important to explore how your own institution has developed tactics to address the problem, and to develop these appropriately using the expertise which is now freely available in the literature and on websites.

1. **Distinguish between malicious and inadvertent plagiarism.** Punitive action may be quite inappropriate when plagiarism is the consequence of students’ lack of understanding of acceptable practice regarding citing the work of others.

2. ** Debate issues and solutions with the whole class.** Establish ground rules for fair play, and agreed procedures for dealing with any infringements of these ground rules. It is important that such discussions should take place before the first assessment.

3. **Act decisively when you discover copying.** One option is to treat copying as collaborative work, and mark the work as normal but divide the total score by the number of students involved. Their reactions to this often help you find out who did the work first, or who played the biggest part in doing the work.

4. **Be alert when encouraging students to work together.** Make sure that they know where the intended collaboration should stop, and that you will be vigilant to check that later assessed work does not show signs of the collaboration having extended too far.

5. **Help students to understand the fine line between collaborative working and practices which the university will regard as cheating.** Sometimes it can come as a shock and horror to students to find that what they thought of as acceptable collaboration is being regarded as cheating.

6. **Don’t underestimate your students!** Clever students will always find a way to hack into computer-marked assessments. Bear this in mind when considering whether to use such processes for assessment or just for feedback. (If students can hack into the security systems of NASA, your system may not be as safe as you may hope!).

7. **Anticipate problems, and steer round them by briefing students on what is – and what isn’t – plagiarism or cheating.** When collaboration is likely to occur, consider whether you can in fact turn it into a virtue by redesigning the assessments concerned to comprise collaborative tasks for students in groups.

8. **Be aware of cultural differences regarding acceptable behaviour regarding tests.** Bring the possibility of such differences to the surface by starting discussions with groups of students. Acknowledge and discuss the extreme pressures to avoid failure which some students may feel themselves subject to. Discuss with students the extent to which emulate their teachers and using their words is acceptable.

9. **Clarify your institution’s requirements on fair practice.** Students actually *want* fair play, and can be very rigorous if asked to devise systems to guarantee this. Draw links between the systems and the assessment regulations extant in your university. Make sure that students understand what the regulations mean!
Working with international students

In many countries, student cohorts are now much more multinational than used to be the case, and there are very significant benefits to students in having an educational experience enriched by the presence around them of a range of cultural backgrounds. There are also implications for curriculum design and teaching approaches, some of which have already been mentioned in this chapter.

Carroll and Ryan (2005) have published one of the most comprehensive resources on teaching international students. They suggest a memorable metaphor ‘canaries in the coalmine’ for the way working with international students often alerts us to the problems other students too may be experiencing.

One analogy we, the authors of this chapter, both use often when thinking and talking about international students is to see them as ‘canaries in the mine’, harkening back to the time when coalminers took canaries into mines to monitor air quality. If the canaries died, they knew that the atmosphere threatened the miners’ well-being, too. We are also at a ‘coalface’. The international student ‘canaries’ thankfully show us their difficulties in less dramatic ways but nevertheless point out aspects of our teaching that all students will probably experience as challenges. By paying attention, we can change conditions to make sure that everyone can thrive in the higher education environment. If we improve conditions for international students, we improve them for all learners.

(Carroll and Ryan 2005: 9–10).

In a later chapter, Carroll continues with a useful discussion of some specific cultural issues as follows.

Leask (2004) likens students’ arrival at university to learning how to play a new game where success depends on figuring out the new rules, applying them, and ‘winning’ rewards such as good grades, positive feedback and a sense of confidence and competence as a learner. All students find learning the new university ‘game’ challenging but international students may be doing so in English, as a second, third or fourth language. British or Australian culture and communication styles may also be unfamiliar and in many cases very different from the home culture (Cortazzi and Jin, 1997). Some international students may not realise the ‘rules’ have changed and most will start out using behaviours and assumptions that have served them well as learners up to this point. This may mean encountering unpleasant surprises. For example:

- An American student who has always received very high marks does her best at a British university and her first coursework is returned with a mark of 50/100. How could she have earned only half the available marks?
- A Chinese student who has always viewed classrooms as places where you sat, listened and tried to make sense of what was being said by the teacher is asked in an Australian lecture to discuss a point with his neighbour. What is the point of talking to someone who does not know the answer either?
- A Greek student who has previously been rewarded for reading a textbook many times then reproducing its insights in an exam is stunned by a Canadian reading list containing 25 books. How can he cope with that task and three other courses suggesting the same number of books to read?
A British student with good A levels goes back home after a term’s work at a British university and asks, ‘Why do my teachers keep asking about referencing my work and giving me bad marks. I got Bs at school.’

