1

# Theory and Practice

**I've always, sort of done things according to my gut feelings and never been really sure it was right. It's great to have some theory under my belt so I can think and plan my teaching better.**

**I don't even know where to start!**

These remarks come from postgraduates who attend our courses on learning, teaching and assessment. The first is representative of individuals who have 'done a bit of teaching' already and have some experience behind them. The second is typical of a postgraduate who has never taught before, and may be facing a new class soon. Both comments reveal a certain lack of confidence which may arise from the need to know more about the research and theory base that underpins teaching in higher education.

If you study this chapter, which gives you selected, key information about current theories, models and research which most relate to the teaching of adults in higher education, you are much more likely to have the confidence of knowing you are acting on a sound knowledge base. You may also find, like many of our postgraduates, that you 'get hooked' on learning and teaching and want to learn more through long term, systematic engagement in professional development.

We begin with a brief explanation of why knowing something about theories of learning might help you. This is followed by a streamlined overview of theories and models of learning which you should find most useful and a summary of some key research on how adults learn, particularly in the context of higher education. In doing so, we mention the possible implications of this information for your teaching. There is a short section on methods for measuring what your students are actually learning – as opposed to what you might think, or hope, they are learning. This kind of formative feedback early in your teaching career can be both revealing and constructive for developing your teaching. Finally, there is a section on how you can use a theory base in your teaching portfolio.

We also introduce and define selected key terms which you will hear and read about and probably need to keep in your head. These terms are not jargon,

although you may hear them called that; they are, instead, part of the specialised vocabulary of the discipline of learning and teaching. This means that you will have to start to work out how they apply to teaching and learning in your discipline.

# What is the point of learning theory?

## Increasing your confidence

Some postgraduates on our courses tell us they do not really want to bother with the theory, they just want to get on with talking about how to teach and deal with the problems they are worried about. However, discussions about theory are not just about the knowledge. Our observations are that they are more to do with the confidence they give you to know that what you are doing is grounded in research and theory, and that somebody else has checked that a particular theory works in practice. This is why more experienced teachers than you are often relieved to find that what they have been doing for years is in line with current research.

More importantly, some knowledge of theory will help you overcome the top three problems that postgraduates say they face in their first experiences as teachers:

1   not knowing enough about the subject and fear of not being able to answer questions – fear of lack of respect or overt disrespect;
2   not having a repertoire of strategies to get you out of problematic situations, for example when students will not participate in tutorials;
3   not having autonomy in your teaching role, so that you feel you cannot change anything that is not working.

It might be appropriate to feel you do not yet have credibility as a teacher, but understanding the research, the theory and a range of practices can help you establish credibility and overcome what we know are recurring problems.

## Understanding your teaching role

Undergraduates often find that they can relate to postgraduates in a way that they cannot with academics. For example, they may feel you are closer to their world of undergraduate study and therefore able to talk to them about experiences you remember well. Significantly, because you are doing research yourself, you will be able to bridge research and teaching in a way that could be stimulating and exciting for undergraduates.

Thus, you may be in a unique position to influence, guide and support your students' learning in a way that others cannot. If you understand something about educational theory, you should be able to build on these advantages. For example, knowing the principles of constructivist learning (which we explain below), you could employ your expertise to guide students through a discussion on 'What is research?' starting from their everyday experiences, such as conducting research prior to purchasing a mobile phone.

With some theoretical background, you will be able to check for yourself that you have been addressing the intended learning outcomes, and that your strategies for facilitating learning have allowed students to practise the skills on which they will be assessed. Furthermore, because you are involved in teaching, assessment and/or student support, you will understand what people are talking about when they use the discourse of learning and teaching. This will mean that you will be able to converse meaningfully about these topics with the programme leader, module coordinator or your academic and postgraduate colleagues, and this will be a real boost for both your credibility and your confidence.

