Outcome-based Education:

A review of the Literature
OUTCOME-BASED EDUCATION

A REVIEW OF THE LITERATURE

Prepared for the Education Department of Western Australia

October 1995

Sue Willis and Barry Kissane
School of Education
Murdoch University
Murdoch, Western Australia 6150
OUTCOME-BASED EDUCATION
A REVIEW OF THE LITERATURE

Educators and the public need to understand why society will be better served if schools clarify their purposes, reorganise as necessary to achieve these purposes, and expect students to demonstrate the knowledge and skills needed for success in life. (Brandt 1994b, p 3)

[W]e must rethink the uses of assessment, since we have entered an era where the goal of schooling is to educate all children well, rather than selecting a ‘talented tenth’ for knowledge work. (Darling-Hammond 1994b, p 25)

We might consider not only whether our suggested innovations can work, but also how we can manage them so that they will flourish in practice, in the field, at a considerable distance from the experts. We should get no credit for promoting promising but ultimately impractical ideas. (Oliver 1993, p 4)

INTRODUCTION

The expression ‘student outcomes’ is used in two distinct ways in education. Firstly, it may refer to a desired state in individual students by describing the actual capabilities (knowledge, understanding, competencies, orientations, ...) they should develop as a result of their school education. This is not the same as, for example, their score or degree of success or the content of the courses they have taken. In this usage, a statement that a student had achieved a set of outcomes would mean exactly that; it would not mean that she or he had been successful on a curriculum intended to address those outcomes or had passed a test which contained items relevant to the outcomes or had performed well on tasks that acted as a proxy or were predictive of the outcomes described. Secondly, ‘student outcomes’ may refer to class-, institution- or system-level performance indicators such as the distribution of test results, course completion rates, measures of student alienation, or post-course destination of students. In this usage, ‘student outcomes’ are performance indicators which either provide evidence of what has happened with respect to a group of students or define a desired state (or target) with respect to that group of students (Helsby & Saunders 1993). While the latter usage has been more common, it is not the way the term is used in this review. It is the use of ‘student outcome’ interchangeably with ‘learning outcome’ or ‘learner outcome’, to describe the actual learning students are to exhibit which is of relevance here because it is this usage that is intended in ‘outcome-based education’.

There is considerable confusion about what ‘outcome-based education’ (OBE) means and about the various forms it takes. Programmes described as ‘outcome-based’ are often quite dissimilar and programmes which are similar in approach may describe themselves differently. Thus, there are many visions and many versions of OBE. The characteristic features of outcome-based education, however, centre on the word based.

- OBE describes an educational process which is based on trying to achieve certain specified outcomes in terms of individual student learning. Thus, having decided what are the key things students should understand and be able to do or the qualities they should develop, both structures and curricula are designed to achieve those capabilities or qualities. Educational structures and curriculum are regarded as means not ends. If they do not do the job they are rethought.

- OBE implies outcomes-based accountability. This means that assessments of individual student progress are based on, and justified in terms of, the outcomes
students actually achieve. Also evaluations of the effectiveness of class-, school- and system-level policies and practices are based on the extent to which students achieve the outcomes.

The purpose of this paper is twofold: firstly, to provide an analysis of the basic principles of, and meanings attributed to, ‘outcome-based education’ as identified in the Australian and international literature; and, secondly, to consider the implications of outcome-based education for curriculum and assessment policy and practice at both the system and the school level.

PREMISES AND PRINCIPLES OF OUTCOME-BASED EDUCATION

For a school or education system (which may be a nation, state or district) to adopt an outcome-based philosophy means, in effect, that the system believes there are certain things that all students should learn as a result of attending its school(s), that it is prepared to say publicly what these things are, and that it is prepared to stand accountable in terms of them. Outcome-based education is often described as involving a fundamental philosophical shift in curriculum policy, practice and evaluation because of its unrelenting focus on what students have learned rather than on what systems and schools have provided and teachers have taught.

People may be drawn to outcome-based approaches for quite different reasons. Some consider that OBE enhances what is actually taught to students, others see OBE as a means of ensuring that all students have access to and succeed with high quality outcomes, and still others that OBE offers an improved approach to accountability and to the distribution of responsibilities within a school system.

Curriculum content and pedagogy

With regards to curriculum content and pedagogy, OBE involves the premise that decisions about what and how to teach should be driven by the outcomes we would like students to exhibit at the end of their educational experience. O'Neil quotes Grant Wiggins as saying, 'It's a simple matter of making sure that you're clear on what teaching should accomplish ... and adjusting your teaching and assessing as necessary to accomplish what you set out to accomplish' (1994, p 6-7). O'Neil suggests that thought of in this way, OBE describes a process and one which could lead to a range of quite different types of schools.

A key claim of OBE is that teaching and learning will be enhanced by the clear articulation of the desired outcomes of learning and a commitment by the whole school community to align teaching and assessment towards these outcomes. The argument is that differences in teachers’ judgements about student learning — of how to make it happen and how to tell when it has — are more often due to differences in interpretation of ‘what's important’ than they are to an inability to make good judgements. If teachers develop a shared and improved understanding of the important outcomes of education, they will judge their students’ learning more validly and reliably. The information upon which they are basing their judgements will be better and this will have a direct and enhancing impact on their practice, that is, on the curriculum they provide and the pedagogies they adopt (Willis 1994). Indeed, the effective schools literature reviewed by Purkey and Smith (1983) suggests that clear and shared goals are important characteristics of an effective school.
A corollary of this argument is that school improvement is unlikely to occur simply through the external imposition of, or even the free adoption of, a set of outcomes. When all members of a school community are involved in formulating student outcomes, the process of producing them should facilitate a common understanding and hence improved clarity of focus. When outcomes are developed externally to the school, their adoption will be insufficient to ensure a common interpretation and considerable professional development is likely to be needed to enable teachers to develop a shared meaning for, and commitment to, them (Darling-Hammond 1994a).

High quality outcomes for all students

With regards to equity, OBE involves the premises that all students can achieve learning outcomes of significance so long as the conditions necessary for their success are met. The argument is that there is considerable social justice potential in the clear articulation of ‘what’s important’ and the commitment to ensuring that all groups of students, regardless of their class, gender, race, ethnicity, physical ‘ablness’, and so on, are expected to achieve at high levels on a common curriculum. Such a position has been put regarding developments in the United Kingdom (Isaacson & Coombe 1991), the United States (O’Neil 1993; Porter 1994), South Africa (Adler 1991) and Australia (Blackburn 1991). Each argue that we should not be prepared to accept a situation where, explicitly or implicitly, less is expected of, and offered to, certain groups of students. As these and other commentators point out, however, the dangers are considerable that what is offered as a promise to students becomes a threat or hurdle to be jumped by them. Referring to the Australian curriculum profiles, Willis (1995a) suggests that their adoption and use ‘with integrity’ would involve making three commitments to students and their families:

- The first is to defining ‘success’ ... as having learned something worthwhile — both valuable and valued knowledge — rather than having ‘passed the course’ or ‘lasted the distance.’ It is a promise to students that when we say they have achieved the outcomes, they have — not some partial or lesser version of them. The second commitment is to make transparent the criteria by which students will be judged and to base assessments honestly upon these criteria and not add other ‘hidden’ criteria. The third commitment is to altering the conditions of schooling to ensure that all students encounter the opportunities necessary for their ... success. (p 173)

Few would query the first two of these ‘commitments’ but the third is considerably more problematical. Proponents claim that OBE offers an educational process which attends to all three commitments, the third being based on these beliefs:

- All students can learn and succeed (but not on the same day in the same way).
- Success breeds success.
- Schools control the conditions of success. (Spady and Marshall 1991, p 67)

And indeed, many schools in Australia and around the world have adopted some variation of these premises as a starting point for their school reform efforts (e.g. Lockerbie 1995). As King and Evans describe it, ‘OBE forces us to express what we value in education, to commit educational resources to bringing that to life in students, and — in contrast to present practice — to continue until we have succeeded’ (1991, p 74).

Accountability and the professionalism of teachers

With regards to accountability, OBE involves the premise that accountability for schools and for school systems should be in terms of student outcomes (referred to as outputs) rather than in terms of what is provided by way of curriculum, hours of instruction, staff-student ratios, school buildings, equipment or textbooks, or support
services (referred to as inputs). Willis (1994) suggests that making explicit the student outcomes expected from schooling is the education system’s means of informing the community what it can expect from schools and it is also the community’s means of informing schools what it expects from them.

Where a driving force for OBE is better accountability, a common feature is that decisions about expected significant learning outcomes are determined across a broader school community, that is, a district or state or national education system. Individual schools, however, are seen as the appropriate locus of final decisions about how best to achieve these outcomes. King and Evans suggest that the attraction of outcome-based education is its effective coupling of control with autonomy:

At the central level, legislatures and school boards exert control by setting exit outcomes; at the same time, they give schools the autonomy to achieve these outcomes in any number of ways. With the ends set, the means to those ends can rest totally in the hands of school people... Schools have both the freedom to effect exit outcomes in any appropriate way and the responsibility for producing results. (1991, p 74)

This particular division of responsibilities is increasingly common in countries across the world. For example, describing the Kentucky Education Reform Act of 1990, Foster (1991, p 36) states, ‘Staffs in the schools are free to organize their resources and instructional practices in whatever way they believe necessary to attain the desired student outcomes’. Speaking of the efforts to develop nation-wide attainment targets for 15/16-year-olds in The Netherlands, Van den Brink (1993, p 459) states that it ‘includes a deliberate choice of ample room for local variations ... Furthermore, each school is expected to determine the means to achieve these national standards’.

The philosophy underpinning this approach to accountability is that desired student outcomes should be clearly articulated and it is these, rather than a plethora of policies and regulations about how schools should function, which should be the foundation for decisions about curriculum, teaching, assessment, professional development, and so on. ‘Presumably such a system would be better aligned, and focused, and thus more efficient than the system now operating’ (O’Neil 1994, p 8). A corollary to this argument is that system improvement through OBE is unlikely to occur unless all levels of the system have a shared understanding of what it means to be ‘outcome-based’ and unless policies of the system are consistent with and supportive of OBE, generally, and the outcomes the system endorses, specifically (Porter 1994).

Principles of OBE

Bill Spady, who first coined the expression ‘outcome-based education’, considers that the four principles of OBE are ‘clarity of focus’, ‘expanded opportunity’, ‘high expectations’, and ‘design down’. He says:

Keep asking the critical questions about the four principles. First, do we have a clear focus on what we expect of our kids? Second, are we willing to provide expanded opportunities for our kids to be successful? Third, what can we say about the system of expectations we have in our district? Look at our tracking; look at our grading system. And fourth, how do we design curriculum? Are we designing down from clearly-established outcomes, or are we simply buying textbooks and perpetuating what has been done for 100 years? (Spady in Brandt 1992/3, p 70)

Most proponents of OBE would endorse these principles. None of them is as straightforward as it might at first seem, however, and, as will become clear in this review, each requires that inherently controversial matters be addressed.
THE DESCRIPTION OF EXPECTED STUDENT OUTCOMES

Spady has suggested that one of the critical questions for schools engaged in OBE is, 'Do we have a clear focus on what we expect of our kids?' The development of outcomes which provide a clear focus is no easy matter and poorly conceived outcomes can result in the failure of attempts to enhance practice. In this section, we will first distinguish outcomes from goals and objectives, and then describe alternative ways of conceptualising and structuring outcomes.

Goals, objectives and outcomes

We suggested earlier that outcomes described the actual capabilities, knowledge or qualities students should develop as a result of their educational experiences. For example,

Outcomes are high-quality, culminating demonstrations of significant learning in context.
(Spady 1994, p 18)

Outcomes, the end-products of the instructional process, may be observable or internal changes in the learner. [This shifts] the focus from objectives derived often from content or textbook outlines to objectives based on desired changes in the learner. (King & Evans 1991, p 73)

Student outcome statements describe what students typically are able to do as a consequence of a program of planned learning activities. (Randall 1993)

In the literature about OBE, however, the terms 'goals', 'outcomes' and 'objectives' are used in a range of different ways. For some people these terms have very special and distinct meanings; for others the terms are almost interchangeable. Even given that one cannot control the use of such language, it is worth drawing some distinctions.

Goals

As commonly used in education, goals are rather broad and general descriptions of the long term aims of a whole curriculum or learning area. For example, the National Statement on Science for Australian Schools includes as a goal that 'all students should develop the confidence, optimism, skills and abilities to satisfy their own curiosity about the workings of the physical, biological and technical world ...' (AEC 1994, p 9). Goals tend to provide an indication of the philosophical base of a curriculum and thus are intended to provide a general orientation for the development of the curriculum. While goals indicate 'what' they do not indicate 'how well' and it is rarely intended that students' achievements will be assessed directly in terms of their achievement of the goals.