Often when Western teachers are presented with examples like this, they accept that learning is culturally conditioned but awareness of difference can turn to dismay. How can they as teachers familiarise themselves with students’ backgrounds when their students come from dozens of different countries?

Teachers can help students best by becoming more knowledgeable about their own academic culture. Once teachers can see their own academic culture as ‘systems of belief, expectations and practices about how to perform academically’, they can start to offer explicit help to students who have chosen to learn in that academic culture. Many students will adapt to the Western academic culture without explicit help, of course, by picking up clues and using feedback, observation and implicit messages from teachers to check out their own assumptions. But many others will not. The less insightful and sensitive may not have the time or, in some cases, the confidence and support they need to gradually pick up the rules of the game. Success comes too late or at a very high price in terms of stress, work and worry. Such students will find explicit help vital, though everyone will probably welcome any help that means they can expend less time and energy trying to figure out ‘the game’ and more time on the content and skills of the programme itself.

(Carroll in Carroll and Ryan 2005: 26–7).

Carroll continues with a discussion of some of the surprises and unexpected behaviours which international students give lecturers – think through the implications of some of those listed below on assessment.

- Giving presents.
- Answers all my questions with ‘yes’.
- Calling me Dr X even when I have said ‘call me John’.
- Complaining about wasting time on seminars rather than me teaching.
- Handing in 4,000 words for an essay with a 2,500 word limit.
- Writing very personal coursework with the main point on page 3 and lots of unnecessary background.
- Repeating verbatim my lecture notes in the coursework.
- Coming into my office after I have given the marks to argue loudly that I should give them higher marks – several times.
- Remaining silent in seminars even when I ask a direct question.
- Coming up after the lecture for a 1:1 discussion and seeming to expect me to stay for as long as it takes even though I said ‘Any questions?’ in the lecture deferring to my opinion even when a preference would be appropriate (e.g. Me: ‘which essay will you do as coursework?’ Student: ‘Please, you say’).
- Talking loudly in lectures.

(Carroll in Carroll and Ryan 2005: 29)

Often, difficulties experienced by international students only manifest themselves when their work is assessed, and if the assessment counts significantly towards their awards, this may already be too late. Carroll highlights this as follows.
Often, it is not until the end of the first term when students submit an assignment and do badly that they realise their ideas about assessment may not match your own. Again, to know what to be explicit about, you need to look for what your international students struggle with, then offer information. Spell out dates, times and deadlines; it generally takes international students much longer to accomplish tasks compared to domestic students. Students being assessed usually welcome explicit instructions on:

- The length of submissions (and the fact that longer is not better);
- The format (with explanations of what a report, poster, essay or précis might be and possibility of a chance to try out new formats such as oral presentations and viva voce);
- What the assessment criteria mean and how they are applied;
- What is being assessed (especially the percentage of the mark allocated to English language proficiency); and
- Which aspects of the assessment brief are compulsory and which are guidance or suggestions.

Because assessment is so central to academic culture, it helps to ensure information is conveyed in writing as well as through discussion, explanation or example.

Being explicit about assessment also includes thinking about feedback. Explicit, sensitive feedback acknowledgements students’ efforts and guides them to a more acceptable performance. Feedback that concentrates on what students have not done (‘confusing argument’, ‘no links’) or that implies rather than states what is required (‘Is this your own words?’, ‘What about the Hastings reports?’) is not helpful. It assumes the student knows the preferred behaviour, can decode the question, and could do what you suggest if they wished. This kind of feedback is rather like telling someone who is unskilled at Indian cookery how not to make a curry by writing ‘coconut?’. Explicit feedback describes positive behaviour (‘Put the main idea first then provide examples of how the idea would work in practice’ or ‘Tell the reader when you move from describing the method to discussing whether it is a good method or not’ or ‘If you are using someone else’s words, you must enclose their words in quotation marks to show they are not your own words’ or ‘You should have referred to the Hastings report because it ...’).

As a significant number of students often make similar mistakes based on similar assumptions, it is possible to assemble statement banks to streamline the task. Confine your comments to key points or essential information, especially in the early days, so as not to overwhelm students.

