

4

Using constructive alignment in outcomes-based teaching and learning

Constructive alignment arose out of an experiment with portfolio assessment. Students were faced with the intended outcomes of a course – mainly that their professional decision making had been improved by taught theory – and asked to provide evidence from their own professional experience as to if and how it had. The results provoked a rethink of the design of teaching: the students couldn't be 'taught' the evidence, they had to reflect on their experience and provide it themselves. The 'teaching method' became a series of negotiations as to how that evidence might be obtained, the assessment the quality of the evidence provided. The course was a success, and in reflecting on it later, it seemed that two principles were involved: a constructivist theory of learning, and alignment between the intended learning outcomes, the teaching/learning activities and the assessment tasks.

What is constructive alignment?

Constructive alignment came about as a result of an experiment with portfolio assessment in a bachelor of education programme. The course, entitled *The Nature of Teaching and Learning*, was a senior-level course in educational psychology for in-service teachers. It followed the then usual model: topics drawn from the psychology of learning and development that were considered relevant to the improved practice of teaching were taught and assignments given that would assess how well the theory and the relationship between psychology and education were understood: a typical academic assignment.

Then the penny dropped. This was not the major intended outcome of the course at all. The assignment was also 'academic' in a less worthy sense: it had nothing to do with the experience and working space of the students. The ultimate aim of any professional education course, by the same token, has everything to do with the direct experience of the students: it is to

improve their professional competence. What evidence was there that it was indeed having that effect? The assignments didn't address that question. What caused the penny to drop and events that happened thereafter are contained in Box 4.1.

Box 4.1 How constructive alignment came into being

In 1994, one of the authors, John, returned from study leave in Canada to teach *The Nature of Teaching and Learning*, an evening course in the third year of an in-service, part-time BEd programme. He had been very impressed with the use of 'authentic' assessment and assessment portfolios in Canadian elementary schools. He thought portfolio assessment would be ideal for this course, which was about how knowledge of psychology might improve teaching. As the students were teachers during the day, they had plenty of opportunity to see how psychology might be working for them. However, when told that the assessment would comprise a portfolio of items, selected by them, demonstrating how psychology had improved their teaching, the students felt threatened:

How am I supposed to do it well when I'm not sure exactly what the professor wants to see in it? . . . though he did say that we can put what means much to us in the portfolio, yet how can I be sure that he agrees with me?

John suggested item types for their portfolios and after a trial run, they got the idea. When they finally submitted their portfolios, John was stunned. They were rich and exciting, the class achieved more A and B grades than ever before, the student feedback the best he'd ever received. Here are a couple excerpts from their diaries:

All [the teacher] said was 'show me the evidence of your learning that has taken place' and we have to ponder, reflect and project the theories we have learnt into our own teaching . . . How brilliant! If it had only been an exam or an essay, we would have probably just repeated his ideas to him and continued to teach the same way as we always do!

Instead of bombing us with lengthy lectures and lecture notes, we have to reflect on our own learning experiences and to respond critically . . . I feel quite excited as this course is gradually leading me to do something positive to my teaching career and to experience real growth.

John didn't know it at the time, but he'd just implemented an example of outcomes-based teaching and learning.

Only he'd called it 'constructive alignment.'

Source: Biggs (1996)

Reflecting on why the experiment with portfolio assessment worked so well, John decided that it was because the learning activities addressed in the intended outcomes were mirrored both in the teaching/learning activities the students undertook and in the assessment tasks. This design of teaching was called ‘constructive alignment’ (CA), as it was based on the twin principles of constructivism in learning and alignment in the design of teaching and assessment.

It is ‘constructive’ because it is based on the constructivist theory that learners use their own activity to construct their knowledge or other outcome. It extends in a practical way Shuell’s statement that ‘what the student does is actually more important in determining what is learned than what the teacher does’ (1986: 429). The intended outcomes specify the *activity* that students should engage in if they are to achieve the intended outcome as well as the content the activity refers to, the teacher’s task being to set up a learning environment that encourages the student to perform those learning activities, and then assess the outcomes to see that they match those intended.