Objectives

The term 'objective' is used in a range of ways. Firstly, objectives vary in their specificity. Some, often called 'general objectives', play a similar role to curriculum goals. They are few in number and broad in scope, may represent something of a 'wish list' and are not directly assessed. Others are rather narrow in scope and — over a whole curriculum or course — will be many in number. They are sometimes called 'specific objectives' although what they specify varies widely and indeed many are not very specific at all while others are trivially so. They may describe what the teacher is to do ('to model the use of Multibase Arithmetic Blocks'), what the student is to do ('the student will explore basic foods through a variety of practical experiences'), the subject matter to be covered ('the basic structure of the periodic table'), some generalised intention ('this unit will provide a variety of writing opportunities') or the
expected student learning (‘the student will be able to remove the buzzer marks from timber’). At times, the way in which objectives are expressed does not distinguish means from ends. For example, the objective ‘investigate promotion techniques used in advertising’ might refer to the learning experience to be provided or to what students are to learn and, if the latter, the expected learning might be the capacity to investigate or the knowledge of promotion techniques (or both). Sadler (1987, p 195) suggests that ‘objectives are prospective; they tell what is intended to happen, and so serve as organisers of learning experiences’.

Ralph Tyler in his seminal book, *Basic principles of curriculum and instruction* (1949), argued that educational purposes or goals should be articulated (or operationalised) in the form of objectives which describe the desired changes in the learner in such a way that one can tell whether or not they have been achieved. Such objectives should, he argued, form the basis of overall curriculum development, the planning of particular learning experiences, student assessment and the evaluation of the learning program. This usage of objective emphasises ‘ends’ and resonates strongly with the definitions of outcomes provided earlier. Helsby and Saunders (1993) say of Tyler’s work:

> Tyler’s work ... had a relatively liberating effect at that time. ... Tyler turned attention ... towards the school curriculum and its improvement, extended the range of valid evaluation data far beyond students test results and encouraged teachers to think explicitly about what they were trying to do. His rationale was based on the assumption that schools had a broad range of purposes, that teachers were competent and autonomous professionals, and that evaluation was not wholly dependent upon psychometric measures of a narrow range of student competencies by outside experts. (p 62, p 63)

They also comment, however, that ‘it seems clear that many who adopted his objectives model did not use it in the way in which Tyler had conceived it’ (p 63).

While Tyler had a broad view of the nature of objectives, and of the teacher’s professional role, later interpretations of his work defined each of them rather more narrowly and his ideas became closely associated with the behavioural objectives movement which focussed attention on the articulation of objectives in terms of expected student behaviours. Mager’s (1962) influential book on behavioural objectives emphasised the importance of precision, clarity and specificity of objectives. Popham (1969) and Bloom, Hastings and Madaus (1971) argued that objectives should be stated as directly observable behaviours, which are without ambiguity and which can therefore reliably be judged to be present or not. Notwithstanding the work of Bloom and colleagues, the difficulty of writing behavioural objectives for higher order capabilities meant that many of the objectives were individually quite trivial. In order to achieve the level of precise behavioural specification demanded, curricula became atomised into sometimes hundreds of objectives with the assumption being that ‘the whole’ was simply the sum of the parts.

**Outcomes**

The current interest in the articulation of expected student outcomes could be seen as a return to Tyler’s early conception of the role of objectives before his work was overtaken by the behavioural objectives movement. King and Evans see outcomes as particular types of objectives, suggesting that outcomes shift ‘the focus from objectives derived often from content or textbook outlines to objectives based on desired changes in the learner’ (1991, p 73). They and other North American writers tend to regard outcomes as particular kinds of objectives but prefer the use of the word ‘outcome’ to
emphasise that they describe significant changes in students which result from provided learning experiences and that they focus on the ends rather than means.

Outcomes are generally rather broader in scope than objectives, describing characteristics, behaviours or understandings in the learner which have significance beyond the particular learning sequence or phase, indeed beyond school. For example, a curriculum might include work on recognising different parts of a sentence, the justification being that it will assist the student to write well. In this case, the outcome would be about writing well, the objectives would relate to the particular means adopted to achieve that outcome, for example, understanding the role of verbs in sentences. Different means of helping students write better which do not involve analysing sentences might instead be adopted. The outcome would not change but the curriculum objectives would. Thus, outcomes are generally superordinate to the specifics of any particular curriculum, whereas common usage tends to make objectives specific to particular curricula content and pedagogical practices. Outcomes relate to the macro level of curriculum development rather than to the micro level.

To take an existing course or unit and relabel or even rephrase what were 'objectives' as 'outcomes' not only does not result in OBE — it is actually inconsistent with OBE.

The emphasis in OBE on students' actually demonstrating that they have achieved particular outcomes, the use of language such as 'demonstration' and 'performance', and even the word 'outcome' itself, has led to some association of OBE with behaviourism. As a result, some commentators (see, for example, Ellerton & Clements 1994; McKernan 1993) direct any criticisms which can be levelled at competency-based education and mastery learning — each of which have been behaviouristic and atomistic in their execution — to any efforts to describe the expected learning outcomes of schooling. This appears to be a misinterpretation of OBE, albeit one that is widespread amongst opponents of OBE and also some who claim to be practising OBE.

A major critique of behaviourism is that it does not allow distinctions to be made between accidental performance, rote performance and performance which is a result of an underlying more broadly applicable competence (this follows Chomsky 1965). Rather than performance being seen as a means through which competence may be inferred, the performances themselves become the focus of attention with the result that 'education' degenerates into 'training'. The rather impoverished view of competency which equates it with particular behaviours is not accepted by proponents of OBE. For example, Fitzpatrick, a teacher involved in her districts' development of outcomes, comments:

These indicators provide a picture of the ability described by each outcome.

[We had] to be aware of some critical challenges to identifying these indicators, such as the fact that an ability is larger than the observed performance of it or that any performance or demonstration of an ability is larger than the sum of the criteria applied to it. (1991, p 19)

The view that outcomes describe broad underlying capabilities of which particular behaviours are evidence seems typical of recent versions of OBE.

The conceptual basis of outcomes

Some conceptual basis is needed for the description of the student outcomes expected of schooling. This conceptualisation will influence — although it certainly need not determine — how the school curriculum is conceived and hence structured. For example, outcome-based education has forced many school communities to confront the question of whether the school curriculum should be thought of in terms of
separate subjects or should deal directly with the demands of life outside school (Brandt 1992/3; O'Neil 1994). It has also required them to be more explicit about whether, and if so how, their curricula support the development of higher order cognitive skills and of affective skills. O'Neil quotes one commentator as saying, 'the questions ultimately get down to the fundamentals — what's worth knowing and what's the purpose of schooling. ... Outcome-based education gets to the heart of the matter' (1994, p 7).

Spady and Marshall (1991), who together founded the High Success Network of OBE schools, have described three versions of OBE: traditional, transitional and transformational. These differ in their conceptual origins and in the nature of the outcomes they emphasise. The distinction is helpful in making sense of the vast array of programmes that go under the title of OBE.

**Traditional OBE**

*Traditional* outcomes are based closely on an existing curriculum, that is, existing curriculum content and structure (lessons, units, courses and subject areas) form the starting point. They articulate what aspects of existing curriculum are important for students to learn to a high level of performance. These outcomes then provide a clearer focus for future curriculum implementation and assessment. The outcomes, however, are often limited to individual units or topics or courses with each an end in itself, that is, they are subordinate to existing curricula.

Consistent with the distinction made in the last section between objectives and outcomes, Spady and Marshall suggest that such outcomes should more correctly be labelled ‘curriculum-based objectives’. Until recently, most outcomes have been traditional but, they argues Spady, programmes utilising such outcomes should not be called OBE because they are not outcome-based.

We have not collectively stopped to examine what it would really mean to BASE our system on intended outcomes for all students rather than on how long the educational process has been defined to last or how its curriculum and delivery structures are already organised. As a result, in the name of OBE, educators and policy makers mistakenly:

1. Write outcomes about existing curricula instead of designing curricula that facilitate intended outcomes;
2. Tie outcome performances directly to the calendar at all levels of the system;
3. Equate time-based performance testing systems and results with intended instructional outcomes;
4. Confuse specific step-by-step instructional objectives with culminating outcomes of significance; and otherwise
5. Refer to anything that has anything to do with learning outcomes as outcomes-based, no matter how time-based or curriculum-based it is. (Spady 1992)

The basic purpose of traditional OBE is to improve individual teacher effectiveness and to improve the percentage of students doing well on existing curricula and conventional measures of achievement and this, according to Spady and Marshall, it does seem to do. Simply pursuing more success on objectives derived from the components of the existing curriculum is, however, an inadequate approach to the enhancement of student outcomes. It addresses *how* successfully students learn (and teachers teach) within existing structures and curriculum but does not place the structures and curriculum themselves under scrutiny (Willis 1995, Darling-Hammond 1994b). Also, it does not improve the quality of *what* they are expected to learn (Spady 1994).
For Spady, the question we should ask of outcomes is: ‘Do the outcomes we expect students to demonstrate matter in the long run — in life after formal schooling?’ (Spady 1994, p 18) and the starting point for curriculum decisions should be what we want students to be able to do at the end of their schooling, ‘... at the “real” end — not just the end of the week, the end of semester, the end of the year — but at the end of their time with us’ (Spady in Brandt 1992/3, p 66). These lead Spady to two features of what he calls ‘exit outcomes’: firstly, they should be derived from an analysis of adult life roles rather than from an analysis of the subject disciplines; and, secondly, they should be culminating demonstrations of learning rather than specific grade- or course-related competencies. He calls such outcomes ‘transformational’.

**Transformational OBE**

Transformational OBE starts with exit outcomes which focus upon ‘adult life roles’. For example, the Aurora Public Schools in Colorado (USA) has five ‘big’ exit outcomes for learners: Self-Directed Learner, Collaborative Worker, Complex Thinker, Quality Producer and Community Contributor, each defined in terms of a number of indicators or proficiencies (which may themselves be regarded as outcomes), for example:

- **Complex Thinker**
  10. Uses a wide variety of strategies for managing complex issues.
  11. Selects strategies appropriate to the resolution of complex issues and applies the strategies with accuracy and thoroughness.
  12. Accesses and uses topic relevant knowledge.

- **Community Contributor**
  17. Demonstrates knowledge about his or her diverse communities.
  18. Takes action.
  19. Reflects on role as a community contributor. (Redding 1992, p 50)

Such ‘big’ exit outcomes then become the basis for identifying the ‘knowledge, competence and orientations ... that you deem critical for assuring success on the outcomes’ (Brandt 1992/3, p 69) and these in turn are the basis for curriculum design. In Spady’s vision of transformed schools, the curriculum would be designed around ‘complex role performance in real situations with real demands’. A ‘complex role performance’ related to the above exit outcomes might be as follows:

- **Organize and participate in a community service team that monitors major community issues and problems, develops alternatives — including proposed changes in laws — for addressing them, and explains potential solutions to key community groups.** (Spady 1994, p 21)

Spady describes subject area learning as enabling outcomes rather than outcomes in their own right, where ‘enabling outcomes’ may be checkpoints ‘along the way’ to exit outcomes or ‘benchmarks’ which are derived from, and show progression towards, the exit outcomes.

- Mathematics would not be taught as a totally separate subject, but learnt in ways that link it to real-life problems, issues and challenges, so that it becomes the tool it was intended to be. Instead of teaching history by itself, we weave the evolution and historical development of ideas throughout everything we teach. In this way, students learn to thoroughly examine current problems, issues and phenomena in depth and ask ‘Why?’ (Spady 1993, p 24)

This has proved to be one of the most contentious issues for OBE. O’Neil comments that, ‘architects of OBE plans find it extraordinarily difficult to weave the academic content into the broad outcomes’ and ‘critics convinced the general public that such [transformational exit] outcomes would lead to more ‘touchy-feely’ exercises and less
history and math in schools' (1994, p 9). Indeed, there has been a wave of opposition in the US to outcomes which ‘focus on social and behavioural issues [rather] than on academics’ and the ‘treatment of academic knowledge as a low priority’ (Gandal 1995, p 16, 17). The difficulty of describing outcomes based on performance roles and, at the same time, making subject content visible has provided fuel for opponents of transformational forms of OBE who variously claim that traditional academic content has been sacrificed, that the outcomes are vague and impossible to measure, or that they involve values that are not within the domain of schools.

There is little doubt that most proponents of OBE would argue that its importance lies in improving what as well as how well students learn and that the question, ‘Do the outcomes we expect students to demonstrate matter in the long run?’ is the appropriate one. Furthermore, most agree that the educational experience is too fragmented and that important outcomes not easily pegged to typical subject area divisions and pedagogical approaches are not well handled.

Many, however, do not agree with Spady’s views of what matters ‘in the long run’ or with what is necessary to ‘transform’ schools. For example, Glatthorn (1993) argues that there is no empirical base supporting the superiority of Spady’s approach and considers that Spady’s ‘narrowness’ causes him to slight the importance of subject matter knowledge.