(Carroll in Carroll and Ryan 2005: 32–3)

In the context of assessing international students, Ryan proposes the following useful checklist, which extends in practice to just about all assessment contexts. This makes a useful checklist for ensuring that learning, teaching and assessment are all sensibly aligned and coherent.

- Are requirements and expectations explicit?
- Are there hidden codes or ‘prompts’?
- Do the assessment tasks match the learning objectives?
- Do assessment tasks allow for different ways of demonstrating achievement of the learning objectives?
- Are students being assessed on what they have learnt or what they already know?
Issues, challenges and reflections

- Are content and understanding, or style and facility with language being assessed?
- If facility with languages is important, are you teaching this skill?
- Is there a choice of topics so that students can connect with their own background knowledge and experiences?
- Can students work on topics that are relevant to their backgrounds and futures?
- Are assessment tasks flexible and negotiable?
- Is there a range of modes of presentation e.g. written, oral, ‘hands on’?
- Is there a mixture of individual and group tasks?
- Can students choose the weighting of the task within a range so that they can take advantage of their strengths?
- Are tasks self-directed?
- Can assessment topics be provided that are less parochial and more internationalised?
- Can opportunities for plagiarism be ‘designed out’ by the choice of assessment task and topic?

(Ryan in Carroll and Ryan 2005: 98–9)

Evidencing your reflections on assessment, learning and teaching

After you’ve worked through this final section of the chapter, you should be better able to:

- think in a reflective way about your teaching, and other aspects of your professional practice;
- choose ways of capturing your thinking about your work – in other words produce evidence of your reflection, allowing you (and others) to review your reflections;
- use starter-questions as a productive agenda for reflecting about your teaching.

What is reflecting? How do I go about it?

‘But how can I reflect? What do you mean by reflection? How will I know when I’ve reflected well?’ are questions which students and staff alike ask about the processes of reflection. Moreover, ‘how can I show that I’ve reflected successfully?’, ‘What will be deemed satisfactory evidence of my reflection?’ are their next questions.

This section aims to help by addressing all of these questions. In particular, the principle underpinning this section is that reflection on practice can best be evidenced by answering well thought out, relevant questions, to help one to interrogate what one has done. But it is not enough just to think through our answers to such questions – even our best and deepest thoughts all too rapidly evaporate away. We therefore need to capture our thoughts – in other words to furnish evidence of our reflections. This is ideally achieved by putting pen to paper, or fingers to keyboard (for example in using a blog as a medium to capture our reflective thoughts).

Why reflect?

Reflection deepens learning and enhances practice. The act of reflecting is one which causes us to make sense of what we’ve learned, why we learned it, and how that particular increment of learning took place. Equally it helps us to make sense of what we’ve done, how we did it, and how we may do it even better next time. Moreover, reflection is about linking one increment of learning or practice to the wider perspective – heading towards seeing the bigger picture.
Reflection is equally useful when our learning (or our practice) has been unsuccessful – in such cases indeed reflection can often give us insights into what may have gone wrong, and how on a future occasion we might avoid now-known pitfalls.

Most of all, however, it is increasingly recognised that reflection is an important transferable skill, and is much valued by all around us, in employment, as well as in life in general. The ability to reflect is one of the most advanced manifestations of owning – and being in control of – a human brain. Have you reflected today? Almost certainly ‘yes!’. But have you evidenced your reflection today? Almost certainly ‘sorry, too busy at the moment’. And the danger remains that even the best of reflection is volatile – it evaporates away unless we stop in our tracks to make one or other kind of crystallisation of it – some evidence. In our busy professional lives, we rarely make the time available to evidence our ongoing reflection. But we’re already into an era where our higher education systems are beginning to not only encourage, but also to require our students to evidence their reflection. So what can we do to address the reflection culture gap – how can we approach accommodating our lack of experience in evidencing our reflection, and helping our students to gain their skills at evidencing their reflection?

So what’s the problem?

The problem, in a nutshell, is that until recently relatively few teachers in higher education have ever been asked to reflect and to capture their reflections. Many who enter the profession have been good students – which boils down to successful students. But that does not necessarily mean they have had experience of – or indeed training in – how to evidence their reflection on their developing professional practice. Now that higher education is evolving to embrace personal development plans by students, records of achievement, or progress files, the kind of reflection that we are starting to require our students to undertake is beyond the personal experience of many of the staff who are requiring it. This is evidenced by the expressed difficulties that staff working towards awards such as Postgraduate Certificates in Teaching and Learning in Higher Education are only too willing to admit to, when they themselves are asked to evidence their own reflection on the learning they experience while working towards such awards. In short, if we aren’t very skilled at reflecting, how on earth are we going to help our students to become skilled?

