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The changing scene in university teaching

Since 2000 there have been dramatic changes in the nature of higher education. It is not just that participation rates are higher than ever, bringing much greater diversity in the student population, but that these and other factors have altered the main mission of higher education and modes of delivery. One consequence is that the major thrust in teaching is more on professional and vocational programmes and concerns about teaching effectiveness. The ‘Robert and Susan problem’ illustrates how increased student diversity challenges teaching. Susan is academically committed and will learn well, virtually whatever the teaching; Robert is at university simply to obtain a good job, he is not academically inclined, and he represents the student who would not have been at university years ago. We argue that teaching that requires active engagement by students decreases the gap between Susan and Robert. Just so, today’s universities need to address the quality of teaching and learning. The Bologna Process requires member countries of the European Union to put in place national qualification frameworks to define learning outcomes at various degree levels, with quality assurance systems. Similar concerns in universities worldwide have led increasingly to the adoption of one form or another of outcomes-based teaching learning (OBTL). The form of OBTL outlined and exemplified in this book is constructive alignment. This book outlines the theory and implementation of constructively aligned OBTL, with hands-on tasks and detailed examples.

The nature of the change worldwide

The university sector in countries worldwide continues to change at an increasingly hectic rate. In a 2009 report to UNESCO, Altbach et al. (2009) review trends in higher education and come to the conclusion that:

Arguably, the developments of the recent past are at least as dramatic as those in the 19th century when the research university evolved, first in
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Germany and then elsewhere, and fundamentally redesigned the nature of the university worldwide. The academic changes of the late 20th and early 21st centuries are more extensive in that they are truly global and affect many more institutions and populations.

(Altbach et al. 2009: 3)

The UNESCO Report deals with all aspects of higher education, but here we are concerned only with those aspects that bear upon teaching and learning. These would include increasing participation rates, or ‘massification’, and inevitably with that an overall lowering of academic standards as universities and student populations become yet more diversified (Altbach et al. 2009). In the 1990s the participation rate was around 15%; now it is over 40% in many countries, and some politicians are signalling a target of up to 60%. The brightest and most committed students still go to university, as they have in the past, but so do proportionately more students of rather different academic bent. Thus, for financial, academic and vocational reasons, more professionally or vocationally oriented programmes are required and more institutions that serve different needs and constituencies from the traditional academic ones. But even within the same university, the range of ability within classes is now considerable, which presents teaching-related problems to staff.

As participation rates increase, institutions are relying more and more on student fees. This means that students demand high profile programmes that are well taught and will enhance their employment prospects. Some, using the logic that education is a commodity to be bought, feel that having paid for a degree they are entitled to be awarded one. The pressures on staff are complex and in some cases have had the effect of encouraging lower standards. Such downward pressures, in some celebrated cases, have also emanated from administration, because of the funding implications of failing students. A twist in this issue in universities in western countries is that international students have become a highly significant source of funding, thus introducing another pressure-point on the maintenance of standards (Burke and Jopson 2005).

These pressures and the changing nature of the institution have brought about increased concern with the quality assurance – or, as we would rather have it, the quality enhancement – of teaching and learning. But first let us look at the question of diversity within the classroom.

Student diversity

One major source of diversity is the massive worldwide movement of international students, mostly from the Asian and African continents to universities in the West, to provide an important source of income to those receiving universities. While international students undoubtedly have specials needs with regard to provision for language and social support, problems of learning in a second language, of homesickness, of cultural isolation, these are areas that need to be addressed by other supportive specialists and struc-
tures, not necessarily by their classroom teachers. Ethnic diversity in the classroom undoubtedly raises issues of teaching and learning but, as was argued in previous editions of this book, teaching that engages students’ learning activities appropriately minimizes differences of ethnicity between students as far as learning itself is concerned. This problem is somewhat related to that of the differences between Susan and Robert discussed below; in both cases, actively engaging students in their learning becomes the issue.

Another source of diversity, then, is the academic orientation and commitment of students. Maintaining standards when the commitment and range of ability of students are so varied presents an interesting teaching challenge that in previous editions we have called the ‘Robert and Susan problem’.

Let us look at two students attending a lecture. Susan is academically committed; she is bright, interested in her studies and wants to do well. She has clear academic or career plans and what she learns is important to her. When she learns, she goes about it in an ‘academic’ way. She comes to the lecture with sound, relevant background knowledge, possibly some questions she wants answering. In the lecture, she finds an answer to a preformed question; it forms the keystone for a particular arch of knowledge she is constructing. Or it may not be the answer she is looking for and she speculates, wondering why it isn’t. In either event, she reflects on the personal significance of what she is learning. Students like Susan virtually teach themselves; they do not need much help from us. Academics like the Susans – indeed, they were once Susans themselves – so they tend to assume that she represents how most students learn, and they teach accordingly.