The ‘alignment’ in constructive alignment reflects the fact that the learning activity in the intended outcomes, expressed as a verb, needs to be activated in the teaching if the outcome is to be achieved and in the assessment task to verify that the outcome has in fact been achieved. Take driving instruction. The intention is that the learner learns how to drive a car. The teaching focuses on the learning activity itself: driving a car, not giving lectures on car driving, while the assessment focuses on how well the car is driven. Car driving is the verb that is common to all components of instruction: to the intended outcome of learning, to the learner’s activity during teaching and to the assessment. The alignment is achieved by ensuring that the intended verb in the outcome statement is present in the teaching/learning activity and in the assessment task.

By focusing on what and how students are to learn, rather than on what topics the teacher is to teach, we need to phrase the learning outcomes that are intended by teaching those topics not only in terms of the topic itself but also in terms of the learning activity the student needs to engage in to achieve those outcomes: we specify not only what students are to learn, as we always have, but what they are supposed to do with it and how they are to learn it. The outcome statement also informs students how they are expected to change as a result of learning that topic. The *intended learning outcome*, or ILO, contains a helpful verb such as ‘reflect on X’ or ‘apply theory to Y’ to achieve the outcome. Once those verbs are specified, it is clear what the teaching/learning activities (TLAs) that should engage the student might be, and what the student needs to perform in the assessment task (AT).

The idea of aligning assessment tasks with what it is intended that students should learn is very old – and very obvious. It’s called ‘criterion-referenced assessment’ in the jargon and it’s what anyone outside an educational institution does when teaching anyone else anything. Yet as we see in Chapter 9,

educational institutions became enamoured of ‘norm-referenced assessment’, where assessment tasks performed quite a different role: to see who learned better than who. That is an important function when selecting from many people for few positions, such as making an appointment to a job from a large field of applicants or awarding university places or scholarships. However, when the aim of teaching is that students learn specified content to acceptable standards, aligning the test of learning to what is to be learned is not only logical, it is more effective in getting students to learn, as Cohen (1987) concluded after reviewing a raft of studies on the matter. Cohen was so impressed that he called such alignment between the assessment and the intended learning outcome the ‘magic bullet’ in increasing student performance.

That is all very well for a skill like car driving, you might say, where the learner’s activities are explicit, but how can that apply to something that is conceptually of a high level and abstract like learning a theory? The example of ‘The nature of teaching and learning’ course (see Box 4.1, p. 51) illustrates that it can.

The theory in any course is not only meant to be ‘understood’, whatever that all-purpose word might specifically mean, but as was argued in the previous chapter it is intended to change the way students see the world and thence to change their behaviour towards it. It isn’t only in professional courses that this applies, although it is more obvious in these cases. Virtually all sound learning, whether in medical education or in subjects like pure physics, gives the student a different view of the world, together with the power to change some aspects of it. That view, and instances of the empowerment that learning gives the student, are the outcomes of learning.

All good teachers have some implicit idea of how they want their students to change as a result of their teaching, so they work towards achieving that change when teaching. Constructively aligned teaching systematizes what good teachers have always done: we state upfront what we intend those outcomes to be in the courses we teach – always allowing that desirable outcomes will emerge that we may not have anticipated. Unlike some outcomes-based education, such as competency-based, constructively aligned teaching is not closed loop, focusing only on what is predetermined. As explained later, we use outcomes statements and open-ended assessment tasks that allow for unintended but desirable outcomes.

Another difference between constructive alignment and other outcomes-based approaches is that in constructive alignment, the connections between intended learning outcomes (ILOs), teaching/learning activities (TLAs) and assessment tasks (ATs) are aligned intrinsically, a ‘through train’ if you like, on the basis of the learning activities expressed in the outcomes statements. In other outcomes-based models, alignment exists only between the ILOs and the assessment tasks, not additionally between the ILOs and the TLAs.

Constructively aligned teaching is likely to be more effective than unaligned because there is maximum consistency throughout the system.

While the curriculum initially contains lists of content topics that are judged desirable for students to learn, those topics are translated into outcome statements that both the teaching/learning activities and the assessments tasks directly address. All components in the system address the same agenda and support each other. The students are ‘entrapped’ in this web of consistency, optimizing the likelihood that they will engage the appropriate learning activities, helping the Roberts learn more like the Susans but leaving them free to construct their knowledge their way.