## Informing decisions in practice

Even if you are 'told what to do' and have materials and a teaching schedule organised for you, you will still have decisions or choices to make. How you make these choices depends on learning outcomes, the student group, resources, the culture of your department and other factors. For example, suppose you are demonstrating a task to a group and some students do not 'get it'. Do you repeat your demonstration? What if they still do not 'get it'? Do you show them a third time? What if time is running out? What do you do? No schedule is going to answer all students' questions or suggest alternative strategies for you and, in any case, you may be alone with the class. It is up to you to find something that works – how would you go about doing that? This is the kind of scenario that normally scares new teachers who do not know what their options are, or who have a limited range of options to start with. Clearly, in this scenario, you would have to find other ways of getting your students to understand the task; demonstration alone is not going to work for everybody.

In some instances, you will have to make decisions about how you are going to teach – sometimes 'on the spot'. This is a complex task and your responsibility is to weave all the factors together to make the best decision; knowing more about how adults learn in your discipline can help. The benefit of this learning, for you, is that you gradually build your repertoire of strategies.

## Informing your planning

You may find that you are given a substantial role in learning, teaching and assessment, and that you are expected to design, plan and implement learning opportunities for students. This could include lecturing, tutorials, seminars, practicals, field trips, projects, web-based learning or any variations on these. Some postgraduates, for instance, are given responsibility for managing all the tutorials or labs in a semester for a module or subject. You will probably be given guidance, a schedule or syllabus, and further information, but you may find that you have more autonomy in how you go about teaching. In this case, you will need to know even more about theory and research, in order to avoid serious mistakes or time wasting. You should, however, try to work closely with a more experienced member of staff, just to check you are on track.
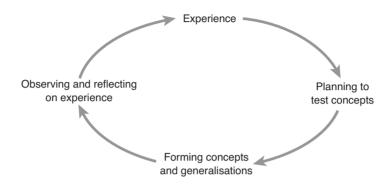
Because your need for guidance may be quite focused – perhaps even urgent – we do not intend to overview all research and theory related to learning, teaching and assessment. There are other books and resources to serve that purpose. Our aim is to get you thinking about how your students are learning. Thinking of your own experience will help, but we want to move beyond that to a cogent but systematic body of knowledge, so that you do not have to rely on an *ad hoc* collection of hints, tips and anecdotes. Your own experience as a learner is, of course, an important source of information about good and bad teaching, but there is much more information out there. Furthermore, at a time when key research is emerging that can inform good practice, we have no excuses for ignoring it.

Don't underestimate how difficult it is to put theory into practice. As you go about developing your teaching skills, look around you. How often do you **HEALTH WARNING** see the gap between theory, research and actual practice? How often is educational research actually discussed or even mentioned? For all of us, closing that gap is about paying close attention to continuous improvement. It is about building up a body of coherent experience. It involves failure, making sense of failure, trying again. This process may lead to solutions to teaching challenges, but it can just as often generate new questions.

FIGURE 1.1
**Experiential learning cycle (Adapted from Kolb, 1984)**



# How do adults learn?

## Experiential learning

As you begin to learn about teaching, an important starting point is to think about your experience as a learner. How do you learn? To begin your thinking on this question, consider something that you know you do well, like riding a bicycle, driving a car, playing a sport or a musical instrument. How did you learn to do that? What factors were important in that learning?

When we ask postgraduates this question, their responses always fall into these categories: doing it, practising (nearly 100% of respondents say that practice is essential); thinking back, reflecting on the experience; sorting out what went wrong, getting feedback; planning what to do next; doing it again. If you think about how you learned to do almost anything, you will probably find that this cycle of 'doing it' (playing an instrument or strategically placing a tennis ball in the opposite court), reflecting, reasoning (theorising about what went wrong) and planning (deciding what to do differently next time) applies to you. Could this be why we so often hear the phrase 'We learn from experience'? Linking the work of others with his own thinking, Kolb (1984) proposed the experiential learning cycle, a model of learning that incorporates these four stages (Figure 1.1). In our examples of learning given above, you can see how this experiential model of learning makes explicit what many people say about how they learn.

You may be thinking that these examples are simplistic and very skills oriented. That is arguable, but it might be more meaningful if you consider a more abstract example, such as how you are learning to do research. Yes, you will be reading,

observing and talking to other researchers, planning your own methodologies, but you will also be 'doing' the research, reflecting on results, refining methodologies, planning the next phase, etc. Are you 'going round the cycle'?