Transformational curricula may be seen as an extreme version of curriculum integration. The research in general supports the effectiveness of curriculum integration ... However, this ‘transformational’ approach is not necessarily more effective or inherently superior to subject-centred approaches ... As Brophy and Alleman note, curriculum integration is a means, not an end, they point out that many integrated units they have examined are badly designed collections of activities.

Also, increasing evidence suggests that in-depth knowledge is essential for problem solving. As Resnick and Klopfer point out, experts in a field reason more powerfully on topics they understand in depth. Such indepth knowledge would seem difficult to achieve in ‘transformational’ units that deal with broad and complex multidisciplinary issues. (p 359-360)

In fact, most otherwise ‘transformational’ school districts add to their life-role exit outcomes another called ‘knowledgeable person’. According to Marzano (1994), like the non-content ‘big’ outcomes, ‘knowledgeable person’ is defined in terms of a number of proficiencies (or outcomes). In this case, however, there is usually a large number of them (30-80), between two to five for each curriculum area. These proficiencies tend themselves to be rather broad and reflect aspects or strands of a curriculum area. For example, a proficiency for geography might be ‘understand the physical and human characteristics of place’ (p 45). Such schools do teach in subject areas but they design their curriculum and assessments in order to address their broad exit outcomes as well as subject specific knowledge or competence (Pollock 1992; Redding 1992).

Commentators (e.g. Marzano 1994; O’Neil 1994) suggest that the majority of reformers both in the United States and elsewhere have not accepted Spady’s arguments for completely transformational exit outcomes, although many have implemented what Spady refers to as ‘transitional’ outcomes.

**Transitional OBE**

*Transitional* OBE communities usually generate exit outcomes which they require all their students to demonstrate and which guide their curriculum programme decisions. These exit outcomes may not reflect ‘life roles’ in Spady’s sense but they do
reflect knowledge, competencies and orientations which are likely to be important to people generally in their post-school lives. For example, Arlington Heights District in Illinois is renowned for its work on OBE and has been characterised by Spady as transitional, rather than transformational, but nevertheless as pioneering. It calls its exit outcomes ‘general learner outcomes’ for graduating students and describes them as follows:

- ability to communicate (in reading, writing, speaking, listening and numeracy skills);
- facility in social interaction;
- analytic capabilities;
- problem solving skills;
- skill in making value judgements and decisions;
- skill in creative expression and in responding to the creative work of others;
- civic responsibility;
- responsible participation in a global environment;
- skill in developing and maintaining wellness;
- skill in using technology as a tool for learning;
- skill in life and career planning. (Fitzpatrick 1991, p 19)

These outcomes are strongly reminiscent of goals and some writers refer to them as such. As Fitzpatrick states of the Arlington Heights general learner outcomes, however, these are not intended to be read as goals in the conventional sense.

It is important to note that these 11 statements are not goal statements or simply as part of the districts’ philosophy. Rather, they are outcome statements — our students are required to demonstrate achievement of these outcomes. (Fitzpatrick 1991, p 19)

The intention with exit outcome statements is to operationalise the more visionary goals so that their achievement can be assessed for graduation purposes. Based on these exit outcomes, Arlington Heights has developed ‘programme level outcomes’ for the learning areas of English, mathematics, science, social studies, fine arts, physical education and health, foreign language, and practical arts and also for ‘student services and student activities’ in order to ‘expand the range of opportunities for students to achieve each of the general learner outcomes’ (Fitzpatrick 1991, p 19).

The Coalition of Essential Schools which was founded in the USA by Theodore Sizer and has spread at least to Australia and Canada, has its own version of OBE based on the notion of ‘planning backwards’ from a vision of ‘producing graduates in the image of the schools’ collective vision of competent intellectual performance’ (McDonald 1993, p 481).

Schools planning backwards have tried setting aside temporarily what is broadly called curriculum and instead simply imagine the school’s candidates for graduation using their minds well. In its mind’s eye, the school struggles to acquire a vision of integrated intellectual performance ... Perhaps, in this vision, candidates for graduation are able to deal well with questions posed by expert strangers on matters they have spent months studying independently. Or perhaps they can discuss several tough texts in a graduation seminar, then write about the texts with skill, conviction, and insight. Perhaps they do this in two languages. Perhaps they show sculptures they’ve created ...

These activities are what the Coalition of Essential Schools calls exhibitions ... they offer concrete images of real kids ... [and] they also function as assessment tools. (McDonald 1992, p 1-2)

Again, these are not simply goal statements or mission statements; they describe what students will be expected to demonstrate for graduation. Having decided what these ‘exhibitions’ will be, the school then ‘struggles to make them actual by planning backwards’ (1992, p 2).
Johnson City District in New York State is renowned for the remarkable and long term success of its transitional OBE programme in improving achievement particularly, but certainly not only, for 'minority' students (Evans & King 1994). It has five broad exit outcomes which relate to 'self esteem, thinking and understanding in academics, problem solving and decision making, being a self-directed learner, and concern for others' (Zlatos 1993, p 24). In addition, it has set programme level outcomes both within and across discipline areas.

Johnson City has three basic [types of] outcomes. The first is academics. These are the parts you ought to be grading, nothing else. Under academics, we want students to be able to think within every discipline ... within science, within art, within health. ... We want our students to understand [and] we've made an attempt to define what we mean by understanding in each of the disciplines. And ... students should be self-directed within each discipline [which means] being able to use the tools of the discipline to be able to carry out an investigation in that discipline.

The second outcomes are the work and process skills. We want our students to be able to work in groups. We want them to be accountable for their work. We want them to be able to make decisions, to solve problems, to communicate.

And the third outcomes are what you might call attitudes. We want our students to love learning, to be concerned about one another. ... [W]e teach these things. But mostly, we develop such qualities through the environment. And we measure how well we're doing it with standards and indicators that are very clear. We do measure it — but we don't grade individuals on such outcomes. (Mammery in Brandt 1994а, p 27)

Johnston City District has not experienced the criticisms levelled at some OBE programmes despite their inclusion of outcomes relating to such things as 'self esteem' and 'concern for others'. This, according to Mammery, is because having written what, inevitably, had to be somewhat 'fuzzy' descriptions of outcomes, they took the additional step of elaborating their meaning through exemplars. You can't just say, 'We want our kids to have good self esteem,' and not define that. And when you make fuzzy terms clear, people say, 'That makes sense.' ... Here's an example of what we mean by self-esteem: that kids take reasonable risks in learning. Having a definition like that helps you avoid inappropriate behaviours like having students of the month, or having an assembly where everybody shouts, 'I am good, I am good,' even though they are not learning.

So we define these outcomes clearly and sensibly. And because of that, I've never heard anybody say, 'We don't want that for our kids.' (Mammery in Brandt 1994а, p 27)

While traditional OBE is criticised by Spady as being mainly concerned with success in school and having no clear conception of what we want students to be able to do in life beyond school, he regards transitional OBE positively because it is concerned with:

... what is most essential for our students to know, be able to do, and be like in order to succeed once they have graduated ... [and does] address higher order competencies that are essential in virtually all life and learning settings. (1993, p 8-9)

While it does not question the fundamental purposes of, or the existing frameworks and structures of, traditional schooling, Spady considers it to have considerable potential for school communities which are embracing the principles of OBE.

In general, then, OBE schools or systems identify exit outcomes which all students are expected to achieve. These exit outcomes may relate to graduation or to the compulsory years of schooling or the years for which a broadly common curriculum applies. They tend to be few in number — somewhere between five and fifteen outcomes is common — and broad in scope. Exit outcomes may, as we have already
suggested, reflect 'life-roles' directly or they may reflect knowledge, competencies and orientations which are important generally beyond school.

In addition, they identify **programme level outcomes** which are more specific outcomes for particular domains of the overall school curriculum. (Note that the terminology varies and we have at times paraphrased for clarity of meaning.) Programme level outcomes may directly reflect and link to the exit outcomes or they may fit within traditional school subject boundaries. More commonly, between seven to fifteen broad areas of learning are identified within which school subject areas are placed. Outcomes are then developed for each learning area and the subjects within a learning area held jointly responsible for the learning area outcomes. In addition, programme level outcomes may be described for areas such as vocational education which span all curriculum areas and in areas of the schools' activities such as guidance and counselling (Haack 1994) or student activities (Fitzpatrick 1991).

A common variation of this pattern is for the list of exit outcomes to include the broadly defined general subject area outcomes. In this case the number of exit outcomes expands to between 30 and 80. The State of Kentucky, for example, has identified 75 learner outcomes which are broad statements such as:

- Students use research tools to locate sources of information relevant to a specific need or problem.
- Students identify, compare, construct and use patterns to understand and interpret past and present events and predict future events. (Steffy 1993, p 42)

As we will indicate shortly, general outcomes for each programme are then interpreted 'appropriately' for various levels of schooling.

In Australia, exit outcomes, whether developed by systems, school districts or individual schools, tend to be transitional in nature (e.g. Harris in Rowe 1994). We found no examples where the exit outcomes were yet directly assessed and/or required for graduation. In some cases, however, Australian schools use exit outcomes as the basis for the development of programme outcomes and assessments, and for their school development planning generally. In addition, some systems and schools across Australia are adopting or adapting the Australian curriculum profiles as programme outcomes (Roberts, Tonkin & Hancock 1994; Marsh 1995).

**The same outcomes for all**

Generally, proponents of OBE consider that the same outcomes should apply to all students. As McGhan says, 'A necessary condition for OBE to succeed is a conviction that all children can achieve a common set of outcomes if given sufficient time and support' (1994, p 72). There are, however, a number of objections to this point of view.

On the one hand, some critics argue that common outcomes will lead to a lowering of expectation and hence poorer outcomes for, and from, those students who have typically been successful in school. Generally, such critics do not believe that high level outcomes are possible for all students. This perspective is not uncommon. As Foster (1991) comments:

> Historically, all children were not expected to master the entire curriculum. Universal education meant universal opportunity, not universal achievement. Schools were expected to sift and sort out the unmotivated and poor performing students in favour of those with some promise of academic excellence. In fact, the academic failure of a certain percentage of students was expected. An outcome different from that was often interpreted as indicating a lack of academic rigour. (p 34-5)
From this perspective, then, common outcomes must inevitably be about minimal competency because, in order to minimise the proportion of students who fail, target levels have to be pitched at low levels. For example, one critic of the Australian curriculum profiles claims that the developers' preoccupation with equity led them to want to make it easy for everyone to be successful:

And to ensure and facilitate this, the educational standards and levels set will be made to match those of the lowest common denominator in the nation, rather than be linked to the highest or even median level which may exist now (Bolotin 1993, p 14).

OBE communities respond that they do not want to make it easy for anyone to be successful. We should, they argue, expect all students to reach very high standards on all outcomes which are reasonably within their grasp (Spady 1988). It is the outcomes from students that should be used to judge standards, not the apparent standard of courses as suggested by their content descriptions, and not the time students take to reach those high standards. Indeed, many supporters of OBE are most critical of the low level of work produced by able students because of assessment practices which routinely accept low level and mediocre work albeit it may be on 'high level' content. Rather, they want everyone to be successful on challenging common outcomes. McDonald (1993) suggests that from the perspective of OBE, the question of equity is 'how to get everybody to a place where some never imagined they could get. This is the equity of ... optimal rather than minimal results' (p 485).

On the other hand, some critics argue that common outcomes set at a high level of expectation are unfair to those who have typically been least well served by schools. Such critics point to the considerable disparities in the education received by students in different schools (Eisner 1993; Howe 1995) arguing that it would be unfair to hold all students to the same standards when they have different 'opportunities to learn'. The gross inequalities in educational provision which exist in, for example, the United States are uncommon in Australia which has always had a public commitment to equal provision (Blackburn 1991). Nevertheless, it cannot be denied that differences between schools do exist. Even within the public education sector, all schools are not equal. Critics further argue that even if we were to meet the ideal of equal educational provision, schools cannot be expected to overcome the external circumstances that adversely effect some learners. To hold all students to the same expectations is unfair if their opportunities and background are so different.

Porter counters these arguments about fairness rather poignantly, 'I know of no strategy for protecting a student who has had a poor education. Once that has happened, the individual is in for a lifetime of penalties' (1994, p 432) and Willis asks rhetorically, 'Is it fair to leave school having apparently succeeded but not knowing much?' (1994, p 7).