Where assessment is not aligned to the intended or other desired outcomes, or where the teaching methods do not directly encourage the appropriate learning activities, students can easily ‘escape’ by engaging in inappropriate learning activities that become a surface approach to learning. Constructive alignment is a marriage between a constructivist understanding of the nature of learning and an aligned design for teaching that is designed to lock students into deep learning.

A critic of the first edition of this book described constructive alignment as ‘spoon feeding’. Spoon feeding, like the other Level 1 metaphors with their curious affinity to metabolic processes – ‘regurgitating’, ‘chewing it over’, ‘stuffing them with facts’, ‘ramming down their throats’, ‘getting your teeth into’ – puts a stranglehold on the student’s cognitive processes. Spoon feeding does the work for the students, so that they have little left to do but obediently swallow. Constructive alignment, by way of contrast, makes the students themselves do the real work, the teacher simply acts as ‘broker’ between the student and a learning environment that supports the appropriate learning activities.

It is also important to remember that while the term ‘intended’ learning outcomes is used, the teaching and assessment should always allow for desirable but unintended outcomes, as these will inevitably occur when students have freedom to construct their own knowledge. The assessments tasks should be open enough to allow for that: an issue we address in Chapters 9 and 11.

Design of constructively aligned teaching and assessment

Let us now unpack the prototypical example of constructive alignment in the course *The Nature of Teaching and Learning*. There are four stages in the design:

- 1 Describe the intended learning outcome in the form of a verb (learning activity), its object (the content) and specify the context and a standard the students are to attain.
- 2 Create a learning environment using teaching/learning activities that address that verb and therefore are likely to bring about the intended outcome.

- 3 Use assessment tasks that also contain that verb, thus enabling you to judge with the help of rubrics if and how well students' performances meet the criteria.
- 4 Transform these judgments into standard grading criteria.

Intended learning outcomes (ILOs)

The ILOs are statements, written from the students' perspective, indicating the level of understanding and performance they are expected to achieve as a result of engaging in the teaching and learning experience. The ILOs of *The Nature of Teaching and Learning* were, in order of cognitive level, with the learning activities or verbs italicized:

- 1 *Explain in depth* why a particular course topic is important to teaching.
- 2 *Explain* how the component course topics interrelate.
- 3 *Reflect* on your teaching in terms of a working theory you have gained from the course.
- 4 *Evaluate* a situation that has gone wrong and *apply* a solution.

Each of these verbs addresses 'understanding' at some level: which is why using 'understand' as the verb for your ILOs is inadequate. In the following chapter we shall elaborate on this important question of the level of the outcomes by presenting two taxonomies of verbs that are classified in terms of their cognitive level. For the moment, let us stay with explain, reflect, evaluate and apply.

The first ILO, 'explain in depth', requires that the students choose a topic, say expectancy-value theory, and in their own words relate it to the practice of teaching. The second, 'explain', requires students to view the whole course and explain how the various topics interrelate to form a workable conceptual framework. 'Reflect' in the third ILO is at a higher cognitive level, requiring students to apply that framework they have constructed from the course to their own teaching as reflective practice. The fourth ILO, 'evaluate and apply', requires the students to spot a problem, evaluate it, then suggest how it might be rectified in light of material taught in the course: this too is at a high cognitive level.

The next question is how students were helped to activate these verbs.

Teaching/learning activities (TLAs)

The verbs the students needed to enact are italicized in our list of ILOs. The TLAs were obtained through negotiation with the students, who quickly saw that the usual situation of the teacher lecturing to them wasn't going to help them achieve the outcomes of the course. The following dialogue, condensed from several sessions, illustrates how this happened (S are students, T is teacher):

S How do we show we can reflect?

T Keep a reflective diary or journal.

S What do we put in it?

T What you think are critical incidents in your teaching, anything that might indicate how your teaching has improved, such as samples of conversations with your students, lesson plans, samples of student work.

S That's too vague. We need help to decide what to put in.

T Talk it over with your colleagues. A learning partnership's a good idea. Choose a friend, maybe two, and get their phone number, sit next to them in class. Talk it over together. You can help each other. You can see me in a group if you are in real difficulty.

S Wouldn't it be better if we had discussion groups of students teaching the same subjects as we do? Then we can share experiences on similar problems.

T Certainly. I thought you'd want that. I've already booked the room next door. You can meet there.