Now take Robert. He is at university not out of a driving curiosity about a particular subject, or a burning ambition to excel in a particular profession, but to obtain a qualification for a decent job. A few years ago, prior to the Bologna Process say (see below), he would never have considered going to university. He is less committed than Susan, possibly not as bright, academically speaking. He has little background of relevant knowledge. He comes to lectures with no or few questions. He wants only to put in sufficient effort to pass and obtain that meal ticket. Robert hears the lecturer say the same words as Susan is hearing but he doesn’t see a keystone, just another brick to be recorded in his lecture notes. He believes that if he can record enough of these bricks and can remember them on cue, he’ll keep out of trouble come exam time.

Students like Robert are in higher proportions in today’s classes. They need help if they are to reach acceptable levels of achievement. To say that Robert is ‘unmotivated’ may be true, but it is unhelpful. All it means is that he is not responding to the methods that work for Susan, the likes of whom were sufficiently visible in most classes in the good old days to satisfy us that our teaching did work. But, of course, it was the students who were doing the work and getting the results, not our teaching.

The challenge we face as teachers is to teach so that Robert learns more in the manner of Susan. Figure 1.1 suggests that the present differences between Robert and Susan (point A) may be lessened by appropriate teaching (point B). Three factors are operating:
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- the students’ levels of engagement in relation to the level of learning activity required to achieve the intended learning outcomes (ranging from ‘describing’ to ‘theorizing’, as between the dashed lines in Figure 1.1);
- the degree of learning-related activity that a teaching method is likely to stimulate;
- the academic orientation of the students.

Point A is towards the ‘passive’ end of the teaching method continuum, where there is a large gap between Susan’s and Robert’s levels of engagement. A lecture would be an example of such passive teaching and we get the picture just described: Susan working at a high level of engagement within the target range of learning activities (relating, applying and theorizing from time to time), Robert taking notes and memorizing, activities that are below the target range of activities. If you compare this with Figure 2.1 (on p. 29), you will see that Susan is using a ‘deep’ approach, comprising learning activities appropriate to the outcomes, while Robert is using a ‘surface’ approach, meaning that he is operating below the cognitive level required.

At point B, towards the ‘active’ end of the teaching method continuum, the gap between Susan and Robert is not so wide. Robert is actually using many of
Problem-based learning would be an example of an active teaching method, because it requires students to question, to speculate, to generate solutions, so that Robert is encouraged to use the higher order cognitive activities that Susan uses spontaneously. The teaching has narrowed the gap between their ways of going about learning and between their respective performances. This is because the teaching environment requires the students to go through learning activities that are designed to help them achieve the intended outcomes.

Of course, there are limits to what students can do that are beyond the teacher’s control – a student’s ability is one – but ability after a certain level isn’t the only determinant of performance or even the major one. There are other things that are within our control, and capitalizing on them is what good teaching is all about. Although Figure 1.1 is a hypothetical graph, it helps us to define good teaching, as follows:

Good teaching is getting most students to use the level of cognitive processes needed to achieve the intended outcomes that the more academic students use spontaneously.

Good teaching is unlikely to close the gap between the Susans and the Roberts of this world completely, but it should certainly narrow it. How that can be done is one of the major issues we address in this book.

**The Bologna Process**

In the twentieth century, standards, procedures, staffing, degree structures and academic freedom varied enormously across European universities. In some countries, courses and even staff appointment had to be approved by parliament. With the creation of the European Union in 1993, greatly increased movement between countries for employment and for further study meant that something had to be done to make transfer across educational institutions possible and equitable. Ministers of education from 27 countries met in Bologna in 1999, and given also the backdrop of globalization, the Bologna Process was set in motion. The following details were obtained from the official website (Bologna Process 2010).

Today, 47 European countries are committed to the Process, which aims to create a European Higher Education Area (EHEA) based on international cooperation and academic exchange in order to

- facilitate mobility of students, graduates and higher education staff;
- prepare students for their future careers and for life as active citizens in democratic societies, and to support their personal development;
- offer broad access to high-quality higher education.

Countries are currently setting up national qualifications frameworks that are compatible with the overarching framework of qualifications for the European Higher Education Area. The qualifications frameworks define learning outcomes for each of bachelor, master and doctorate levels,
describing what learners should know, understand and be able to do on the
basis of a given qualification. If a degree is commenced in one university and
completed in another there must be assurance as to the quality and equivalence
of the degrees so that credit transfers are equitable. Accordingly, there
is common agreement as to quality assurance and recognition of foreign
degrees and other higher education qualifications.