Proponents of common outcomes consider that differential outcomes encourage differential expectation and streaming which together perpetuate and exacerbate inequalities (Wiggins 1991). They argue that 'what you accept is what you expect' (Rowe 1994, p 3) and reiterate the principle of high expectations for all, 'the futures of many students are compromised because the outcomes held for them are low or unclear. ... some students — and some schools — are held to high standards while others are not' (O'Neil 1994, p 8). They consider that defining the same outcomes for all is particularly important for those students who traditionally have not been well served by schools. Rather than accepting, indeed expecting, differential outcomes from schools and from students, they argue, we should ensure that systems and schools are
held accountable for ensuring that the conditions necessary for student success exist in all schools. For McDonald (1993), the vision is clear:

What is wanted is a community of striving in which the standards of achievement are plainly visible and plainly applicable to all, but in which support, time and structure all vary according to need. (p 485)

This is, of course, a rather tall order but a premise of OBE is that schools can make the difference and OBE claims to offer a model for doing so. As Fitzpatrick (1991) says of Arlington Heights District in which she teaches:

[We have stayed the course ... because of the power of our affirmations — affirmations of the potential of our students and affirmations of our ability to make a difference ... Today we remain optimistic and steadfast in our beliefs that all students can learn and that schools indeed control the conditions of success. (p 22)]

And, indeed, there is considerable evidence from the United States of the success of OBE in school districts which have large proportions of 'disadvantaged students' (Evans & King 1994; Waters, Burger & Burger, 1995; Zlatos 1993). For example:

The achievement gap between Anglo and Hispanic students has decreased dramatically while the performance of both groups has improved. ... Our data demonstrate that it is possible to achieve equity of education for all our children, without sacrificing educational quality. (Waters, Burger & Burger 1995, p 35)

Another criticism levelled at the notion of common curriculum generally, rather than OBE in particular, is that a common curriculum inevitably reflects the priorities, concerns, experiences and history of the dominant culture or, at least, the more powerful members of the dominant culture. Undoubtedly this is true. OBE proponents, however, do not consider that common outcomes should imply uniformity of curriculum, pedagogy, assessment or student work. Some hold strongly to the view that outcomes should be developed at the school or possibly school district level in order to reflect and accommodate local values and conditions (Sizer & Rogers 1993, Darling-Hammond 1994a). Others consider that outcomes developed at the state or large-system level ought to be written to enable the specifics of curriculum and pedagogy to reflect a diversity of people and practices, and students to demonstrate their achievement of the outcomes in a variety of ways (Simmons & Resnick 1993; Willis 1995) albeit the underlying capability and the standard of expectation should remain the same.

The OBE literature is rather silent on the matter of students with disabilities although there are some exceptions (e.g. Shriner, Ysseldyke, Thurlow & Honetschlager 1994). We suggested earlier that outcomes describe broad underlying capabilities of which particular behaviours are regarded as evidence. It is probably in the case of students with disabilities that this distinction between underlying competence and particular behaviours becomes most obvious. Some students have disabilities which need not prevent them from achieving particular outcomes so long as the necessary accommodations are made in the way in which they are expected to learn and the means through which they demonstrate the outcomes. For example, a student who does not have the manual dexterity to physically construct a 3-D model may nevertheless use computer software to undertake quite analogous tasks and demonstrate the same planning, visualisation, geometric concepts and problem solving skills. Some students, however, will have disabilities which will prevent them from achieving particular outcomes albeit they may, with assistance or modification, perform some of the tasks associated with that competence. Where the disability is demonstrably related to the outcome, the outcome may be considered
irrelevant or it may be modified. The difficulty is that while it may be unrealistic to expect all students to achieve some outcomes, it is difficult to be sure ahead of time which students they are and, indeed, which outcomes (Resnick 1995, oral presentation). Low expectations are a considerable problem for the achievement of many students with disabilities. In general, OBE would see common outcomes apply as far as possible and ‘students with disabilities ... afforded the opportunity to demonstrate their progress towards these outcomes and achievement of skills that are important for their future’ (Shriner et al 1994, p 40). The necessary accommodations would be made in order for ‘disabled persons to be treated and judged, insofar as possible, by the same standards as other people’ (Shriner et al p 41). Where significant modifications are made and the standards do change, however, this must be made explicit. To do otherwise would disservice all students particularly those with disabilities who have demonstrated the outcomes fully but whose achievements may be disbelieved.

Finally, in response to assertions such as, ‘It’s just not realistic to expect the same from everyone’ (Candal 1995, p 20), OBE proponents reply that they do not claim that all students are alike or equally academically skilled but rather that all students have the right to engage in a curriculum which offers high quality intellectual tasks, all should be expected to produce high quality work and, with few exceptions, held to high standards (Wiggins 1991, McDonald 1993; Shriner et al 1994). Schools should be expected to do their part by ensuring that the outcomes students are expected to achieve are worthwhile (there should be no jumping through hoops for the sake of it), that the time and conditions necessary for students’ successful learning are provided and that the criteria by which their learning will be judged are open and accessible. Students should be expected to do their part by actively engaging in learning and producing their best possible work.

Students do differ, in their talents and their interests, and students will work more and less well at different times. Notwithstanding the best efforts of schools to provide the opportunities every student needs to learn to a high standard, the level and quality of student learning will vary. The dilemma is clear:

Obviously some students will fall short of the highest goal, at least initially, and their progress must be noted or their motivation will dissipate. But if different levels of accomplishment are established, the system may ultimately settle for too little once again. (Porter 1994, p 433)

Approaches to addressing this matter will be considered in this next section.

The structure of programme outcomes

It is an obvious characteristic of a school system’s exit outcomes that they occur at the end of some phase of the schooling process. In principle, achieving the exit outcomes is sufficient to graduate from secondary school or from the ‘common years’. Programme level outcomes, on the other hand, relate specifically to the school’s programmes. They may occur at various stages in the schooling process and, indeed, they are intended to guide teaching and learning by providing a structure through which progress can be recognised.

Within each programme area, a number of general outcomes are decided upon and then interpreted into various levels perhaps called level outcomes, benchmarks or attainment targets. There are a number of ways of structuring such outcomes but they
generally fall into two broad categories, the first describing outcomes for particular grades and the second describing outcomes in progressive levels.

**Outcomes linked to key grades**

In the first category, expected outcomes are linked to key grades. For example, one Oregon district identified a number of general outcomes for their guidance and counselling programme. Each outcome was then ‘interpreted … into developmentally appropriate levels at grades 3, 5, 8, 10 and 12. All students are expected to achieve the benchmarks when they exit that particular grade level’ (Haack 1994, p 34-35). Figure 1 provides an example.

**FIGURE 1**

<table>
<thead>
<tr>
<th>Gen. Outcome</th>
<th>Grade 3</th>
<th>Grade 5</th>
<th>Grade 8</th>
<th>Grade 10</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students will acquire the skills to counteract the negative influence of peer and societal pressures.</td>
<td>Differentiate between positive and negative social pressures at school.</td>
<td>Role play refusal skills as related to alcohol/drug use and misbehaviour.</td>
<td>Practice refusal skills in a variety of situations (for example, pressure regarding illegal activity, alcohol and sexual activity).</td>
<td>Identify ways to strengthen refusal skills that are judged to be most effective.</td>
<td>Identify situations in different settings (for example, workplace, college) that will require the use of refusal skills.</td>
</tr>
</tbody>
</table>

This approach does not obviously allow for individual differences in maturity or learning rate and may not support the curriculum flexibility that OBE demands. In the US, some schools or systems address differences between students by retaining students in a grade until they have achieved the outcomes. The educational research provides little support for this approach, indeed, the evidence is fairly consistent in indicating that students who are retained in grades below their age level perform less well that those who stay with their age cohort (Shepard & Smith 1990).

Cognisant of this problem, but also of the implications of continuing to promote children who are not achieving, the state of Kentucky, US, has introduced non-graded classes for the early childhood years with students moving to grade 4 when they are ‘ready’ as determined by their achievement of certain outcomes. This program is promoted as giving children ‘the gift of time’ and each child’s readiness is decided by the review of a portfolio of their work collected over an extended period (Steffy 1993).

Other school communities address the same issue by building in the possibility of students at the target grades achieving at several levels. For example, the Common Curriculum Grades 1-9 published by the Ministry of Education, Ontario (1993) uses the structure shown in Figure 2 to describe expected outcomes.

**FIGURE 2**

| level 4 | level 4 | level 4 | Performing beyond the expected standards set for the grade |
| level 3 | level 3 | level 3 | Performing within the expected range of standards set for the grade |
| level 2 | level 2 | level 2 | Not yet performing within the expected range of standards |
| level 1 | level 1 | level 1 | |
| grade 3 | grade 6 | grade 9 | |
| outcomes | outcomes | outcomes | |

A problem that can occur when structuring outcomes in this way is that it may not be
clear how the levels at one grade relate to those at another grade. Is level 1 at grade 6 more or less advanced than level 3 at grade 3? On this matter, the documentation for Ontario simply says ‘the levels do not represent a simple continuum — for example, level-three performance in Grade 3 is not equivalent to level-one performance in Grade 6’ (Ministry of Education and Training 1993, p 5). A student who achieves level 2 in grade 6 and level 1 at grade 9 may have regressed by comparison with peers. Has she or he nevertheless progressed individually, albeit more slowly than some other students? Also, is a student who achieves at, say, level 1 in grade 6 given the opportunity to develop the learnings of level 2 and level 3 or does she or he ‘move on regardless’. In an effort to overcome this difficulty in tracking the progress of individual students over time, a second category of approaches to structuring programme level outcomes has emerged.

**Outcomes described in terms of progressive levels of achievement**

In the second category, outcomes are described for each of a series of progressive levels which are not tied to any particular grades and students are expected to achieve the levels at different times. Essentially, grade based differentiation of levels are rolled together into a progression of levels. This approach, often referred to as ‘profiles’, is based on the evidence that there is considerable overlap between the achievement of high achievers at lower grades and low achievers at higher grades (Brown 1991). Figure 3 provides an extract from the eight levels of the Australian Curriculum Profile for mathematics (Curriculum Corporation 1994).

**FIGURE 3**

<table>
<thead>
<tr>
<th>Gen. Outcome</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3 ...</th>
<th>Level 6</th>
<th>Level 7 ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student can organise data by listing, classifying, sequencing and grouping to generate and answer questions.</td>
<td>Participate in classifying and sequencing objects or pictures.</td>
<td>Contribute to deciding how to classify and sequence data, applying unambiguous and familiar criteria consistently.</td>
<td>Classify, sequence and tabulate data to answer particular questions and vary the classification to answer questions.</td>
<td>Organise data in diagrams, tables and databases to help answer questions and generate new ones, planning class intervals and fields collaboratively and individually.</td>
<td>Compare, choose and use methods of organisation to suit the type of data and the questions asked.</td>
</tr>
</tbody>
</table>

In Figure 1 the question asked of a student’s achievement is ‘has she or he achieved the grade 5 outcomes?’. In Figure 3 it is ‘what level has she or he achieved?’. In principle, structuring outcomes in progressive levels enables the monitoring of an individuals’ personal growth over a period as well as their progress against an external standard or towards an agreed goal (Wiggins 1994). This does not completely overcome the matter of differences between students since students may produce high quality work on less advanced concepts or skills, and low quality work on more advanced concepts or skills. Some schools and systems therefore describe the same outcomes at each progressive level, but allow for perhaps two levels of performance on them: ‘achieving the outcomes’ and ‘achieving the outcomes with credit’.

In principle, OBE demands that the sequences of learning area outcomes for each grade or each level should be conceptually linked to each other and to the desired endpoint of learning, forming a series of inclusive categories along a continuum rather than being discrete entities. That is, they should be structured like this:
The examples in Figure 1 and Figure 3 above reflect this principle. As Malcolm (1995) says of the Australian curriculum profiles:

An outcome at one level is continuous with, but qualitatively different from, the outcome below it: the key question is not ‘should electricity be at level 4 or level 5?’, but rather ‘how does understanding of electricity at level 5 differ from level 4?’ (p 35)

Brown also speaks of the importance of a sequences of outcomes being conceptually coherent and ‘... reflecting observed cognitive steps in learning in order that they should both be readily assessable and represent long-term learning rather than short term memory’ (1991, p 218). The 5-14 Development Programme for Scotland is structured in this way (Harlen & Malcolm 1994). In its original conceptualisation, so too were the Attainment Targets for the National Curriculum for England and Wales but, as Brown and other commentators have noted, it lost this feature in its various revisions and the levels have in many cases become unstructured lists.

There are many instances of sets of outcomes being described for target grades or at different levels but in which outcomes at one target grade or level cannot easily be read as a more advanced version of outcomes at the previous target grade or level. This is most likely to occur when the outcomes are actually what Spady calls curriculum-based objectives. There are a number of disadvantages of such unstructured sets of outcomes. Firstly, it vastly increases the number of components in the curriculum. Rather than there being, perhaps, twenty outcomes in a learning area each interpreted at, say, six progressive levels of difficulty, there could be one hundred and twenty distinct outcomes. It is this that has led to accusations that OBE atomises the curriculum. Secondly, it is difficult to map the progress of students towards the desired end outcomes and so a key feature of OBE, ‘clarity of focus’, is lost.

An important aspect of describing outcomes progressively is that it highlights what should be changing in students’ thinking and what progress means. Willis (1994) comments that this feature of the Australian curriculum profiles has proved particularly helpful for teachers.