S But we'll need direct teaching on some things. Won't you lecture us?

T Yes, but only when that's suitable. There's a topic for each session, I'll give you some pre-reading, just a few pages, before each session with some written answers needed. I'll then meet half the class at a time, while the other half is having a discussion group. We can clarify each topic in the lecture, as necessary.

And so on.

In short, instead of the teacher doing the work of teaching, the students were helped to do what *they* needed to do in order to meet the intended learning outcomes of the course.

The first two ILOs are about 'explaining', which require first that the theories in the course needed to be learned and understood at a sufficient level to allow the two kinds of explanation: in depth, and to integrate the different topics of the course. The TLAs are italicized, as follows.

The content was presented in notes and readings to be *read* before each class. The readings contained self-addressed questions to be *answered*: before the class: 'What do I most want to find out in the next class?' and after the class: 'What is the main point I learned today?' and 'What was the main point left unanswered in today's session?' The questions were *reflected on* and the answers *written* in note form in a journal. Class time, including mass lecture, was used for *questioning*, *clarifying* and *elaborating*. Each student chose a learning partner to help in *clarifying* and *elaborating* and *interacting* in whatever ways they thought might be helpful.

'Reflection' was encouraged by the journal, which contained the self-addressed questions for each day. Students were asked to *record* learning-related incidents, particularly critical incidents, and to *reflect* on them.

'Evaluation' and 'application' were addressed also with the learning partners (who were also teachers) and to extend the range of exposure to different views and professional experiences, they *discussed* in groups of

around 10 students, teaching in the same general content area. The groups had a question to address, but were basically self-directed and students had to *draw their own conclusions*.

Thus, all the learning activities mentioned in the ILOs were embedded in the TLAs in one way or another. Table 4.1 summarizes the alignment between ILOs and the TLAs.

Table 4.1 Intended learning outcomes (ILOs) for *The Nature of Teaching and Learning* and aligned teaching/learning activities (TLAs)

| | |
|----------|---|
| 1 | <i>Explain in depth</i> why a particular course topic is important to teaching |
| | TLAs: Plenary sessions with pre-readings and notes used for learning information, clarification and elaboration. Application to teaching by partners and small groups |
| 2 | <i>Explain</i> how the component course topics interrelate |
| | TLAs: As for (1) |
| 3 | <i>Reflect</i> on your teaching in terms of a working theory you have gained from the course |
| | TLAs: Keep reflective diary; discuss with group/learning partner |
| 4 | <i>Evaluate</i> a situation that has gone wrong and <i>apply</i> a solution |
| | TLAs: Use workplace resources, group/learning partner comparing perspectives on evaluating and applying |

Assessment tasks (ATs)

The portfolio required items that addressed each ILO, the highest level having to do with how students' teaching had changed as a result of being informed by theory. The students were to decide on the evidence for their achievement of the ILOs in the form of items for their portfolio and to explain why they thought the portfolio as a whole met the ILOs. Specifically, the requirements were:

- 1** Four pieces of evidence selected by the student, which they thought addressed most of the ILOs.
- 2** A reflective journal, including answers to the self-addressed questions for each plenary session.
- 3** A justification for selecting each portfolio items and the overall case they were supposed to make as a learning package, showing how each ILO had been addressed one way or another. This provided further evidence of students' reflective awareness of their learning.

A list of suggested item types was provided, but original items were encouraged.

Table 4.2 shows the alignment between the ILOs and the items in the portfolio.

Table 4.2 ILOs for *The Nature of Teaching and Learning* and aligned assessment tasks (ATs)

| | |
|----------|---|
| 1 | <i>Explain in depth</i> why a particular course topic is important to teaching AT: Set yourself a 2000-word essay on one of two nominated topics |
| 2 | <i>Explain</i> how the component course topics interrelate AT: Concept map of course; letter-to-a-friend |
| 3 | <i>Reflect</i> on your teaching in terms of a working theory you have gained from the course AT: Present selected parts of diary with comments: explain how your portfolio items meet ILOs and self-evaluate |
| 4 | <i>Evaluate</i> a situation that has gone wrong and <i>apply</i> a solution AT: Write a case study of a critical incident in your own teaching and how you dealt with it |

One student referred to the assessment portfolio as ‘a learning tool’. In fact, it was difficult to separate what was a TLA and what an AT, as is the case in an aligned system. For example, students learned how to reflect by using the journal, which was used later as evidence of reflection; the self-addressed questions (‘What was the most important idea’) are both learning activities and evidence for the quality of learning. Grappling with the task you want students to learn is automatically both a learning process and a learning outcome.