We think Kolb's experiential learning model is one useful way of understanding what genuine learning involves – that we have to engage actively, to do a task, to try out, to practise; to think retrospectively about what we have done; to form theories or postulate why we got the result we did; and to plan again. Then we have to have time to 'go round the cycle', perhaps several – perhaps many – times. The learning is complex, of course, because it has at least three different components: it incorporates (1) learning 'that' (knowledge), (2) learning 'how' (skills) and (3) other aspects of learning related to judgement, values and attitudes. However, one feature of Kolb's model is the attention it draws to the importance of skills in learning, an aspect often forgotten in higher education.
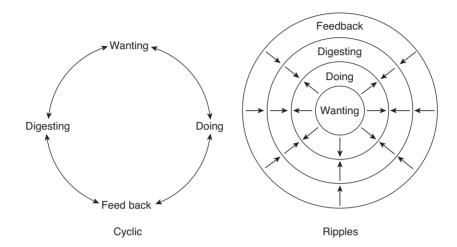
The interesting thing about Kolb's experiential learning cycle is that it is also a constructive tool for designing your teaching. In thinking about planning a tutorial, for instance, you might divide the time into four subperiods, allowing students to engage in each of the stages of the cycle. For a longer period, perhaps there is time for them to repeat the cycle. Note that it is not necessary to start with the 'doing' stage; depending on what the learning outcomes and the nature of the activity are, you can start with any of the stages and work round the cycle.

However, our postgraduates categorically state that Kolb's cycle model lacks one key element essential for learning – motivation. On the basis of their own learning experiences, postgraduates insist that we insert motivational words such as 'want', 'need' and 'commitment' in the middle of the cycle in order to indicate the importance of motivation. As they see it, it should be in the centre of the model. They are, of course, quite right, and the relevance of motivation is captured in another model of learning, developed by Race (1993). Some of our postgraduates prefer this model to Kolb's. Race's model is easier to remember, for a start, and it re-presents Kolb's model with a different perspective. Figure 1.2 reproduces Race's initial thinking of learning as a cyclic process, and his revised model of learning represented by his 'ripples' model. You may prefer one of these models to Kolb's, but all of them provide helpful images for thinking about and planning for learning.

## Constructivism

What postgraduates tell us is that they go around the learning cycle many times (an upward spiral) as they build on previous learning. This is one example of what we call constructivism. Constructivism is the term you can use to refer to the process of building up your own knowledge by connecting new information with

FIGURE 1.2
**Race's models of learning (Race, 1993)**



Cyclic                                          Ripples

what you know already and forming concepts, or constructs, which are models of reality (Biggs and Moore, 1993; Biggs, 2003; Prosser and Trigwell, 1999). As new knowledge and experiences are assimilated, knowledge structures grow and are modified. Because we all have different knowledge bases, with discrete connections between those knowledge elements, each of us has to scaffold our own learning for ourselves. For this to happen, we have to take an active role in our learning.

> **Constructivism:**   the process of building up your own knowledge by connecting new information with what you know already and forming concepts that are models of reality.

New information has to link with what you know. Can you remember attending a lecture or a class in which you did not have a clue what the teacher was talking about? There is a good chance that this happened because you did not know the terminology or the literature and therefore had no 'pegs' or 'hooks' to which you could connect new information. It is possible that your teacher had made assumptions about what you, and the rest of the class, already knew and pitched the information at the wrong level. What can we learn from situations like this?

'The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly' (Ausubel, 1968: 127). Ausubel, like others, recognised the importance of making connections between known concepts and new ones – that we need to support students to construct their knowledge and understanding by (1) starting from what they already know, and (2) planning learning opportunities which allow them to build up their learning, stepwise, in their own individual ways. This may seem straightforward to you now, but the phrase 'individual ways' hints that it is not as easy as it might first appear.

For your role, helping undergraduates to make connections – between what they learn in your class and what they know from elsewhere – and helping them to make sense of those connections, could be key. Exactly how we can prompt our students to be actively involved in their learning is the subject of a body of research. There is material out there to help us develop the techniques to do this.