Where, when and by whom is reflection needed?

Reflection is increasingly required in education and employment. More specifically, evidence of reflection is required, for example:

- where students are required to build up ‘personal development planning’ portfolios, or learning logs, or records of achievement, both as evidence to be able to present to prospective employers, and (more importantly) as a proactive process to help them to deepen their ongoing learning as it happens;
- where teaching staff are required (or encouraged) to build up records of their reflection on their developing work associated with teaching, learning and assessment, so that they develop their practices in a more efficient and focused way than if they simply left reflection to chance;
- as part of the preparation for appraisal, and the follow-up after appraisal, where appraisees can get much more out of the whole process, and where well-trained and sympathetic appraisers can facilitate the reflection involved;
in most areas of professional life, where continuing professional development is required or expected, and where it is important at any stage to be able to show that such development is indeed being undertaken in an organised and professional way.

Some professions have led the way regarding reflective practice, not least nursing and health care disciplines. But for other disciplines, progress has been slower. Hard-nosed engineers, mathematicians, scientists and business professionals have tended to shrug off reflection as subordinate to subject knowledge and skills. But the wider community beyond the campuses of higher education continues to value ‘rounded’ individuals, who can not only demonstrate subject knowledge and skills, but can develop and grow as circumstances around them continue to change and evolve.

Reflection: making sense of learning and experience

As proposed from the beginning of this Toolkit, ‘making sense’ of what is being (and has been) learned is a key factor underpinning successful learning. ‘Making sense’ links to reflecting on the experience of having done some learning-by-doing (practice, repetition, trial and error, experience, and so on). Moreover, ‘making sense’ links to thinking deeply about incoming feedback (other people’s reactions, praise, critical comments, seeing the results of one’s teaching, and so on). Deep reflection needs far more than simply observation, and for observation to be at its best it needs more than just a reflective dimension (requiring in addition analytical, extrapolatory, and other aspects as well as just inward-looking aspects).

It remains the case, however, that people find it hard (sometimes even quite alien to their nature) to reflect, and to evidence their reflection. Teaching staff in higher education are not alone in often finding it hard to write about reflection on their professional practice. The ‘Registered Practitioners’ of the Higher Education Academy in the UK who gained such status by the ‘experienced staff’ route often remember that the hardest part of writing their applications was putting together around 500 words about ‘reflective practice and professional development’. Writing about the latter part was for most quite straightforward, as it boils down to presenting a little factual information about the staff development they have done in the last few years. But writing about ‘reflective practice’ is much harder for some, not least because the language of academe tends to be remote, formal and scholarly, whereas the language of written reflection needs to be more personal and quite informal.

Reflection as a basis for enriching learning dialogues

Perhaps the most powerful advantage of evidencing reflection consistently and coherently is that it opens up the possibility for dialogue with significant others, for example dialogue based upon evidenced reflection between:

- teachers and students, enabling learners to gain feedback on the quality and depth of their reflection, so that they are able to improve and develop both their reflection and their learning;
- staff developers and teachers, enabling teachers to gain feedback on their own thinking about their triumphs and disasters alike, to enrich their own learning about their developing practice;
The common ground among each of these three scenarios is the development of a greater sense of ownership, both of what has already been achieved, and what remains to be achieved.

**A widening agenda for evidencing reflection**

It is probably unwise to attempt to ‘teach’ people to reflect (whether they be students, professionals, or employees). The process of reflection can indeed be illustrated to those whose reflection is to be improved, but in the final analysis reflection remains an individual act in most circumstances (though the increased benefit of a group of people being involved in shared reflection is even more significant in many situations where collaborative and team activity is to be encouraged).

The most efficient way of helping people both to reflect and to evidence their reflection can be to provide them with questions as devices to help them to focus their thinking, and direct their thinking to those areas of their work where reflection can pay highest dividends. This section presents some starting-point questions to illustrate the range of reflection that can be encouraged.