Grading

The final step is to obtain a final grade for the student from the evidence presented in the portfolio as to how well the ILOs have been achieved. There are normally two aspects to grading: assessing the student’s outputs against the stated criteria and combining results from several ATs to form a final grade. This can be done quantitatively, as is usually the case, or qualitatively: these issues and the pros and cons are discussed in Chapter 9.

In the case of *The Nature of Teaching and Learning*, a qualitative approach was taken as being the most suitable for the task and the context. Each letter grade represents a qualitatively different level of thinking, as follows:

- A** Able to reflect, self-evaluate realistically, able to formulate and apply theory to problematic classroom situations, clear mastery of course contents.
- B** Can apply theory to practice, a holistic understanding of course and components, barely failed **A**.
- C** Can explain the more important theories, can describe other topics acceptably, barely failed **B**.
- D** Can only explain some theories, barely failed **C**.
- F** Less than **D**; plagiarism.

The grading was simple, involving no quantitative ‘marking’ or averaging to calculate a final grade. The portfolio items were assessed as to whether they provided ‘evidence’ for A qualities, B qualities, and so on. If the evidence collectively did not reveal realistic self-evaluation, for example, but did show an ability to form a working theory and apply it to classroom situations, then here was a clear B.

Summary and conclusions

This chapter described how constructive alignment came about and how the unit in which it was first used illustrates the important stages. By way of summary let us generalize by reference to Figure 4.1, which can be used as a general framework for teaching. Although it arose in a professional programme, it can be implemented in virtually any course at any level of university teaching.