## Concepts of learning and approaches to study

Research on adult learning and learning in higher education is informing our understanding of the individual nature of learning and the factors which influence it. We give a brief summary of the main research findings below, but you should know that this is an area where the research literature is expanding rapidly.

Consider the comments on concepts of learning shown in the box. These quotes from Gibbs (1990) summarise the seminal research of Marton, Saljo and Entwistle (Marton, 1988; Marton and Saljo, 1976a; 1976b; Entwistle and Ramsden, 1983) and show that individual students can have quite different concepts of what learning involves. Student 1 seems to think that learning is memorising by repeatedly going over and over information. Student 2, on the other hand, is likely to look for patterns and underpinning principles, relating ideas to previous knowledge, and attempting to internalise the information so that he or she can express it in his or her own words. For student 3, learning is a profound experience, altering outlook and changing perspective.

---

### Concepts of learning

Learning is about getting it into your head. You've just to keep writing it out and eventually it will go in. (student 1)

> Learning is about trying to understand things so you can see what is
> going on. You've got to be able to explain things, not just remember
> them. (student 2)
>
> When you have really learnt something you kind of see things you
> couldn't see before. Everything changes. (student 3) (Gibbs, 1990)

Considerable research (Marton et al., 1997; Entwistle and Ramsden, 1983) has
led to the conclusion that students have different approaches to study, that is, their
intentions determine how they engage with a set learning task. Student 1 takes a
'surface' approach: memorising facts, reproducing information, failing to make
connections between related ideas and concentrating on content. Students 2 and 3
take a 'deep' approach to learning: attempting to link ideas, examining the logic
of an argument, checking evidence. These students are studying with intent to
understand.

Which approach would you like to see your students taking? Most of us would
say a deep approach is what learning at university should be about. The way we
plan and carry out our teaching can help students to move towards deeper
approaches to learning. However, we all know – or remember doing it
ourselves – students who take a a 'strategic' approach (Biggs, 2003); we used
surface learning when it served the purpose, and engaged in deep learning when
challenged and/or stimulated to do so. Table 1.1 summarises the main
characteristics of approaches to study.

While individuals may have their own approaches to learning, the context of
that learning will influence how and what they learn (Ramsden, 1988). Surface

TABLE 1.1

**Students' approaches to study**

| APPROACHES TO STUDY | CHARACTERISTICS |
| --- | --- |
| Surface | Memorising, reproducing facts, focus on content, assessment oriented |
| Deep | Examining argument, studying underlying principles or rationale, linking ideas and concepts |
| Strategic | Applying either of the above approaches to suit the outcomes, expectations and assessment |

learning will be encouraged and reinforced by assessments which focus on recall, large amounts of material, low levels of application or relevance of the material, lack of background and limited independence or choice in study. Deep approaches to learning will be stimulated by challenging assessments, teaching which stresses meaning and relevance to students, opportunities for choice, interest in and background to the subject matter, and explicit, clearly stated academic expectations (Ramsden, 2003).

How do these ideas apply to the teaching and learning situations you know? Can you recognise how individuals work in different ways? If you are already teaching, have you observed that your students try to write down everything you say in class and then copy it all out again? Do they reproduce the notes you have given them in their assignments, with no personal commentary? Do they frequently ask to see you to check they are 'on the right lines' and ask questions for clarification? Do they read and think for so long before starting to write that they cannot finish their assignments? These kinds of sensitive observations should stimulate you to think about how you can help students understand, and work with, their own approaches to learning.

It is important to stress here that surface learning is not always a bad thing, and may sometimes be necessary. Your students may need to memorise terminology, as in anatomy or microbiology, or important names and dates, as in history, or vocabulary, as in languages. In these circumstances, students may be unable to communicate in the discipline if they have not converted the required information to memory. What we are saying is, think about what kind of learning is appropriate when, and think about how the learning approaches should be valued.