The Process also includes areas of broader societal relevance, such as the
links between higher education, research and innovation; equitable participa-
tion and lifelong learning and links to higher education systems outside
Europe. Regular meetings of European ministers of education determine
priorities and set up working groups to make recommendations. Coming
priorities include: equitable access and completion, lifelong learning, employability, student-centred learning and the teaching mission of higher
education, research and innovation, international openness, mobility
between institutions, and others. Lifelong learning is seen as a central issue,
involving greater focus on: recognition of prior learning, including non-
formal and informal learning; student-centred flexible modes of delivery
and wider access to higher education.

To achieve these aims, each country will operate a quality assurance agency
to which are referred all the policies, ongoing review processes and actions
that are designed to ensure that institutions, programmes and qualifications
meet and maintain specified standards of education, scholarship and infra-
structure. Institutions and stakeholders in higher education are thereby
provided with some sort of assurance that quality and accountability are
being achieved. Enhancement and improvement of higher education
systems, institutions and programmes are also concerns.

The Bologna Process is clearly a major step towards improving teaching
and learning on a massive scale, across the whole of Europe no less, but there
are dangers. Benchmarking and credit transfer may threaten one of the
important characteristics of the university: the pursuit of excellence. Ideally,
departments should build on their strengths so that they become renowned
for their research and teaching in a specific area of the discipline. Credit
transfers, however, may work on the equivalence not only of standards but
also of curriculum, so the net effect is likely not to differentiate universities
but to homogenize their offerings. Care must be taken that credit transfers
do not ‘dumb down’ institutions to the standards of the weakest. Many stake-
holders are aware of this problem, claiming that market forces will force
universities to continue to offer better quality, and/or different, programmes
than the opposition. Another way, implied by Altbach et al. (2009), relying
more on government deliberation than on market forces, would be to set up
sectors of universities, the equivalent perhaps of Ivy League, state and private
universities, with credit transfers permissible within, but not across, sectors.

While Bologna is essentially a transnational managerial process, it has
strong implications for teaching at the institutional and individual classroom
levels. Although Bologna does not explicitly prescribe an outcomes-based
approach to teaching and learning (a search through the Bologna docu-
ments for ‘outcomes-based’ did not yield any results), the emphasis on student-centred learning, and on learning outcomes at bachelor, masters and doctoral levels, certainly suggests one, as does the emphasis on lifelong learning, which is a common graduate outcome. Huet et al. (2009) point out that this will involve a paradigm shift towards a more learner-centred approach, especially in many southern European countries where the teaching model is teacher centred, and to achieve this an effective use of learning outcomes requires knowledge of ‘the pedagogy of teaching and learning and [of] the concept of constructive alignment’ (p. 276). They advocate the use of ‘curriculum maps’ to facilitate alignment between learning outcomes, learning activities and assessment tasks. The design and implementation of constructive alignment is the theme of this book, and we turn specifically to the use of such maps in Chapter 7.

Putting Bologna together with other developments in western and some Asian countries, then, we may conclude that there is a strong move towards a more student-centred approach to teaching and learning, marked especially by designing curricula in terms of the outcomes students are meant to achieve at different levels.

Let us spell this approach out in more detail.

**Improving teaching: towards learning outcomes**

In meeting these demands for improved teaching for a broader range of students, many universities are funding staff development centres, or centres for teaching and learning, on a larger scale than previously; they are recognizing research into teaching one’s content area as legitimate research. But perhaps the most important ways of improving teaching are:

1. recognizing that good teaching is as much a function of institution-wide infrastructure as it is a gift with which some lucky academics are born. Thus, policies and procedures that encourage good teaching and assessment across the whole institution need to be put in place.
2. shifting the focus from the teacher to the learner, and specifically, to define what learning outcomes students are meant to achieve when teachers address the topics they are meant to teach.

These two points are mutually supportive. The point about focusing on learning outcomes was first made explicit on a systemic basis in the Dearing Report (1997) in the United Kingdom. Today probably most UK universities describe course and programme outcomes in terms of the outcomes students are intended to attain, although how far these filter through into fully blown outcomes-based teaching and learning varies between institutions. In other countries, including Australia, New Zealand, South Africa and North America, individual universities are moving towards outcomes-based teaching and learning (OBTL). In Hong Kong, the move is system-wide. The then Chairman of the University Grants Committee (UGC), Alice Lam, wrote:
‘The UGC’s goal in promoting outcome-based approaches is simple and straightforward – improvement and enhancement in student learning and teaching quality’ (Letter to Hong Kong universities, May 15, 2006).