Many primary teachers have commented, for example, that while there is considerable emphasis on patterns in the primary mathematics curriculum, they never really understood why it was there, where it was going or what constituted progress. ... By our articulating exactly what it is that is supposed to be changing, we are in a better position to ‘teach towards it’ and our students should be in a better position to ‘learn towards it’. (p 4)

We have referred to the use of the word ‘fuzzy’ to describe certain non-academic outcomes. ‘Fuzzy’ descriptions of outcomes are not restricted to the non-academic components of the curriculum, however, and some outcomes are criticised because it is difficult to judge whether they have or have not been achieved. Writing outcomes that alone are sufficient to define standards of expectation is no easy matter and groups around the world have struggled to do so. Van den Brink, describing attempts in the Netherlands to describe expected outcomes for various learning areas, comments, ‘the committee did not succeed in always defining specific qualities of the outcomes requested from the students’ (1993, p 467).
Sadler (1987) considers naive the belief that verbal descriptions could ever be refined to a point where they provide a formal definition of a level of quality or competence in a non-trivial way. The difficulty is twofold.

Firstly, verbal descriptions are always somewhat vague or 'fuzzy' because the meaning of words is not constant. Words such as 'fluent', 'appropriate', 'original' and 'articulate' are relative, highly contextualised and involve, often implicit, standards. We do not all use the same words in the same way. For example, the apparently simple and easily understood statement 'Can add whole numbers' is capable of a wide range of interpretations (Willis 1994). Also, the same words will mean different things to us in different contexts. Thus we might interpret 'recognises and interprets basic linguistic structures' or 'makes fluent use of mathematical notation' or 'identify feelings of self worth and describe self in terms of personal roles and responsibilities' (EDWA 1994, p 18, p 25, p 37) differently if we think they refer to a young child than if we think they refer to an adult, and differently in the context of a university course than in an adult basic education course.

Secondly, quality, understanding and competence are complex phenomena and it is difficult to characterise different levels of them completely in words in such a way that categorical decisions can be made about whether or not specified levels have been reached. Van den Brink referred to this problem with particular reference to the development of language attainment targets for the Netherlands. He listed a range of elements which could be considered to contribute to the complexity of a language task (e.g. sentence length, word usage, syntactic construction, style, implicit-explicit reasoning, ...) but concluded that the use of these elements to distinguish levels is only possible to a limited extent. '[I]t is impossible to state exactly which sentence length or word use students ... should be able to handle at [each level]' (p 467). Also elements (for example, constructing arguments and conclusions) that may characterise higher levels, may nevertheless be present to some extent at earlier levels. The degree of presence which is necessary to be said to have achieved an outcome to a particular level cannot be easily captured solely in words.

For this reason, the articulation of expected outcomes often involves exemplars in the form of assessment tasks of the kind students are expected to be able to perform or, more commonly, in the form of student work (written, oral, object, or action) which suggests achievement of the outcomes. In some cases, these exemplars are seen to be an integral part of the description of the outcomes, in other cases the exemplars are seen to provide advice and support in interpreting the outcomes. Whether exemplars illustrate the kinds of tasks students are expected to be able to carry out, or the kind of work they produce, they are usually annotated to indicate how they demonstrate the outcomes or performance levels. The New Standards Project in the US, for example, has 'content standards' which are narrative descriptions of expected outcomes in various subject areas, and 'performance standards' which define and provide concrete examples of the level and quality of performance students must exhibit to show achievement of those outcomes. Thus 'we have performance standards embodied in collections of student work' (O'Neil 1993b, p 21). In order to acknowledge particularly high quality work, some use student work to exemplify the standard expected for achievement of the outcomes at perhaps two or three different performance levels.
In summary

Although the word ‘outcome’ is used in a multitude of ways, increasingly proponents of OBE take the view that outcomes should provide broad descriptions of student competencies which reflect long-term learning of significance beyond school and which are super-ordinate to the details of any particular curriculum content, sequence or pedagogy.

Outcomes differ widely in their conceptualisation and structure. They also vary in their clarity and level of specificity. Marshall suggests that the field has fallen short in defining what a good outcome is. ‘Many so called outcomes are really more like goals and they aren’t assessable as such’ (quoted in O’Neil 1994, p 9). Jasa and Enger (1994), in describing the OBE efforts of a new specialist arts school for year 11 and 12 students, speak of the considerable time and energy their school spent on writing and rewriting outcomes for each curriculum area in ‘the arts and academics’. In doing so they developed the following criteria for ‘good outcomes’.

An outcome:
- provides a picture of the student behaviour that would result from learning;
- describes long-term learning;
- reflects discipline standards beyond the school setting;
- acknowledges differing learning styles and forms of intelligence;
- is understandable to students, parents, and the community;
- is appropriate developmentally;
- addresses higher order thinking skills; and
- is assessable directly or indirectly. (p 31)

Outcomes need to be drafted with enormous care and even then one cannot assume that all readers will interpret them in the same way unless considerable effort is made to develop common understanding and consensus.

OBE AND CURRICULUM

Proponents of OBE believe that the curriculum process should begin with the explicit statement of the outcomes expected of schooling and curriculum content and structures should be planned to expand students’ opportunities to achieve the outcomes. There are two related but different aspects to expanding students ‘opportunities to learn’. The first is the provision for all students of a curriculum consistent with the outcomes. The second is the provision of the time, learning opportunities and environment individual students need in order to attain the outcomes. Each of these makes quite considerable demands on teachers, individually and collectively.

Clarity of focus

Improved articulation of the full range of learning outcomes valued by the school community, common outcomes for all students, and clarity of focus of the teaching/learning process on those outcomes are the means through which OBE promises to give all students access to the outcomes. The argument is simple: students learn best what they have the opportunity to learn. And the research supports the argument (Porter, 1994).
Mammery, in discussing the well known ‘Outcome-Driven Developmental Model’ from Johnson City District in New York State, suggests that clarity of focus was one of three key factors in improving the learning outcomes for their students.

A [key] factor is how intentional we are about everything we do — intentional about what we want students to learn, about alignment of instruction, about creating standards and holding kids accountable. (in Brandt 1994a, p 25)

Precisely how this clarity of focus is realised in practice depends upon decisions made at the school level. Glatthorn (1993, p 359) describes at one extreme Spady’s preferred approach in which curriculum is based on a rather tight process of ‘designing down’ from exit outcomes to outcomes for particular topics and even lessons. His example is shown in Figure 4.

**FIGURE 4**

| Begin with the system’s general exit outcome ... | Ability to communicate. |
| From this develop a set of programme outcomes ... | Write clearly and effectively in a variety of genres, for a variety of audiences, in real communication contexts. |
| From this derive one or more outcomes for a particular English course including ... | Write a clear and effective letter to the editor of a local newspaper, supporting own position with evidence and refuting the opposition’s arguments. |
| From this and other outcomes develop a topic on ‘Persuading others’ which includes ... | Effectively refute the argument of those opposing your position on a controversial issue. |
| The topic includes one or more lessons with the outcome ... | Analyze the audience to determine the rebuttal strategies most likely to be effective. |

Many critics of OBE regard this ‘design down’ model as an inevitable aspect of OBE and raise issue with its apparent assumption that learning can systematically be broken down into component parts or hierarchies of learning and that the result of teaching ‘up’ through this process can be predicted. They see this as a distortion of the learning process and a trivialisation of knowledge (e.g. McKernan 1993).

Many supporters of OBE, however, do not consider designing down in this rather technical way to be a necessary, or even desirable, part of OBE. Classroom practice, in this view, ought to be informed by the significant outcomes one wants to achieve in the long term but, while individual lessons and topics should be purposeful, one would neither want to nor expect to be able to specify outcomes for every small part of the curriculum for each student.

Students completing a particular activity can have different learning outcomes — they can understand a particular idea or perform a skill at different levels. Further they can achieve an outcome through a variety of inputs — within and beyond the classroom, in the past and future as well as the present. (Malcolm 1995, p 35)

Indeed, Jasa and Enger (1994), in describing their specialist arts school’s adoption of OBE, describe how their school was unhappy with the results of the design down process as articulated above because they found themselves producing long lists of detailed ‘outcomes’ which covered every conceivable aspect of what they wanted children to learn and then focussing upon these micro-outcomes as ends in
themselves. Now the model they use focuses on always being mindful of the broader outcomes.

Outcomes serve as the starting point, defining in broad terms what the students' competencies should be after they have completed the course. Next, assessment is considered. What skills, behaviours, attitudes and understandings signal the mastery of an outcome? These criteria help the teacher construct the course content, which in turn leads to daily instructional strategies. (p 31)

McLean (1995) describes her early teaching of English in Australian secondary schools as being based on the 'Russian roulette model of curriculum design'. She comments, 'I am unhappily aware that even though my individual lessons may have been sound, even inspiring, my teaching program was non-existent' (p 41). The example in Figure 5 illustrates how the work requirements from an existing English course outline (left column) were made more explicit and, in her view, more helpful by focusing on the outcomes and associated descriptors from the Australian curriculum profile for English (AEC 1994). McLean argues that being more explicit about outcomes provides more structure for both teacher and student by suggesting teaching points and goals for students to aim towards.

FIGURE 5

<table>
<thead>
<tr>
<th>Current course outline</th>
<th>Revised by reference to the English profile outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 7: Students will prepare a two-minute talk</td>
<td>Year 7: Students will prepare a two-minute talk on a familiar/accessible topic. They should refer to aspects of the topic which are more complex or challenging. Ideas and information should be clearly ordered. The purpose of the talk should be clear, and students should attempt to use techniques intended to influence the audience.</td>
</tr>
<tr>
<td>Year 10: Students will prepare a three-minute talk</td>
<td>Year 10: Students will prepare a three-minute talk which explores a complex issue in some detail but with succinctness. The talk should acknowledge the existence of a range of perspectives on the issue. The student's own perspective on the issue should be put, with appropriate evidence used in justification of it. The talk should show awareness of the needs and interests of the audience and should show some skill in influencing the audience. The talk should demonstrate that the student is aware of the difference between speech and writing. (McLean 1995, p 41)</td>
</tr>
</tbody>
</table>

McLean's article was entitled 'Anything I liked, really'. In a similar vein, Mammery (in Brandt 1994a) describes 'hoping something good would happen'.

"In the past, we'd ... do open education, or flexible scheduling, or quality circles, hoping something good would happen. Outcome-based education turned the whole process around. What it says is, what do you want to happen? What outcomes do you really want to achieve? Start with your outcomes and let your outcomes drive your action. ... But also your outcomes serve as a screen. When we consider doing something, we always ask, 'If we take that action, will it get us where we want?'" (p 26-7)

While Mammery regards outcomes as serving both to inform and screen curriculum decisions, Willis (1995b) suggests they should also act as the lens through which curriculum decisions are reviewed. The process of review is essential to the success of OBE. Clarity of focus means remaining cognisant of the bigger outcomes one wants to achieve. For teachers, the question is not 'Did I teach the curriculum and did the students pass the test, participate in the activity, or complete the work sheet?', rather it is, 'Have they achieved the outcomes?'. If not, where did the problem occur?
Students’ learning of what we teach may not be successful; what we teach may not be what we intend to teach; and what we intend to teach may not have the potential to produce the intended outcomes — it may be one of those apparently good ideas that don’t produce the intended learning even when the students engage fully and successfully! Teachers will need to make judgements about whether the provided curriculum results in the intended outcomes for students. (Willis 1995b)

Thus, outcomes are a kind of lens through which teachers view their curriculum and assessments and not simply their students.

The nature of the exit outcomes identified by many OBE communities goes beyond academic learning, alluding as they do to such qualities as cooperation and collaboration, self esteem and respect for others. The achievement of such outcomes demands the creation of the school as a supportive learning community. Mammery suggests that quite explicit provisions must be made for their accomplishment even when individual students will not be assessed on them.

For example, suppose we have broad agreement ... that we want our students to take reasonable risks in the classroom. What will the teacher be doing? You need standards or indicators. Our teachers came up with lots of standard things they ought to be employing, like using wait time, asking open-ended questions. The teachers said, ‘If we want kids to take risks, we should not put them down, we should not humiliate them.’ If kids are going to take reasonable risks they won’t always get it right the first time, so we will allow them to retest ... (in Brandt 1994, p 27)

Many educators also point to the importance of a supportive classroom environment for academic outcomes. This includes justice in access to resources, space and teacher time, and freedom from negative forms of anxiety bought on by excessive competition and by harassment such as teasing, sarcasm or remarks which stereotype or denigrate students or their efforts. In many school communities, other deterrents to effective learning such as harassment, bullying and drugs in the schoolyard must also be addressed. These are not peculiar to OBE but they speak directly to the beliefs of OBE that ‘all children can learn’ and ‘schools control the conditions for their success’.