## Learning styles

Although people do not, of course, fall into neat categories, it is reasonably well established that individuals do have preferred learning styles. You may be familiar with Honey and Mumford's (1982) learning styles questionnaires, which present four categories of learner: pragmatist, activist, reflector and theorist. The pragmatist is practical and logical, whereas the activist is eager to get on with the task – a doer. The reflector will hold back to think and plan, whereas the theorist will read, research, find models and theories to follow. Clearly, people do not fit exclusively one category, but it is surprising how often they do say their Honey and Mumford profiles are typical of their behaviour and demonstrate their learning styles. What is your learning style? Do you know?

Other researchers have similar categories, such as the serialist (operational learning), holist (comprehension learning) and versatile learning described by Pask (1976). Still others remind us that some people learn best through pictures and

diagrams (visual), some prefer words on the page (verbal), others need to hear (oral) and still others are kinesthetic learners, needing to 'do'.

However, why is all this important for you as a teacher? In a room (real or virtual) full of students there will be those who have different learning styles. Furthermore, you undoubtedly have a preferred learning style too, which will affect the activities you organise for students. How will you handle this? What do you need to do? The implication of this research for new teachers is that if you only have one way of doing things, then almost inevitably you will lose the attention and/or engagement of some of the students in the room. This is not to say you should be 'all-singing, all-dancing' for every minute of every class; clearly that is neither feasible nor sensible. However, there are lots of little things you can do that will support students with different learning styles – maybe not all at the same time.

One useful strategy is to make these points the subject of a brief discussion with students: would it not help them hugely to know what type of learners they are, what that means for their learning, and how you are trying to accommodate different learning styles, including your own, in your teaching? It might, therefore, be a good time to spend some time discussing personal learning styles, explain that you use different activities to accommodate those styles and point this out as you go along, so that they see what you mean. This does not mean giving the students a lecture on learning styles; you can make the point in less than a minute, then refer to them as you move on.

Perhaps both you and your students also need to acknowledge that there may be times when your students 'tune out', for whatever reason, and that this may not be your fault. On the other hand, it might be a moment where you encourage students to engage in an activity that does not seem to suit the majority's learning styles, because part of learning is moving outside their comfort zone.

> **Learning styles:**   these are indicators of individuals' preferred ways of learning. Learning styles can be categorised in a number of ways, depending on the researcher and the tools used to measure learning styles.

## Social learning

So far, our discussions have centred on examining how individuals learn, looking at learning as an individual process. Clearly, learning also has a social dimension, since we learn from and with others in all our social interactions. You will be aware, from

your own experiences, of how much you have learned outside of what you have been taught formally. This learning from social relationships is sometimes referred to as the 'hidden curriculum'.

People also learn as members of a group who share common goals and participate in collective learning. This kind of learning is mutual and proactive, not merely responsive, and is more than the sum of individuals' learning within the group (Jarvis et al., 2003).

The relevance of this to you in your teaching role is that it prompts you to recognise and allow social learning to happen. Often students learn from each other, by observing and 'copying' behaviour, through peer tutoring or through 'vicarious' learning during group work (Bandura, 1986). You should positively encourage, if not exploit, these effective methods of learning.

Having read a little about theories, models and research on learning in higher education, you may be tempted to jump to subsequent chapters on lecturing, group learning, etc. – especially if your learning style is activist or pragmatist. However, the next section contains information and advice that will prove crucial in orienting yourself within the higher education teaching environment and, importantly, in helping you to become an effective facilitator of learning.

# What is the curricular framework for learning and teaching in higher education?

For a number of years, learning and teaching in higher education in many countries have been driven by curricula based on a set of aims and specific objectives or goals to be achieved by learners but defined by teachers. More recently, there has been a shift in focus from objectives to outcomes, that is specific statements of what learners will know and be able to do as a result of their learning. Generally, aims and learning outcomes are described by the educators, very much less frequently by the learners. A framework based on aims and learning outcomes provides a useful structure for guiding learning and assessment but there are those who argue that it constrains, even inhibits, the individual's learning and freedom to explore (Jarvis, 2004).