Reflection can also bring the benefit of addressing widening participation in higher education, where there are many more students from diverse cultures and educational backgrounds in the system than was formerly the case. This makes it all the more necessary to legitimate student reflection, and for teaching staff to have close encounters with the range of student reflection which can be uncovered, so as to enable them in turn to reflect and thereby to tune in better to the ‘widened’ student community.

Moreover, with increased attention to student retention in higher education, student reflection can be one of the most powerful vehicles for alerting teaching staff to the range and nature of problems that ‘at risk’ students may be experiencing, and allowing for compensation and adjustment to be made to reduce the levels of risk. Furthermore, getting students to reflect on their learning, their aspirations, their triumphs and their disasters can add significantly to the value of their educational experience overall, and help them to work towards being more self-assured and self-aware graduates.

In short, there has been no better time to get our act together regarding evidencing reflection – both our own reflection, and that of our students.

**Reflection transcends time**

Although many attempts to cause people to evidence their reflection tend to be backward-looking, the reflection which can be generated by simultaneous past-, present- and future-tense questions can be much deeper.

For example, the trio of questions:

- What worked really well for you?
- Why do you now think this worked well for you?
- What are you going to do next as a result of this having worked well for you?

is a much richer agenda for reflection than just any one of these questions on its own.
Some questions to help us to evidence our reflection on teaching

As in the example above, questions which aid deep reflection are rarely single questions, but tend to form clusters. There is often a starter question which sets the agenda, and frequently is a ‘what?’ question. Then come the more important ones – the ‘how?’ questions and the ‘why?’ questions – and sometimes the ‘... else?’ questions which ask for even deeper thinking and reflection.

In general, it seems too obvious to state it, but simple ‘yes/no’ questions can rarely enable the extent of reflection which can be prompted by more open-ended questions such as ‘to what extent ...?’. (Sadly, however, there remain far too many ‘closed’ questions on student feedback questionnaires, and unsurprisingly the level of student reflection that such questionnaires tend to elicit is limited.)

Below are some clusters of questions – ‘families’ of questions one could say. The first part tends to be a scene-setting starter, and the sub-questions which follow are probing or clarifying questions, intentionally leading towards deeper or more focused reflection. These questions are not in any particular order. A set of questions to aid us to reflect on an element of teaching we have just finished could use some of these as starting points, and usefully add in subject-specific and context-specific questions to help us to flesh out the agenda for reflection.

Such questions can extend to many continuing professional development contexts, appraisal contexts, and suggesting some agenda items for a teaching portfolio for lecturers. Whatever the context, however, the quality of reflection which is prompted is only as good as the questions which prompt it. In other words, for optimum reflection, much more care needs to be taken with phrasing the questions than might have been thought necessary.

1 What did I actually achieve with this element of teaching? Which were the most difficult parts, and why were they difficult for me? Which were the most straightforward parts, and why did I find these easy?

2 How well do I think I helped students to achieve the intended learning outcomes related to this element of teaching? Where could I have improved their achievement? Why didn’t I improve it at the time?

3 What have I got out of doing this element of teaching? How have I developed my knowledge and skills? How do I see the payoff from doing this element of teaching helping me in the longer term?

4 What else have I got out of doing this element of teaching? Have I developed other skills and knowledge, which may be useful elsewhere at another time? If so, what are my own emergent learning outcomes from doing this teaching?

5 What was the best thing I did? Why was this the best thing I did? How do I know that this was the best thing I did?

6 What worked least well for me? Why did this not work well for me? What have I learned about the topic concerned from this not having worked well for me? What have I learned about the students through this not having worked well for me? What have I learned about myself from this not having worked well for me? What do I plan to do differently in future as a result of my answers to the above questions?

7 With hindsight, how would I go about this element of teaching differently if doing it again from scratch? To what extent will my experience of this element of teaching influence the way I tackle anything similar in future?

8 What did I find the greatest challenge in doing this element of teaching? Why was this a challenge to me? To what extent do I feel I have met this challenge? What can I do to improve my performance when next meeting this particular sort of challenge?
9 What was the most boring or tedious part of doing this element of teaching for me? Can I see the point of doing these things? If not, how could the element of teaching have been redesigned to be more stimulating and interesting for me?

10 Do I feel that my time and effort on this element of teaching has been well spent? If not, how could I have used my time more effectively? Or should the teaching have been designed differently? Which parts of the teaching represent the time best spent? Which parts could be thought of as time wasted?