McRae (1995) gives an account of an Australian primary school which prides itself on having transformed itself over a period of four years by being ‘explicit’, a notion which closely parallels the clarity of focus central to OBE:

... explicit in what it expects from itself and from the people who work there, its staff and students, in terms of behaviour and achievement. ... A glance up and students know what the rules are, what is to be achieved at any given time, what a good finished piece of work is like. (p 35)

The following extract provides some of the flavour of the work of one teacher in the school and provides compelling support for such explicitness.

I developed a more open-ended approach to my mathematical tasks. This allowed children to use their already existing experiences, skills and expertise to solve problems and seek challenges. We highlighted our achievements and results during ‘sharing sessions’ and this promoted learning from each other. The emphasis was on risk-taking and the value of learning when risks are taken.

The following year I continued ... I found that children worked more successfully if they knew what was expected and if they practiced the skills fundamental to cooperative learning. ... The results ... enticed me to be more explicit, not only with the social and communication skills, but also with planning and introduction of content and assessment. I learned to highlight the intended outcomes of learning experiences so that children would become used to purposeful learning.
My journey ... has given me the opportunity to reflect on my teaching style, to question the purpose and outcomes of the tasks I initiate, to formulate my beliefs about children’s learning and put them into practice. (p 36)

In OBE school communities clarity of focus is considered to be as important for the learner as it is for the teacher. Although the extent to which students control how and when they demonstrate success on outcomes varies, that expected outcomes ought be made explicit to students is a recurring theme throughout the more recent literature on OBE. Rowe (1994), for example, suggests that educators must ensure that students understand the purpose and meaning of what they are doing and what is expected of them. And Mammery comments:

[W]e began to see that if we really wanted outcome-based learning, if we wanted students to be self directed, we had to get them involved in self assessment.

That’s what I think makes OBE different. For example, in virtually all of our classes, students are given opportunities to demonstrate to the teacher that they understand. The criteria are still being used — but it’s the students who are using them. (in Brandt 1994, p 26)

**Expanded opportunities to learn**

At its simplest, ‘expanded learning opportunities’ simply means that students get more than one chance to succeed (Rowe 1994). As Simmons and Resnick (1993) put it:

Instructional opportunities should be characterized in a way that remains focussed on outcomes and recognises that the number and kind of resources students require to meet the standards will vary with their needs. (p 15)

The goal is for all students to achieve important outcomes to a high level rather than some diluted or partial version of them, albeit they may not all do so by the same means or in the same time.

Time-based curriculum structures, OBE proponents argue, inevitably result in poor achievement by a significant proportion of students. Firstly, if all students are presented with the same course in a fixed time then students who develop new ideas more slowly will inevitably learn less well than students who develop new ideas more quickly. Particularly for students in the former group, thoroughness is sacrificed to coverage and there is encouragement for teachers to set low standards and students to learn to low levels (often a 50% level). Secondly, and arguably more importantly, in a time-based curriculum such students are expected to build new ideas on a progressively weaker foundation. This results in a tapering off of the rate at which they learn to the extent that many appear to learn practically nothing during the later years of their schooling. Many fail, while often those that pass do so because courses are designed which demand less and less of them. In 1988, Spady argued against time-based or calendar-based organisational decisions with their pervasive effect on curriculum and opportunities to learn.

Even courses which we commonly refer to as 'bodies of knowledge,' are actually time blocks that uniformly last nine months ... A 'course' ends when time — usually the semester — runs out ... [T]his calendar-defined model promotes teaching that emphasizes curriculum coverage over student mastery. Teachers too ... get caught up in the unproductive syndrome of 'putting in time' and 'covering material.' (Spady 1988, p 4-5)

This, as many commentators on OBE point out, is the argument which led, via Carroll, to Bloom’s model for group-based mastery learning (King and Evans 1991; Spady in Brandt 1992/3; Glatthorn 1993). Certainly some people consider mastery learning to be integral to OBE.
An essential feature of Bloom’s notion of group-based mastery learning and the closely associated individually-prescribed instruction is that material is presented in short units, with students taking formative tests in each unit, which they have to ‘master’ before proceeding to the next unit. This typically results in the atomisation of the curriculum into small chunks each of which is separately taught and assessed and the degeneration of assessment into complicated check-listing processes. The assumption is that complex learning can be broken down into simple and sequential parts and, as we suggested earlier, that the whole is simply the sum of the parts. The negative effects of such approaches on what and how students learn are well known and will not be revisited here.

Traditional forms of OBE are the most likely to adopt mastery learning approaches (Rowe 1994). Spady suggests, however, that both transformational and transitional forms of OBE each differ in a significant way from what has occurred in the name of mastery learning.

The agenda of what were called mastery learning schools was more success-based than outcome-based. The focus was on creating more success for all learners on whatever the individual teachers were teaching. Outcome-based education focuses on defining, pursuing and assuring success with the same high level culminating outcomes for all students. (Spady in Brandt 1992/3, p 3)

As we suggested earlier, Spady considers that traditional OBE has tended to focus on micro outcomes which should be called curriculum-based objectives. Students are expected to progressively demonstrate achievement of these ‘outcomes’ which are often limited to individual units or small segments of instruction. ‘This makes each unit or segment an end unto itself and its substance and processes quite specific’ (Spady 1993, p 7). This he does not regard as true OBE.

Certainly some schools which practice OBE do use the basic principles of mastery learning, but many do not. Indeed, the State of Missouri (US) in its Statewide Project for Improving Student Achievement has endorsed three types of programmes called Mastery Learning, Outcome-based Education and Cooperative Learning. Fitzpatrick (1991) suggests that Arlington Heights schools, described earlier, practice a version of mastery learning albeit with outcomes that are rather larger than were associated with past mastery learning approaches. Jasa and Enger, quoted earlier, describe their early confusion of, on the one hand, the idea of a curriculum justified in terms of outcomes and judged in terms of achievement of outcomes with, on the other hand, a curriculum segmented and taught outcome by outcome.

In the early months, teachers tended to equate outcome-based education with mastery learning, in which complex skills are broken down into smaller, discrete skills and are mastered incrementally. What can easily occur in mastery learning, however, is skill practice without a sense of context. This kind of learning without understanding can make students feel as though they are putting together a jigsaw with no picture to guide them. When we saw this trend in our classrooms, we realized that we had been confusing outcomes with curriculum. Instead of laying out the big picture — the philosophical framework — our outcomes were providing the specific, concrete objectives that constitute curriculum. (1994, p 31)

Thus, the fact that they were practising OBE enabled the teachers in this school to see that their mastery learning programme, even though designed quite carefully with the outcomes in mind, was not producing the desired effect. The integration necessary for students to achieve the broader outcomes was not occurring and so they changed their curriculum practice. According to its advocates, this is the essence of OBE.
While describing their experiences somewhat differently, Mammery indicates that Johnston City schools also went through phases of mastery learning (see, for example, Vickery 1988), including 'individualized instruction [which] didn’t work ... But then it changed, we grew up a bit' eventually arriving at OBE (Mammery in Brandt 1994, p 26).

Finally, in 1987, Slavin published a widely cited review of group-based mastery learning which showed modest increases on achievement on tests closely tied to the materials being taught but no improvement on broader based measures of learning. If this occurred in a school committed to OBE, then it would be bound to change its approach since mastery learning would not be producing the expected outcomes. Indeed, in 1994, Slavin wrote an article entitled ‘Outcome-based education is not mastery learning’ in which he stated adamantly, ‘... my review of group-based mastery learning review has nothing to do with OBE’ (p 14).

The language of mastery is widely used in the OBE literature. Their interpretation of ‘mastery’, however, is that involves deep understanding, higher-level thinking skills and long-term learning, rather than the capacity to perform in the short term on small components of the curriculum to predetermined mastery criteria (Castner, Costella and Hess 1993, Fitzpatrick 1991). A central belief of OBE is that it is better to learn less to a high level than more to low level. Students are not considered to have achieved outcomes if they simply ‘fall over the line’ perhaps by accumulating 50% on a test ‘covering’ the outcomes. Achievement of the outcomes is intended to mean that students can do whatever the outcome describes consistently and well. As Brown (1989) suggests of the Scottish mathematics profiles:

In assessing a criterion we ask teachers to check that students can apply the strategy at different times and in more than one context and advise them that students should only be judged successful if teachers believe that students would be able to apply the strategies successfully on most occasions in the type of straightforward contexts suggested in the examples. (p 125)

Expecting students to attempt to work superficially on ideas that are presently well beyond their grasp encourages both teachers and students to expect and accept low level reproductive work. Spady suggests that teachers in the High Success Network of OBE schools now insist that all students reach high performance standards on all outcomes within their reasonable grasp.

These teachers have achieved this goal by defining outcomes in higher-order terms, by setting high criterion standards for grades and credit, by giving students temporary ‘Incompletes’ rather than permanent low grades if standards are not met, and, of course, by providing additional instruction when necessary. ... Students know they have to do high quality work to receive credit, but they also know that they will be given the support they need to reach those challenging standards. (Spady 1988, p 7)

At possibly the other extreme from mastery learning, Rowe (1994) describes a process for OBE which is strongly reminiscent of ‘negotiated curriculum’ but is, in fact, informed by Deming’s notions of ‘total quality management’ which involves the notion that people ‘are good’, ‘want to do well’ and ‘improve through self assessment’ (p 10). Rowe describes a process in which students negotiate both the work they will undertake in order to achieve outcomes and how they will demonstrate that they have. ‘[S]tudents can be taught to ... understand the learning process in which they are involved’ (p 28), he suggests.
Roberts, Tonkin and Hancock (1994) describe a South Australian teacher’s use of the outcomes from *English — A Curriculum Profile for Australian Schools,* with children in a year level which she had not previously taught, in the following way:

Working from the broad outcomes ... she established her own criteria which reflected her program expectations and the skills she would expect them to be developing. ...

Using free choice and journal writing contexts, the teacher collected samples of children's draft pieces to ascertain what achievements they had made in writing. She found that, as a whole, her class were not working at the level she had anticipated. Her program was then organised around the skills and knowledge that most of the children were ready to learn. For those who had already developed these skills, she planned to set activities to extend them.

... The teacher recognised that the profile supported her strategies for helping students become independent learners. The children were encouraged to set their own goals and proof read their writing. A buddy system was established ...

As the teacher identified gaps in learning, she demonstrated the particular skills and knowledge needed to assist the children in their future attempts. Because there was a range of abilities identified, she made extensive use of group activities to teach different skills. The membership of these groups varied depending on the task and the needs of the children. Some groups were mixed ability and others were grouped according to need. (p 40)

This teacher's decisions were guided by her understanding of the long-term outcomes and where her students presently were with respect to those outcomes, rather than by their age or year level. Having a clear idea of the outcome(s) she wanted to result from the learning activities she provided, and what to look for as evidence of progress, enabled her to adjust curriculum content and pedagogy to provide increased opportunities for her students to learn.

OBE does not imply any particular pedagogical practices but the dual demand for clarity of focus and expanded opportunities to learn mean that teachers need a broad teaching repertoire. Vickery (1988) suggests of the OBE programme at Johnston City:

The instructional process does not prescribe or preclude any particular teaching strategy. Rather it is the teachers’ professional responsibility to select from a wide range of instructional practices those that accommodate the learning styles of different students: lecture, discussion and interaction, reflecting on and analyzing experience, integrating reflective analysis into concepts, practising clearly defined concepts and skills, adding something of oneself to that which is being studied, and so on. (p 54)

While a progression of learning should be evident in the learning experiences teachers provide, totally different activities are not necessarily required for students who have reached different stages in their progress (Willis 1994; Malcolm 1995). Often it will be in the questions teachers ask, the extensions they provide and what students do with tasks that differences between students will be accommodated. Sometimes this will be planned in advance based on what teachers have already observed about their students. At other times, observing students as they engage in learning experiences will lead teachers and students to adjust things ‘in action’. At still other times, teachers will decide to provide quite different learning experiences for students in the same class.