Today all eight universities in Hong Kong are moving at their own pace to outcomes-based approaches to student learning (OBASL), as the UGC puts it – we say more about the Hong Kong situation in Chapter 14, as it is one in which we have been directly involved. Currently, Malaysia is moving nationally to implement OBTL in over 1000 post-secondary institutions (Biggs and Tang, in press). The Bologna Process, involving 47 countries in the European Union, is an even larger scale attempt to improve teaching, again with an emphasis on learning outcomes.

Outcomes-based teaching and learning (OBTL)

In outcomes-based teaching and learning (OBTL) we state what we intend the general outcomes a graduate of a university should achieve, and following from that, we derive the content-based programme and specific course level outcomes. Graduate outcomes recall the older notion of teaching goals, but placing them in a more systematic context. In a wide ranging survey of nearly 3000 university teachers, Angelo and Cross (1993) identified six goal clusters that teachers might address:

1. higher order thinking skills
2. basic academic success skills
3. discipline-specific knowledge and skills
4. liberal arts and academic values
5. work and career development
6. personal development.

This work was done nearly twenty years ago when institutions did not spell out mission statements to the extent that most do today. Graduate outcomes, also called ‘graduate attributes’, are outcomes of the total university experience, such as creativity, independent problem solving, professional skills, critical thinking, communication skills, teamwork, as well as lifelong learning. Graduate outcomes are conceived in mainly two different ways: as generic, comprising context-free qualities or attributes of individuals, as if graduates would be ‘creative’ whatever they do; or as embedded, that is, as abilities or ways of handling issues that are context dependent, so that creativity is only intended to apply in a graduate’s content area. We take the embedded view here, as developed in Chapter 7. The generic view of graduate attributes claims that graduates would be creative, or think critically, whatever content they were dealing with. This is not the way it works. These context-free claims reify the attribute, making it a personality characteristic so that its acquisition becomes a matter of personality change. Such claims are exaggerated to serve a different agenda, justifying the criticism by Hussey and Smith (2002) that outcomes ‘have been misappropriated and adopted widely . . . to facilitate the managerial process’. We see the purpose of
OBTL not to serve a managerial agenda, but as stated by Hong Kong’s UGC: the ‘improvement and enhancement in student learning and teaching quality’.

Graduate outcomes guide the design of the intended learning outcomes for the programme and its constituent courses. In this way, both higher order thinking and basic academic skills are written into the intended learning outcomes of the programme, and then of the courses making up the programme, rather than leaving it to the individual teacher to decide. The question of designing outcomes at university, programme and course levels is explained in Chapter 7.

A course outcome statement tells us how we would recognize if or how well students have learned what it is intended they should learn and be able to do. This is different from the usual teacher-based curriculum, which simply lists the topics for teachers to ‘cover’. That is, an outcome statement tells us what students should be able to do after teaching, and how well they should do it, when they were unable, or only partially able, to do it before teaching. Good teachers have always had some idea of that – that is one reason why they are good teachers. In outcomes-based teaching and learning, we are simply making that as explicit as we can – always allowing for unintended but desirable outcomes. Teachers and critics often overlook that students may also learn outcomes that hadn’t been foreseen but which are eminently desirable. Our assessment strategies should allow for these unexpected or unintended outcomes, as discussed in Chapter 10.

In OBTL, assessment is carried out by seeing how well a student’s performance compares to the criteria in the outcome statement; that is, assessment is criterion referenced. Students are not assessed according to how their performances compare with each other and then graded according to a predetermined distribution such as the bell curve (these issues are discussed in Chapter 10). Ideally, in OBTL an assessment task requires the student to perform the intended outcome itself – which is often not easily achieved by giving students questions to which they write answers in an invigilated exam room.

Constructive alignment, the theme of this book and its previous editions, differs from other forms of outcomes-based teaching and learning in that teaching is also addressed, in order to increase the likelihood of most students achieving those outcomes. In constructive alignment we systematically align the teaching/learning activities, as well as the assessment tasks, to the intended learning outcomes. This is done by requiring the students to engage the learning activities required in the outcomes. Talking about the topic, as in traditional teaching, rarely does that directly as lecturing requires the students minimally to listen and to take notes. Only the really academic students, the Susans, go further and question, interpret or reflect. It is getting Robert to engage these learning activities that brings him closer to Susan’s way of learning (see Figure 1.1)

All this might sound difficult, time consuming and way too idealistic. That is not what an increasingly large number of university teachers are finding. This book will explain the background and lead you through all the stages of implementing constructive alignment, but using the outcomes-based terminology that is now current.
The nature of the change worldwide

Since 2000 there has been a dramatic change in the nature of higher education. Participation rates have greatly increased, which has created much diversity both among the nature of programmes offered and in the student population. Classrooms must cater for a diverse range of students, all demanding the quality teaching they believe they have paid for and should be receiving. As a result, universities are much more concerned with improving teaching and maintaining quality assurance of teaching than hitherto. It is inevitable that universities will specialize, as one way of coping with diversity, but the real problem of diversity lies within universities and within classrooms.