## Constructive alignment

Biggs (2003) proposed a curricular framework, now widely adopted in the higher education sector, which links the theory of constructive learning to an

outcomes-based approach. This model, called constructive alignment, arises from two key principles:

1   Learning and teaching should be 'learner centred'. Because individual learners must construct their own learning, it is 'what the learner does' that is most important.
2   Aims and learning outcomes, learning and teaching activities and assessment must be aligned so that learners know what is to be achieved, how they will engage in activities which will help them achieve those outcomes, and how they will demonstrate they have done so. This alignment is necessary to provide a transparent framework within which individual learning is constructed.
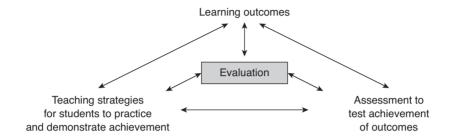
Thus, constructive alignment enables students to construct their own learning by ensuring that, within the curriculum, aims, learning outcomes, learning and teaching activities and assessment are matched.

> ***Constructive alignment:***   the deliberate linking, within curricula, of aims, learning outcomes, learning and teaching activities and assessment. Learning outcomes state what is to be achieved in fulfilment of the aims; learning activities should be organised so that students will be likely to achieve those outcomes; assessment must be designed such that students are able to demonstrate they have met the learning outcomes.

Setting aims and learning outcomes gives students real, tangible goals so they know what they have to know and be able to do – you could say it eliminates the guesswork. Aligning the assessment with the learning outcomes means they know how their achievements will be measured. Then, planning and designing the learning – without getting hung up on the 'teaching' – gives students opportunities to develop their knowledge and skills and to practise for their assessment. How else will they learn what they need to know and do? The concept of aligning aims, outcomes, assessment and learning and teaching strategies seems so simple that some might say this is just a fancy name for 'joining up the dots'. The trouble is, very often it does not happen in practice.
Let us say that a learning outcome for students might be that they should be able to critique a paper. However, how often do they get a chance to do

FIGURE 1.3
**Alignment for constructive learning (Based on Biggs, 2003 and Moon, 1999)**



that – once, ever? Is that enough? Do we ever show them how to do it? Do we give them criteria or a set of questions to provide a framework? Maybe not. Yet this outcome may be assessed by asking students to critique an unseen paper as part of an examination. In this case, the assessment is aligned with the learning outcomes, but the learning (and teaching) is not aligned.

Alternatively, if the learning outcome is that students should be able to critique a paper, but the assessment is that they should write an essay summarising research methodologies for qualitative research, it is obvious that the assessment is misaligned with the learning outcome. This is, quite frankly, unfair to students. It turns learning and assessment into a guessing game – one that, arguably, has been going on for too long.

Alignment, therefore, is essential to ensure that students are not misled, and to make the learning and assessment process as transparent to them as possible. Furthermore, we would add that constant evaluation is crucial to the maintenance of that alignment. Figure 1.3 demonstrates the relationship between these elements: the curriculum, learning, teaching and evaluation.

## Aims and learning outcomes

Aims are broad statements of intent or purpose, such as 'The aim of this module is to enable students to develop their oral and written communication skills in various business contexts.' Words commonly used in aims are enable, support, facilitate, introduce, review and outline, because they describe the overall intentions of the staff who write them. Learning outcomes are specific statements of what students should know or be able to do as a result of the learning. They are statements describing observable behaviour and therefore must use 'action verbs'. There are literally hundreds of action verbs, including: name, list, describe, discuss, draw,

construct, measure, calculate, summarise, justify and evaluate. All learning outcomes should be SMART: specific, measurable, achievable, realistic and relevant, and time limited. This means that they should be specific enough for students to know exactly what they need to do, so that staff can measure whether students have done it, so that the outcomes are achievable within the time they have (for example, a semester) and so that they are relevant to the aims of the course.

> **Aims:** broad statements which clarify the intent or purpose of a course, module or learning activity.
>
> **Learning outcomes:** specific statements of what students should be able to do as a result of learning.