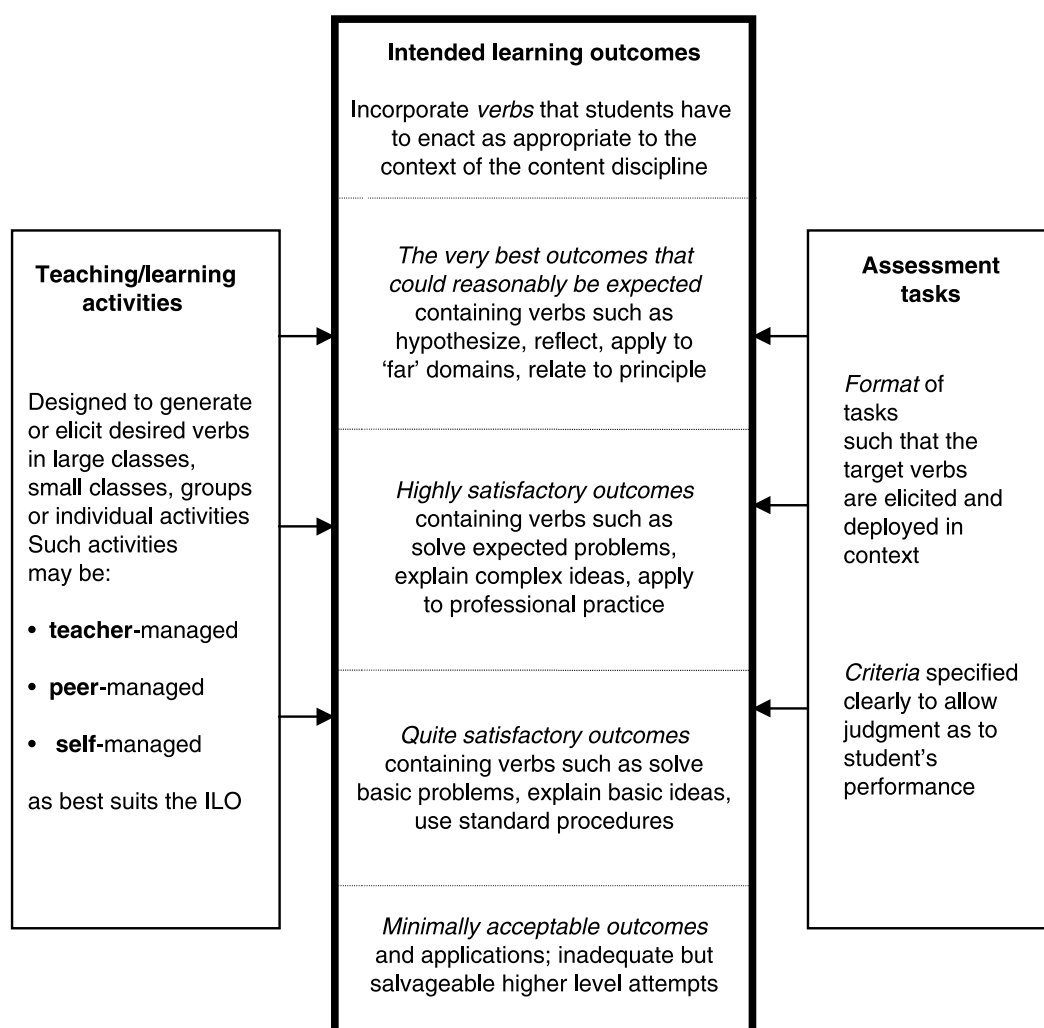


Figure 4.1 Aligning intended learning outcomes, teaching and assessment tasks

The intended learning outcomes are central to the whole system. Get them right and the decisions as to how they are to be taught and how they may be assessed follow. We express the ILOs in terms of what constructive activities are most likely to achieve them. Activities are *verbs*, so, practically speaking, we specify the verbs we want students to enact in the context of the content discipline being taught.

Turn back to Figure 1.1 (p. 10). We see that Susan tended spontaneously to use high-level outcome verbs such as theorize, reflect, generate, apply, whereas Robert used lower level outcome verbs such as recognize, memorize and so on. Their level of engagement is expressed in the cognitive level of the verbs used: reflection is high level, memorizing low level. Note that these verbs are examples only. Precisely what is meant by ‘level’, and how to determine it, is a key issue addressed in Chapter 5.

Those verbs take objects, the content being taught. We explicitly reject the one-dimensional notion of ‘covering’ the topics in the curriculum, by specifying the *levels* of understanding or of performance that should be manifested in the learning outcomes intended for the particular content discipline.

Once we have sorted out the ILOs, we design TLAs that are likely to encourage students to engage the verbs that are made explicit in the ILOs, thus optimizing the chances that the intended outcomes will be achieved. Next, we select assessment tasks that will tell us whether and how well each student can meet the criteria expressed in the ILOs. Again, this is done by embedding the verbs in the ILOs in the assessment tasks. ILOs, teaching and assessment are now aligned, using the verbs in the ILOs as markers for alignment.

Finally, a grading scheme needs to be constructed according to how well the ILOs have been met. A grade of A denotes a quality of learning and understanding that is the best one can reasonably expect for the course. Obviously, that level will become increasingly higher from first year to more senior years. In the final year, one would expect the sorts of verbs in the top box (‘generalize’, ‘reflect’), B is highly satisfactory, but lacks the flair that distinguishes A. C is quite satisfactory, while D denotes what is minimally acceptable; anything less is fail (F). What that range will be for any particular course is a matter of judgment. The criteria, or rubrics, defining the final grades will need to be much more specific than this and will need to be developed for each course. The important thing is that the categories are defined by a particular *quality* of learning and understanding, not by the accumulation of marks or percentages.

Grading on the *quality* of learning is not new. The term ‘first class honours’ has been used for a long time to capture the idea that a student with first-class honours *thinks differently* from a student with an upper second. This difference is not captured by saying that a first has to obtain x more marks than an upper second. We have more to say on this in Chapter 9.

To sum up, in an outcomes-based aligned system of teaching, the teacher’s task is to see that the appropriate learning activities, conveniently expressed as verbs, are:

- 1 nominated in the intended learning outcome statements
- 2 embedded in the chosen teaching/learning activities so that performing them brings the student closer to achieving the ILOs
- 3 embedded in the assessment tasks enabling judgments about how well a given student's level of performance meets the ILOs.

Because the TLAs and the ATs now access the same verbs as are in the ILOs, the chances are increased that most students will, in fact, engage with the appropriate verbs, which is by definition a deep approach. Had Ramsden's psychology teacher (see pp. 22–3) included in the ILOs such verbs as 'theorize', 'generalize' or 'explain the contribution of particular founders of modern psychology', an assessment task that required only paraphrasing 'a bit of factual information for two pages of writing' would immediately be seen to be inadequate.