**Enhancing the capacity of schools and teachers**

OBE places the locus of control for curriculum in schools. Schools are regarded as professional communities in which teachers collectively take responsibility for making curriculum decisions consistent with desired outcomes. In this view, the teacher’s responsibility is to focus on actual learning outcomes rather than on covering a provided curriculum (Preston 1993, 1994). The view of teaching as a professional,
rather than a technical activity, is central to OBE and, apart from the nature of the outcomes themselves, possibly the most significant thing in distinguishing it from common versions of mastery learning. According to Preston (1993):

- 'Professional judgement' is the central notion in understanding how teachers can best teach all students in all circumstances ... (p 7)

Professionalism has one essential feature: practice requires the exercise of complex high level judgements ... [which] involve various mixes of specialised knowledge: high level cognitive skills; sensitive and sophisticated personal skills; broad and relevant background and tacit knowledge. (p 8)

The exercise of high level professional judgements — about what to teach, to whom, when and how — is central in teaching. It must be exercised at the level of collaborative school-based planning of the school's curriculum and assessment regime, at the level of individual teacher planning, and in the moment by moment progression of classroom activities. Darling-Hammond argues that rather than seeking to make schooling more efficient by standardising practice, school reform efforts must emphasise building the capacity of schools and teachers:

... to ensure that all students learn to think critically, to invent, to produce, and to solve problems. Because this goal requires responding to students' non-standard needs, it far exceeds what teacher-proof curricula or administrator-proof management could ever accomplish. (1993, p 754)

Accommodating the needs of students requires flexibility, responsiveness and a great deal of skill according to Darling-Hammond (1994a). As she states:

... if students construct knowledge in highly contextualized ways based on their diverse, culturally grounded experiences, teaching must be highly adaptive ... (p 481)

A curriculum that enables all students to learn must allow for different starting points and pathways to learning so that students are not left out or left behind; allow for different strategies and approaches that meet varying learning styles and needs; allow for the reality that different areas of study are differentially relevant (and will be differently pursued) in various communities because of geographic, economic, topological, and cultural considerations; and allow for the prospect that students' demonstration of their knowledge will be grounded in these contextual differences. (p 489)

This is hardly likely to be achieved without supporting the professionalism of teachers and without systematic approaches to assisting them enhance their professional judgement. Speaking of school restructuring generally, rather than OBE in particular, Darling-Hammond nevertheless captures the essence of 'increased opportunities to learn':

The foundation of genuine accountability — one of the most frequently used words in the school reform lexicon — is the capacity of individual schools: 1) to organize themselves to prevent students from falling through the cracks, 2) to create means for continual collegial inquiry (in which hard questions are posed regarding what needs to change in order for individuals to succeed), and 3) to use authority responsibly to make the changes necessary. (1993, p 760)

Clearly, the flexibility and responsiveness needed to increase all students' opportunity to learn is more supported by some forms of school organisation than others. For example, secondary schools are more likely than primary schools to have fixed length teaching periods, predetermined course content, strong divisions between subject areas and teachers who work with a large number of students each day. Such structures can inhibit efforts to respond to students' needs to the extent required. OBE, however, is based on the belief that curriculum structures should be designed to serve the desired
outcomes of education rather than the outcomes being tailored to fit existing structures. Grundy (1994) suggests the question for the school community is as follows:

[To what extent does this learning environment provide ample and varied opportunities for students both to engage in active learning and to demonstrate in meaningful ways the outcomes of that learning?] (p 12)

And for Vickery (1988):

Every aspect of school life is subject to change if that change increases the probability of achieving the district's desired outcomes. (p 54)

While the extent varies, many OBE schools have undertaken restructuring in directions they consider to better accommodate student learning (Fitzpatrick 1991; Haack 1994; Harris in Rowe 1994; Waters, Burger & Burger 1995). Nevertheless, as O'Neil (1994) points out about the US, and as is certainly true of Australia, relatively few systems or schools have yet restructured their curriculum, assessment and reporting practices to reflect higher order outcomes. More often, they either write outcomes based on their existing courses or they write 'ambitious and far reaching' (p 8) new outcomes while changing their thinking and their practices very little. O'Neil quotes Champlin, Director of the National Center for Outcomes-Based Education in the US, as suggesting that this is because insufficient attention has been paid to building schools' capacity to help all students achieve the outcomes. As much attention must be placed on building schools' capacities to undertake outcome-based systems as on mechanisms for holding schools accountable for achieving those outcomes, Champlin argues.

Outcome-based policy involves articulating expected outcomes and ensuring that structures exist for monitoring achievement in terms of them. As Mammery (in Brandt 1994a) points out, this does not necessarily result in gains in student achievement. Outcome-based education is a process and not a product or package that can be placed in schools. The process makes enormous demands on schools and teachers and it needs support. Vickery (1988), speaking of the Johnston City District, suggests that providing this support has been a major component in their success. School Board policy requires that decisions are based on the best available research and that ongoing professional development is available to, and expected of, teachers: '[L]oaded with new information on theory and research [teachers] are given risk-free opportunities to develop programs consistent with district goals' (p 55). Darling-Hammond remarks, 'Reforms that rely on the transformative power of individuals to rethink their practice and to redesign their institutions can be accomplished only by investing in individual and organizational learning, in the human capital of the educational enterprise' (1993, p 754).

Finally, there is the matter of the locus of responsibility. The Australian Teachers Union suggests that, as professionals, teachers must take responsibility for that which is under their control (ATU 1991). Furthermore, OBE is founded on the belief that schools control the conditions for success. Clearly, however, individual schools and teachers, collectively or individually, cannot be held completely responsible for the necessary changes.

On the one hand, education systems and the community generally must accept responsibility for ensuring the necessary resources, structures and supports are available for schools to make any changes needed (Porter 1994). As Darling-Hammond suggests, 'those who attempt to use standards in the quest for accountability and
improvement can themselves be held accountable for making sound decisions' (1994a, p 502). Simmons and Resnick also place responsibility squarely with education systems. 'In our view [states and school districts] have an obligation not only to set standards, but also to see to it that every learner receives the support he or she needs to have a fair shot at meeting them' (1993, p 15).

On the other hand, students too must take responsibility for their own learning. Indeed, most OBE school communities consider being a self-directed learner a significant outcome. However, the significance of this point is that schools and teachers cannot be held accountable for that which is truly beyond their control. Schools must do the best with what they are given, and students must do the best with the opportunities they are provided. ... [S]tudent achievement is a joint responsibility shared by student and school. Holding students and schools simultaneously accountable ensures that neither will be forced to take sole responsibility for that which is only partly under their control. (Porter 1994, p 428, 429)

ASSESSMENT OF STUDENT OUTCOMES

One of the defining characteristics of OBE is that judgements about the success of the system, the school and the student should be based on the student outcomes achieved. This may seem obvious, but it is not always what we do. The 'theory' of curriculum development is that it is goal driven and one would expect, therefore, that assessment and accountability would also be goal driven. Even in systems with elaborate programmes for monitoring student achievement, however, the link between professed goals and assessments is often rather tenuous. Willis (1995) suggests that typical classroom based assessments (that is, those developed by the classroom teacher for her or his own class) assess the 'enacted curriculum' (see Figure 6). The intention is to find out how well students have learned what was taught and, indeed, it would probably be considered unfair to assess anything else. Assessments developed externally to particular classrooms (they may be school-based or developed externally to the school) are more likely to assess the 'intended curriculum' by the school or system although often only easily tested parts of the curriculum are addressed. Rarely, if ever, is the achievement of goals directly assessed.

FIGURE 6

Typical classroom assessments
Goals —> intended curriculum —> enacted curriculum —> learned curriculum —> assessment

School wide or external assessments
Goals —> intended curriculum —> enacted curriculum —> learned curriculum —> assessment

Outcomes-based assessment
Outcomes —> intended curriculum —> enacted curriculum —> learned curriculum —> assessment

In an outcome-based approach, however, the accountability question to be asked is not how well did students learn what was taught (the enacted curriculum) or what was supposed to be taught (the intended curriculum). As suggested earlier, the question is,
'have they achieved the outcomes?' and, if they have not, where did the problem occur? This question lies at the heart of a student outcome-based system. How well we are able to answer it — whether at the level of the individual, class, school or system — depends upon the quality of the information we have on students' achievement of the outcomes. It is now generally understood that the quality of assessment practices is integral to determining the success of OBE.

Assessment situations and tasks

Given the nature of many outcomes, whether interdisciplinary or within subject areas, and the role that assessment is considered to play in improving teaching and learning, it is clear that conventional paper-and-pencil tests will only rarely be sufficient to assess students' achievement of outcomes. Wiggins (1991) has suggested that many OBE programmes have been plagued by poor quality assessment tasks and exemplars. The challenge is to 'develop performance assessments that validly portray the quality of students' accomplishments' (Baker 1994, p 61).

In the past decade or so, there has been considerable work undertaken to develop the needed alternatives to traditional assessments. Alternative assessments are variously described as 'performance assessment', 'authentic assessment' and 'direct assessment', amongst others. Some use these terms interchangeably, while for others there are differences in nuance. The terms at least have in common that they refer to changes in assessment tasks, and the criteria by which student work is judged, in directions more consistent with the actual goals or expected outcomes of the provided curriculum. Generally, the intention is to design assessments which measure students' capacity to integrate and apply their learning to complex and higher order tasks — both practical and theoretical. Thus, they seek to go beyond the use of timed written tests as the basis for making judgements of what students have learned, and hence for reporting students' achievement, although they may also seek to enhance written tests.

Resnick (1994) has suggested that what is now being called 'performance assessment' differs from more traditional means for testing students in two fundamental ways. The first concerns the assumptions about the nature of human knowledge and competence. We will not elaborate this distinction here except to say that performance assessment is more sympathetic with notions that competence is not independent of context and, unlike traditional testing, does not regard the effects of context as 'noise' or 'error', indeed, just the opposite. The second difference is that performance assessments are intended to function as integral elements of the educational process rather than external monitors of it.

The new performance assessments are meant to set standards to which students and teachers can direct their efforts. They must maintain their validity even when they are 'taught to.' And they must be capable of exemplifying standards, setting clear targets for instruction and learning efforts. (p 512)

This view of the role of assessment resonates strongly with OBE, as does the following extract from a list of the characteristics of 'authentic' assessment.

Authentic tests of intellectual performance involve the following factors.

- Engaging and worthy problems of importance in which students must use knowledge ...
- Faithful representations of the contexts encountered in a field of study or in the real life 'tests' of adult life. The formal options, constraints, and access to resources are apt rather than arbitrary.
- Nonroutine and multistage tasks — real problems. ...
- Tasks that require the students to produce a quality product and/or performance.
- Transparent or demystified criteria or standards. The test allows for thorough preparation as well as accurate self assessment and self-adjustment by the student ... (Wiggins 1993, p 206-7)
Similarly, 'direct' assessment is described by Frederiksen and Collins (1989) as attempting to 'evaluate a cognitive skill as it is expressed in the performance of extended tasks [since] any indirectness in the measure will lead to a misdirection of the learning effort by test takers to the degree it matters to them to do well on the test' (p 28) and as being transparent in as much as the criteria for judgement is clear to learners so that they can evaluate and improve their own work.

In a number of education systems and schools in the United States graduation is no longer dependent upon the number of courses taken and credits gained, but rather upon the demonstrated achievement of the exit outcomes (e.g. Cushman 1993). This often involves the direct assessment of exit outcomes. For example, students might be expected to:

Design and carry out a project on a major issue or problem that uses data to heighten community awareness and propose feasible ways to address it by initiating new laws. (Spady 1994, p 20)

One means of demonstration of exit outcomes, most associated with the Coalition of Essential Schools, has become known as graduation by exhibition in which students are expected to provide a comprehensive demonstration of their skills, competence or knowledge, often but not universally interdisciplinary. It will typically require students to produce a demonstration or live performance in class or before other audiences with teachers or trained judges assessing performance according to standards or criteria known to all participants ahead of time (Feuer & Fulton 1993). It may take the form of a debate, play, lecture, display, video, art work or competition accompanied by a portfolio which documents the process of the inquiry or project (note cards, interview transcripts, drafts, a finished paper, and so on) (Eibell 1993; McDonald 1993). Sizer and Roger (1993) argue that exhibitions provide for the widespread maintenance of standards because they are public. Indeed, they suggest the use of technology to communicate standards between schools: 'Modern computers and televideo technology are two promising ways to bring a wide array of exemplary student work into every school and every public library' (p 26).

There is a growing literature which addresses alternative assessment in the context of student outcomes (e.g. Castner, Costella & Hess 1993; Cushman 1992; Cushman 1993; Morony & Olssen 1994; Pollock 1992; Redding 1992; Shepard 1995; Wiggins 1989). Alternative assessment is not restricted to exit outcomes or to interdisciplinary work. Furthermore, they need not all be large or extended in scope — some may take no more than a few minutes. What they share is that they try to reflect with integrity the significant student outcomes which the school or system has identified.

The quality of such tasks is variable, however, and in many cases the 'authenticity' is quite spurious. Tasks which purport to be 'practical' may be quite the opposite. It turns out to be quite difficult to write tasks which 'break set' with traditional ways of assessing students. Castner, Costella & Hess (1993) remark of their school district's effort to develop appropriate assessments for their OBE programme:

However rosy a picture we paint we admit that writing these first assessment tasks was a struggle. Teachers worked diligently to write the assessments only to find that they were uninteresting to students or they did not test what we wanted them to test. (p 47)

Nevertheless, the 200 teachers who engaged in the first series of workshops to develop assessment ideas for the whole district were enriched by the process which helped to provide them with the 'clarity of focus' central to OBE.
As teachers created assessment tasks, their efforts touched other curriculum areas and grade levels. What developed was something unexpected and exciting — a common educational focus. (p 47)

Many such tasks are increasingly used as a part of ongoing classroom learning activities. The issue for OBE is how they become part of the assessment regime of the school and system in a way that has the potential to enhance classroom practice and also has credibility beyond particular classrooms. If more authentic forms of assessment are to be pursued then rigorous standards and thoughtful rules of evidence have to be employed for their use (Wolf, Bixby, Glenn & Gardner, 1991). Thus, even when tasks are developed which are rich and engaging, the question of how they should be assessed and how comparability of assessment can be assured must be addressed. What the district described above did was to collect a large number of work samples based on the assessment tasks they had developed. From this collection, papers (called anchor papers) were chosen, again collaboratively, to represent various levels of achievement on those tasks and descriptive statements (called rubrics) were written to explain the features of work at different levels. These in turn became models for judging other student work.