Some aims and learning outcomes typical of a module, for example a one-semester course of study, are shown in the next box. What is your assessment of these learning outcomes? Do they align with the aims? Are they SMART? If you were a student on this module, would you know what you were expected to know and do? Two words you may find used to describe learning outcomes are 'appreciate' and 'understand'. What does 'appreciate' mean – to know a little bit about, to applaud, to be thankful for? How do we measure 'understanding' and how do students 'demonstrate' that to us – by discussing, debating, applying tools and/or concepts? In our view, these are terms which do not help students because there are so many interpretations of their meaning. It is more transparent, and helpful, to be specific about expectations. However, these words are often used by academic staff in writing learning outcomes. If you are teaching and/or assessing to these types of outcomes, you might need to discuss them with staff to ensure you have a shared interpretation.

## Example module: aim and learning outcomes

*Aim*

The aim of this module is to enable students to develop knowledge and skills of research necessary to complete a small-scale research project.

*Learning outcomes*

Upon successful completion of the module, students should be able to:

- set an apposite and feasible research question;
- select, analyse and synthesise relevant published literature;
- design and write an appropriate research proposal;
- plan and conduct the investigation using an appropriate research method;
- analyse, interpret and present data;
- discuss the meaning of their findings;
- write up the research in a report according to given guidelines.

---

Suppose you discover that aims and outcomes are not well written and possibly not aligned with assessment? What do you do:

**HEALTH WARNING** !

- nothing;
- discuss it with module coordinator or course leader;
- change it yourself;
- Press on?

This may be the biggest challenge in teaching a course someone else has designed. Can you challenge the status quo? It is risky, but the point is to enhance learning for your students. Therefore, what exactly should you say? How can you raise this positively? Your best approach might be to express your own uncertainties about whether your students will be able to demonstrate they have met the learning outcomes. This could be a good opener for a productive discussion with the module coordinator or course leader. If you have thought of an alternative assessment which would be better, you might suggest it. However, unless you have been designated the module coordinator, it is not your responsibility to make the major changes, which in most institutions take considerable time.

> If the course is not aligned and you decide you have to get on with it, what do you do? You have to do your best to ensure your students are able to practise the things they will be assessed on, so that will shape what you do in the classroom. This may mean taking a particular interpretation of the outcomes and finding some way of aligning them with the assessment. It may require emphasising one or more of the outcomes over the others. Importantly, you will have to be able to articulate that to yourself or others, for example, in your teaching portfolio, mentoring or other discussions.

# What next?

## Planning and designing for learning

The obvious place to start with planning and designing learning opportunities for students is with the learning outcomes and the assessment. What do your students need to know? What do they need to do? What skills must they demonstrate? What cognitive abilities must they display? How will the assessment measure these things? Then, having answered these questions, what will you do to enable them to acquire the knowledge and process it, and to develop and refine their skills? What, then, do you need to do to set up situations so they can do that?

Therefore, if students will be required to critique a paper as their final assessment in order to achieve the learning outcomes, here are some initial ideas for structuring their learning:

- discuss what is meant by 'critique' and how you begin to do that;
- deconstruct, with them, a published critique of another paper;
- design (with their input) a set of criteria or guidelines to help them with the task;
- find suitable papers in the literature for them to practise on;
- get them to peer review a critique written by a classmate and conduct a plenary discussion about the key principles and issues.

If you just do a lecture on 'How to critique a paper', they will probably not ever practise doing it; they may not even know which paper to select or where to find it, or possibly will just never 'get around to it'. Clearly, the lecture is a 'teacher-centred' process which focuses on what the teacher does. If, however, you start with what students should be doing and what they are likely to learn

from that activity, the emphasis shifts to how you set up and facilitate situations which enable the students to learn what you want them to or what the course coordinator wants them to.

## Motivating learners

One of the factors affecting learning which we mentioned above referred to motives. You will know from your own experience that people may be motivated to learn for many different reasons: they may want a qualification as a reward and/or symbol of achievement or as the entry point to a job or promotion. Some students are motivated to learn out of genuine interest and love of learning. Most are motivated by the assessment, as we will see in Chapter 6. You will find that motivation is a powerful driver for learning (Brown et al., 1998). It will make your experience and your students' experiences more enjoyable, even fun, if you can keep your students motivated to learn. This is not always an easy task, of course, but keeping your attention on what they are doing will prompt you to plan activities which are relevant, engaging, interesting and challenging. Remember, it is what students do that is important.