11 How useful do I expect the feedback to be, that I receive on this element of teaching? Who can give me useful feedback – students, colleagues, assessors? What sorts of feedback do I really want at this point in time? What sorts of feedback do I really need at this point in time? What are my expectations of getting useful feedback now, based on the feedback (or lack of it) that I’ve already received on past teaching I’ve done?

12 What advice would I give to a friend about to start on the same element of teaching? How much time would I suggest that it would be worth putting into it? What pitfalls would I advise to be well worth not falling into?

13 What are the three most important things that I think I need to do arising from this element of teaching at this moment in time? Which of these do I think is the most urgent for me to do? When will I aim to start doing this, and what is a sensible deadline for me to have completed it by?

In short, reflection on our practice can be aided by setting ourselves questions to respond to, and capturing our responses so that we can continue to reflect on them. I hope that this final part of the Toolkit helps you to take charge of your own reflections on your teaching and assessment-related work, and thereby assists in your own continuous development as a professional in higher education.
References and further reading


References and further reading


Index

| absence 139–40 |
| academic tutorials 147–50 |
| Adams, M. 215 |
| adapting resource-based learning materials 160–1 |
| additional needs, students with 113, 165, 179–80, 207–18 |
| annotated bibliographies 51–3 |
| appraisal, managing your 189–92 |
| ‘Approaches to the advancement of tertiary teaching’ 3 |
| assessment 27–94; concerns 33–7; inclusive 211–13; and international students 221–3; peer-assessment 85–9, 90, 91; reasons for 31–2; reducing your load 84–5; techniques 37–74; values 29–30 |
| Assessment Matters in Higher Education 4 |
| Ausubel, D.P. 3 |
| behaviour: in groups 138–42; in lectures 98–9 |
| behaviourist school of thinking 2, 3 |
| Bell, B. 75 |
| bibliographies, annotated 51–3 |
| Biggs, J.B. 3, 4, 22 |
| blended learning 177–9 |
| Bloom, B.S. 3 |
| Bond, D. 74 |
| Bowl, M. 77–8 |
| brainstorming 136 |
| Brown, S. 27–8, 75, 213, 215–16 |
| buzz-groups 134 |
| buzz-phrases 158 |
| Carroll, J. 211, 220–3 |
| classroom practice, inclusive 214 |
| clones, favouring of 145–6 |
| Coffield, F. 2–3, 13 |
| cognitive school of thinking 2, 3 |
| competence 17–20; and feedback 81–3 |
| competence model 17–20, 82 |
| computer-aided assessment 36 |
| computer-aided presentations 112–19 |
| Cowan, J. 74, 79 |
| Cowie, B. 75 |
| cultural sensitivity 145, 155, 210; and plagiarism 218, 219; see also international students |
| curriculum: cross-cultural design 210; inclusive 213–14; for resource-based learning 175–7 |
| deep learning 4–5 |
| diabetes 217 |
| didactic facilitators and poor group learning 144–5 |
| digesting 10–12, 12, 13; in lectures 106 |
| disabled students 165, 179–80; see also inclusive practice |
| discrimination 214 |
| disruptive behaviour 141 |
| dissertations 70–2 |
| distance learning 158 |
| domination of groups 141–2, 143 |
| Dunn, L. 4 |
| Dweck, C. S. 20 |
| dyslexia 213, 215–16 |
| educational development and inclusivity 214–15 |
| Experimental Learning: Experience as the Source of Learning and Development 2 |
| feedback: from colleagues 119–21, 193–4; and competence development 81, 82, 83; formative 74, 75–6, 78; from interviews with students |
204–5; lectures and learning through 105–6; quality of 79–81; questionnaires 195–203; record-keeping 83; reducing your load 84–5; from self-assessment 92–3; from students 192–205; to students 9, 11, 12, 13, 79–83, 167–8
feed-forward 74–5
‘Field theory in social science’ 2
fishbowls 135–6
‘500 Tips on Group Learning’ 150
500 Tips on Open and Online Learning 161, 175
flexible learning 159
followership 137–8
formative assessment 75, 77
formative feedback 74–7
further reading 229–32