Student diversity

Ethnic diversity is greatly expanded especially in western universities with increasing numbers of international students studying abroad. While this calls for much non-academic support in terms of learning in a second
language, social adjustment and counselling, the pedagogical issues are somewhat similar to those met when dealing with diversity of academic commitment. ‘Academic’ Susan hardly needs teaching; she is motivated, knowledgeable and actively learning even while sitting quietly in a lecture. ‘Non-academic’ Robert, who previously would not be at university, is unsure of his goals, is doing subjects that don’t really interest him and sits passively in class. There is a large gap between Susan’s performance and Robert’s. However, if teaching actively engages Robert in appropriate learning activities, the gap between him and Susan will decrease. Coping with academic diversity in the universities of the twenty-first century becomes largely a matter of improving teaching and learning.

The Bologna Process

The Bologna Process is an ambitious attempt to improve teaching across 47 countries Europe-wide. It requires member countries to define learning outcomes for all degrees, to establish national degree frameworks and quality assurance mechanisms, and to address wider social issues such as promoting lifelong learning as a university outcome. While the Bologna Process was originally intended to facilitate credit transfers between institutions in different countries equitably, it has become a reflection of what is happening worldwide – or some might argue that what is happening worldwide is a reflection of Bologna. All these changes point to an increasing use of outcomes-based teaching and learning.

Improving teaching: towards learning outcomes

A major feature of the change in universities is a fresh orientation to the responsibility of teaching, so that teaching is seen not so much as the responsibility of individual teachers as of the entire institution, with policies, staff development and quality assurance of teaching being put in place. In line with this, there has been a concern with anchoring performance in learning outcomes. Outcomes-based teaching and learning is in place in many universities in several countries, with some whole countries requiring teaching to become outcomes based.

Outcomes-based teaching and learning (OBTL)

Graduate outcomes, also called ‘graduate attributes’, are outcomes of the total university experience. They include such things as creativity, problem solving, professional skills, communication skills, teamwork, and lifelong learning, which should be contextualized in the programmes and courses students undertake. Graduate outcomes thus guide the
design of programmes and courses. In OBTL, the concern is not so much a matter of what topics to teach, but what outcomes students are supposed to have achieved after having been taught. Defining those intended learning outcomes becomes the important issue, and assessment is criterion-referenced to see how well the outcomes have been attained. Constructive alignment goes one step further than most outcomes-based approaches in that, as well as assessment tasks, teaching and learning activities are also aligned to the outcomes, in order that students are helped to achieve those outcomes more effectively. How all this is achieved is the subject of this book.

Further reading

On trends in higher education


The UNESCO Report deals with all aspects of higher education apart from teaching and learning: globalization, access and equity, quality assurance and accountability, finance, the academic profession, the student experience, information and communication technology, distance education, research, links to industry and future trends. It is a comprehensive and up-to-date survey that provides excellent background for putting this chapter in context.


The first major thrust towards outcomes-based education in the UK.


This is the official website of the Bologna Process and it gives the history of the project, current developments, priorities and meetings and associated documents.


A publication of the Tuning Project, which was set up to allow credit transfers between universities in the Bologna Process. However, as they explain, ‘The name Tuning was chosen for the project to reflect the idea that universities do not look for uniformity in their degree programmes or any sort of unified, prescriptive or definitive European curricula but simply for points of reference, convergence and common understanding.’ The Project distinguishes between generic competences and subject-specific competences and is producing booklets for major subject areas.
Dealing with diversity


Margaret, a staff developer, and Ross, an economics teacher, hold a dialogue about dealing with the increasingly large number of Roberts sitting alongside the Susans in our classes. Is it fair to Susan to divert resources from her in order to deal with Robert? Is it fair to Robert if you don’t? Is it really possible to obtain the optimum from each student in the same overcrowded class? Read, and draw your own conclusions.


‘Dealing with diversity at Deakin’ is an interactive module given by the Institute for Teaching and Learning at Deakin University. This website presents eight topics on diversity among university students.