In practice, probably the best way to determine if your students are motivated is to watch them. Are they animated and talking about the subject? Do they ask questions? Do they talk about the subject during the break? Do they try to talk to you about the subject after class? When they write, is there evidence that they have done some reading? By consistently observing their behaviour, you can begin to judge what it is that stimulates their learning and you can make connections with the way you designed activities; in short, you can see what works and what does not. As you continue to learn about teaching, observe your students, think about how they are learning, think about how you will respond on the basis of what you are learning about teaching – and that will embed theory into your practice.

## Measuring your students' learning

In this chapter, we have emphasised the centrality of student learning which is carefully planned and facilitated. But of course you will want to know how successful your efforts are. What are your students getting out of the class? Are they learning what you hope they are? Are the activities you planned engaging students in the way you expected? There may be a million questions you want to ask so that you get plenty of feedback. Throughout this book, and especially in Chapter 10, we suggest ways in which you can evaluate students' learning as well as collect feedback on your teaching so that you can continually improve your practice. This will also be important information for your teaching portfolio.

However, here are two simple, quick and effective evaluative tools which you can incorporate into your first teaching plans.

Give each student three Post-it notes. On one they should write 'learned', on another 'appreciate' and on the third 'regret'. Ask your students to write a response to the prompt on each Post-it, and to stick the Post-its on the door or wall as they leave the room. You collect and sort them and quickly learn something about what they are thinking about both the learning and the teaching (or something else entirely, for example, food). Obviously, you may use any number of variations of this Post-it method of evaluation to get feedback on both learning and teaching (such as 'stop', 'start', 'continue').

Another very successful tool to evaluate learning is to ask the students to write a note or short letter to a friend about what they are learning in your class. This inserts an element of informality into the evaluation and can give you some genuine insights.

# Portfolio

We introduced the concept of a teaching portfolio in the introduction to this book. Here, as in each of the following chapters, we suggest ideas for building your portfolio as you go. This will not only document your learning journey, but also provide you with a 'bitesize' approach.

What you might do now, to get your teaching portfolio moving, is to write about reading this chapter:

- What ideas have stimulated your thinking?
- How do they relate to your own experiences of learning?
- Do you know what your own learning style is?
- What other reading have you done? What was meaningful for you and why?
- Who have you talked to about learning and teaching in your discipline? What are they based on? How do they happen? What research influenced them? Who can you have the conversation with about them?

This is just the start of a series of ongoing conversations. They need not be jargon laden. They need not be long. You might not even discuss the terms used in this chapter, explicitly. The point is you need to find out which ideas, assumptions, and theories are being used in your subject now. Talking to lecturing staff, consulting your postgraduate colleagues and chatting to students are all interesting ways of learning more about learning and teaching.

However, it is up to you to make some connection between the theory and the teaching being done in your subject. If you can document that, you have some excellent material for your portfolio.

Ultimately, however, it needs to be related to your own practice. Think back over your planning for teaching. Have you made opportunities and time for your students to go round Kolb's experiential learning cycle? Will they have a chance to reflect, form concepts and plan for the next round? When have you tried to connect new knowledge with what they may know already?

Lastly, what reading and web searching have you been doing? Some references are suggested in the following:

## Additional resources

Atherton, J.S. (2003) *Learning and Teaching: Learning Index.*
   http://www.dmu.ac.uk/~jamesa/learning/, accessed 21 February 2005.
This site provides an excellent and entertaining journey through learning theories. Our postgraduates like it.

Biggs, J. (2003) *Teaching for Quality Learning at University,* 2nd edn. Buckingham: SRHE and
   Open University, Press.
Biggs sets out the principle of constructive alignment, succinctly covers relevant theories and deals with all the aspects of learning, teaching and assessment you are likely to need in an intelligent but accessible manner.

Higher Education Academy (HE Academy). http://www.heacademy.ac.uk.