Gardner, H. 13
gender issues in groups 155–6
Gibbs, G. 4, 6
Glasner, A. 27–8
groups 125–56: formation 126–33; getting them started 150–3; leading and following 137–8; problems 138–47, 154–6; processes 133–7; size 126–8
handouts in lectures 100–4
Honey, P. 2
icebreakers 151–3
inclusive practice 206–18
intelligence 13, 20, 21
international students 220–3
internet 183–5
intranet 183
Jaques, D. 151
Knight, P. 6–7, 28
Kolb, D.A. 2
language difficulties 180, 208
lateness 139
leadership 137–8
learning: by doing 7, 8, 9, 11, 12, 13, 105, 166–7; in lectures 104–8; model of processes 12, 99; outcomes 22–6, 147, 163–4; processes 1–26; resources 157–85; from screens 172–5; spaces, inclusive 214; theories 1–4; and understanding 21–2
‘Learning Styles Questionnaire’ 2
Learning to Teach in Higher Education 3
lectures 92–124; feedback on your 193–4; handouts 100–4; importance of 95–7; and inclusion 211; peer-observation 119–21, 193–4; practical pointers 121–4; processes 99–109; reasons for 97–8; using technologies 109–21
Leicester, M. 207
Lewin, K. 2
library staff 53
looking after yourself 186–205
low motivation 13–16
marking: essays 50; schemes 41–3, 44; strategies 84–5
mental health issues 213, 216–17
Miller, C.M.L. 5, 6
model of learning processes 12, 99
motivation 13–16, 29
multiple-choice exams 46–9
Mumford, A. 2
names, learning and using 153–4
National Student Survey in England and Wales 2005 74
needing to learn 11, 12, 13; lectures and 105
non-attendance 139–40
non-participation in groups, dealing with 142–3
online learning 157–85
open-book exams 44–5
open learning 158
Open Learning Handbook, The 161
open-notes exams 45–6
Open University, The 158
oral exams 63–5
Orsmond, P. 75
overhead projectors 110–12
pair dialogues 137
Parlett, M. 6
Pask, G. 3
Peelo, M. 28
peer-assessment 85–9; grids for 90, 91
peer-observation 119–21, 193–4
personal tutorials 148
Pickford, R. 75, 213, 215–16
plagiarism 36, 218–19
portfolios 58–60
poster displays 67–70
PowerPoint 112–19
practical work 56–8
preparation, group members lack of 140; facilitator’s lack of 144
presentations 61–3
projects 65–7
pyramiding see snowballing
QAA (Quality Assurance Agency) 22, 29, 211–12, 214
questionnaires 195–203
Race, P. (other publications by) 7, 12, 29–30, 35, 37, 150, 161, 175, 218–19
Ramsden, P. 3
record-keeping 83
reflective practice 223–8
reports 54–6
resource-based learning 157–85; main components 159–60; quality checklist 163–72; strategy for design 161–3; students particularly helped by 179–81; using existing packages 160–1; writing new materials 181–3
retention of students 77
reviews 51–3
Reynolds, M. 3
ripples on a pond model of learning 12, 12, 99
rounds 134
Ryan, J. 211, 220–3
Sadler, D.R. 75, 76, 77
‘The science of learning and the art of reading’ 3
screens, learning from 172–3
SEDA (Staff and Educational Development Association) 206
Selected Theoretical Papers 2
self-assessment 35–6, 37, 57, 60; questions 167–8; tutor dialogues 89, 92–3
self-concept 20–1
SENDA (Special Educational Needs and Disabilities Act) 208, 210
setting exams 39–40
sexism 156
Simpson, C. 6
Skinner, B.F. 3
small-group teaching 125–56; importance of 125–6
snowballing 135
SPACE (Staff–Student Partnership for Assessment Change and Evaluation) 212–13
special needs see additional needs, students with strategic learning 5, 6, 7, 35, 37
stress 187–9
structured exams 46–9
student retention 77
‘Styles and strategies of learning’ 3
successful learning 7–13, 99, 100
summative assessment 75
surface learning 4–5, 35
syndicates 134–5
Taxonomy of Educational Objectives 3
Teaching for Quality Learning at University 3
technologies, using 109–21
theses 70–2
timetables 108–9
time-wasting 140–1
traditional exams 33–5
tutorials 147–50
‘uncompetence’ 17–20; feedback 82
unseen written exams 33–5
visual impairments, addressing 113, 180, 213
visual learning 170
vivas 63–5
Wareham, T. 28
wanting to learn 10, 12, 12: lectures and 104
websites, useful 213, 214
work-based learning 72–4
workload, managing your 186–7
Yorke, M. 6–7, 27, 77, 78