Constructive alignment is common sense. Mothers, like driving instructors, use it all the time. What is the intended outcome? That the child can tie her shoes. What is the TLA? Tying her shoes. What is the assessment? How well she ties her shoes. It is so obvious, yet most university teaching is not aligned. There are several reasons for this:

- 1 Traditional transmission theories of teaching ignore alignment. A common method of determining students' grades depends on how students compare to each other ('norm-referenced'), rather than on whether an individual's learning meets the intended outcomes ('criterion-referenced'). In the former case, there is no *inherent* relation between what is taught and what is tested. The aim is to get a spread between students, not to see how well individuals have learned what they were supposed to have learned.
- 2 'If it ain't broke, don't fix it.' Some teachers genuinely do believe there's nothing wrong with current practice. As we saw in Chapter 1, however, there are problems of teaching that are arising in the rapidly changing university scene. In any case, a situation doesn't have to be 'broke' before we may profitably start improving matters. The difference between reflective and unreflective teachers is that the former teachers believe they can always teach better than they are at present. Indeed, a major feature of award-winning university teachers was that they were continually seeking feedback from students on ways in which they could improve their teaching (Dunkin and Precians 1992).
- 3 Some administrative factors, such as resource limitations, appear to dictate large classes with mass lecturing and multiple-choice testing. These make alignment difficult, but not impossible. Some administrative requirements, however, such as requiring teachers to use norm referencing by grading on the curve, do make alignment impossible. If constructive alignment is to be implemented such policies and practices need be changed, as we discuss in Chapter 12.
- 4 People hadn't thought of it before. Many of these matters may not have occurred to teachers.
- 5 Others might like to use the principle but they don't know how to.

These points are addressed throughout this book. We shall see how the principle of alignment can be applied to the design of most units.

Further reading

Biggs, J.B. (1996) Enhancing teaching through constructive alignment, *Higher Education*, 32: 1–18

This paper outlines in detail the original course that gave rise to constructive alignment.

DVD

Teaching Teaching & Understanding Understanding, an award-winning DVD from the University of Aarhus, Denmark, written and directed by Claus Brabrand. In less than 20 minutes, Claus takes the viewer through the basics of constructive alignment with Doina and Rune, Danish versions of Susan and Robert. Available from Aarhus University Press (www.unipress.dk) in English, French, Spanish, Italian, Portuguese, German and Danish.

Websites

The Engineering Subject Centre, Higher Education Academy, UK: http://www.engsc.ac.uk/er/theory/constructive_alignment.asp

An excellent overview of constructive alignment, with links to related topics such as ‘Assessment’, ‘Approaches to learning’ etc.

University of Wales at Bangor, North Wales: http://riel.bangor.ac.uk/the/Testing%20a%20Model%20of%20Constructive%20Alignment%20-%20planning_files/frame.htm/

A nice easy PowerPoint presentation by Romy Lawson.

National Council of Open and Distance Education and the Teaching and Learning Centre, Southern Cross University: http://www.scu.edu.au/services/tl/sd_online/consalign.html

A version of constructive alignment in an online course on course design, with examples.

What is the evidence on constructive alignment?

<http://www.ed.ac.uk/etl/project.html>

This is the website for the ETL project led by Noel Entwistle and Dai Hounsell of the University of Edinburgh. The project, which has been running since 2001, seeks to develop subject-specific conceptual frameworks to guide institutional and faculty or departmental development of teaching–learning environments. Constructive alignment is one of the key concepts underlining the thinking of the project.

Other

The home page of the Higher Education Academy <http://www.heacademy.ac.uk/> is well worth visiting for a browse. The recently established HEA is just so resource rich: click 'Supporting learning'.

Outcomes-based learning in general

<http://merlin.capcollege.bc.ca/mbatters/whatslearningoutcome.htm>

A very good discussion of outcomes-based learning, as these authors call it. The difference between this and constructive alignment is that the *means* of tuning teaching and assessment to achieving the outcomes is left open, whereas in constructive alignment we progress using the verbs.

If you want more, Google 'constructive alignment' and browse.