The literature includes many examples of groups of teachers working together to develop assessment tasks and means for judging student work (Castner, Costella & Hess 1993; Jasa & Enger 1994; Marzano 1994; Redding 1992; Shepard 1995; Sperling 1994). Many commentators suggest that this collaborative work within and between schools is essential for the improvement of teaching and learning. For example, from the US:

Standards and assessments are developed where people can look each other in the eye and argue about what's good enough and how they can collectively know that it's occurring. (Darling-Hammond 1994a, p 505-6)

and from Australia:

[I]ssues such as what will count as evidence of achievement of any educational outcome need to be addressed and debated widely within the school. Furthermore, the process of making judgements needs to be understood as a collaborative practice, not an individual one. (Grundy 1994, p 14)

Models for judging students' achievements

Traditionally, the judgement of student achievement has been relative. This norm-referenced assessment places more emphasis on the comparison of students' achievements than on the nature of the achievements themselves. Obvious examples include reading age and tertiary admission scores but, indeed, grades are distributed 'on the curve' in many educational settings. Such norm-referenced assessment practices have the disadvantages that they do not indicate what or even how much students have learned and they do not provide an adequate means of monitoring either individual progress over time or long term trends in the achievement of groups.

For several decades, criterion-referenced assessment has been the recognised alternative to norm-referenced assessment. Although there are a range of practices associated with this terminology, they share a concern that assessments should reflect the actual achievements of students rather than their rank relative to others.
Assessing students against criteria has the advantage that it can provide detailed information about the nature and range of capabilities of an individual student. As it is typically practiced, however, criterion-referenced assessment involves aggregation of data and detailed information is lost in the process. Indeed, Masters (1992) has suggested that criterion-referenced assessment was ‘seized upon (and in a sense, hijacked) by the behaviourists of the 1960s’ (p 67) who converted the notion of criteria for defining increasing levels of competence in a particular sphere into ‘the concept of a checklist of precisely defined behavioural objectives’ (p 67) about which decisions can be made with little ambiguity. It has come to rely on the detailed specification of objectives and domains of knowledge, tests of these objectives based on multiple-choice or short answer items which are ‘objectively’ marked and calibrated in some way, and a combination of measurement and numerical cut-offs for making grading decisions. It may be based on objective tests or checklists of objectives. With objective tests, answers are right or wrong; with checklists, the objectives are achieved or not achieved. The measure of a student’s achievement is ‘derived, essentially and naturally, from counting the items correct’ (Sadler 1987, p 193) albeit items may be weighted differently. This produces a score and scores are equated directly with levels of attainment. Which answers are to be regarded as correct is predetermined and no interpretation of the specific answers of an individual student or of the overall pattern of her or his answers is made in order to determine level of achievement. The number of answers correct is regarded as all the information that is needed to judge students’ achievement and the possibility that two students with the same overall score might be assessed differently is not countenanced.

Sadler (1987) comments of criterion-referenced assessment:

[I]t relies on relatively sophisticated statistical and technological solutions to the problem of grading students according to their actual achievements. Because of the complexity of the procedures, much of the responsibility for grading is removed from the teaching profession as a whole ... [thus] the processes leading up to grading and the interpretations of the grades themselves, become less accessible to the student, the teacher and the private citizen. (p 192)

It is not always the case that the whole assessment process is removed from the classroom teacher. Tests or checklists and rules for determining levels of achievement may be provided, with teachers carrying out the administration and scoring. In the quest for reliability, however, every effort is made to reduce the need for professional judgement by turning assessment into a technical task. Students’ individual answers are available to both the student and teacher and so it is possible for school administered tests to be used diagnostically so long as the items are helpful in this regard. Criterion-referenced assessment does not, however, of itself provide support for such diagnostic work and it neither values nor directly serves to enhance teachers’ professional judgements. Indeed, it sends a strong message that ‘scores’ are to be valued more than teachers’ judgements even though, as Brown (1991) has demonstrated in reference to the Attainment Targets for the National Curriculum of England and Wales, the process of aggregation can result in bizarre final assessments.

A second criticism of common forms of criterion-referenced assessment is the low validity of the actual assessment tasks used.

Criterion-referenced assessment which relies heavily on objective testing is inappropriate for many subjects and parts of subjects where the quality of students’ work can best be assessed only by direct qualitative human judgement. A preoccupation with objective testing encourages the substitution of surrogate or indirect measures for the real thing. It is an obvious logical fact that, however highly correlated indirect measures may be with qualitative judgements, the two are fundamentally distinct. (Sadler 1987, p 192)
Many educators argue that the technical demand for standardisation of questions and answers is inappropriate for most of the curriculum. Indeed, probably the most strident criticism has come from within mathematics, the area of the curriculum which many, who otherwise call for the reform of assessment practices, continue to regard as suited to standardised testing (see, for example, Sizer & Rogers 1993). Critics argue that the 'decomposition of important knowledge and skill into disconnected bits and the decontextualization from meaningful situations ... virtually ensure their inability to validly assess complex capabilities' (Resnick 1994, p 523); learning is complex, and diverse means are needed to assess it fully and fairly (Guskey 1994, p 51). The argument can be summarised quite simply: forms of testing and scoring which are 'designed to minimize the ambiguity of tasks and answers ... simply do not tell us what we need to know' (Wiggins 1993, p 202).

With OBE, any assessments used to judge student achievement become critically important whether they are developed internally or externally to the school. This is for four reasons. Firstly, students will focus their attention on what assessment tasks tell them is valued by schools, and so too will teachers (Freedman 1995). There is considerable evidence to support the contention that 'whatever kind of test matters in the system has a heavy influence on classroom practice' (Simmons & Resnick 1993, p 17). If such tests encourage teaching and learning in directions contrary to the desired outcomes then the fundamental principle of 'clarity of focus' is breached. Indeed, recently a validity construct has emerged which addresses exactly this issue. Called consequential validity, it refers to the extent to which an assessment tools produces positive consequences for the teaching and learning process and for students who may experience different educational benefits as a result of the tests (Darling-Hammond 1994). Secondly, assessment can only enhance the achievement of particular outcomes if teachers and students have good quality information about the effectiveness of their teaching and learning of those outcomes. Thirdly, if accountability is to be in terms of the outcomes then fairness demands that the assessments that matter reflect, with integrity, the outcomes that matter. Fourthly, OBE seeks to make educational standards visible, and hence accessible, to teachers, students, parents and the broader community. For each of these reasons, neither norm-referencing nor more common forms of criterion-referencing provide 'judgement' models fully consistent with OBE.

Criticisms of criterion-referenced assessment are not directed at the use of criteria in assessment. It is the implementation of criterion-referencing as involving checklists of skills, knowledge or competencies and 'objective testing', and the mechanisms of quantification and aggregation which are the subject of criticism. Indeed, OBE relies on applying clear and common criteria to the judgement of students' achievements but in the sense described by Eisner (1993):

> The application of criteria requires the exercise of judgment, the ability to provide reasons for the judgment, and an understanding of which criteria are relevant to the genre of the work. Applying criteria is a ... complicated and intellectual enterprise ... (p 23)

Sadler describes an alternative to both norm- and criterion-referenced assessment which is consistent with this view of the use of criteria. It shares the commitment of criterion-referenced assessment to linking students' grades or levels directly to their achievements but does not depend upon the assignment of levels and grades through the combination of sub-scores into total scores. His suggestion is a form of standard-referenced assessment.
In essence, sets of standards are based on the notion of a continuum of increasing knowledge, quality or competence with the 'standards' intended to provide stable reference points or frameworks against which a particular student's quality of performance or level of attainment or competence can be judged directly without reference to other students or to overall scores. Thus, the set of standards provide benchmarks along the way to a desired outcome or exemplary 'standard', whether it be of knowledge, quality or competence. One of the characteristics of fixed sets of standards is that they enable long term changes in the achievements of groups of students to be seen. Furthermore, they can guide behaviour by providing learners not only with feedback about the level of their current achievements but also with knowledge of the levels aspired to or expected of them.

Wiggins (1991) argues,

> A standard offers an objective ideal, serving as a worthy and tangible goal for all — even if at this point in time, for whatever reason, some cannot (yet!) reach it. ... Our task in assessment is to similarly provide students with a record of the longitudinal progress they make in emulating a standard. ... We might set targets whereby students who are far from meeting standards would have some guideposts along the way to judge the quality of their progress. (p 21)

Notwithstanding the slightly different usage of the term 'standard', Sadler and Wiggins are describing essentially the same model of assessment. Wiggins says,

> Standards are thus not abstract aims, wishful thinking, or the effect of arcane psychometric tricks. They are specific and guiding pictures of worthy goals. (p 20)

while Sadler describes the development of sets of standards in the following way:

> In principle, standards should be derived partly from what is known to have happened so far (and therefore what is known to be feasible), and partly from notions of what is desirable. ... Standards, therefore, should and often do contain an element that is normative in the philosophical sense ... but once standards are defined the norms become irrelevant. (p 197)

It is essentially this model that underpins the development of curriculum profiles in both Scotland and Australia.

Standards may be set by numerical cut-offs. Sadler suggests that numerical cut-offs are attractive because they appear to be 'sharp' standards. Sharp standards are characterised by precise boundaries such that it is possible to tell 'unequivocally and independently of the evaluative context' whether or not a standard has been reached. In some cases numerical cut-offs have a direct and intrinsic meaning such as when typing speeds, say of 40 wpm, 55 wpm and 70 wpm are defined as cut-offs for different levels of typing. More commonly, numerical cut-offs may be used for determining grades or levels where the numbers are based on results on short answer or multiple choice (so called 'objective') tests of some kind. The standards appear sharp because they are unambiguous but the scores themselves do not have a 'natural' meaning. In fact, criterion-referenced assessment typically uses standards of this kind. Numerical cut-offs are also often used to signify grades, for example, 10 is the cut-off for a C grade on an essay, 14 for a B grade and 17 for an A grade. Here the scores are not determined by application of unambiguous criteria or well defined rules. Indeed, an essay is often judged qualitatively in such terms as 'borderline A' or 'high A' in order to decide what score to give it. This qualitative judgment may be quite valid and based on well developed standards but the 'sharpness' of the numerical cut-off is spurious.

For complex phenomena, 'standards' are often based on tacit knowledge, that is, judgements rely on experts' notions of quality as is the case for wine tasting. Reliance on tacit knowledge is quite prevalent in education, for example, for marking student
essays or artworks. When experts are known to agree amongst themselves, it is concluded that 'standards' exist. The standards are passed on by joint participation in assessment processes. The expert assessor has come to know what the standards are and how to apply them but they remain implicit and are not available to the non-expert. Criticisms of standards based solely on tacit knowledge include that they rely on the ability of teachers to hold standards constant in their heads which means that they are frequently unreliable and may appear to reflect arbitrary value judgements and matters of taste. Also, such standards are not externalised and, therefore, are not directly accessible by students or for that matter by teachers who have not had access to the level of induction needed to internalise the standard.

A third method of promulgating standards involves the use of exemplars.

Exemplars are key examples chosen so as to be typical of designated levels of quality or competence. The exemplars are not the standards themselves, but are indicative of them; they specify standards implicitly. (Sadler 1987, p 200)

Exemplars are of considerable practical worth because they provide concrete referents for standards. One of the problems of standards set solely through exemplars, according to Sadler, is that, 'someone who is given a set of exemplars faces the task of trying to determine by inference what the composition rule that “explains” the standards must be' (p 200). Where multiple criteria are involved, as is typically the case in education, a large number of exemplars is necessary to reduce the uncertainties of trial-and-error induction to an acceptable level. Sadler also suggests that when standards are set solely through exemplars, they may be interpreted in a literal way as models to be copied and the acceptable limits to variation not explored. Furthermore, because they are concrete and produced at a fixed point in time, they reflect fashion, cultural practices and current technology. Hence, they gradually go out of date and their usefulness decreases unless they are revised periodically.

A fourth method of promulgating standards is through verbal descriptions. The standard consists of a statement which describes the properties that characterise that level of quality or competence.

Verbal descriptions arise out of an attempt to objectify standards, to make them publicly accessible, and to free them from dependence on the private judgments of evaluators and on exemplars. ... Developing such standards ... contains a phase in which characteristics (including criteria, and degrees or levels on those criteria) are abstracted from real or hypothetical assessments, and then codified. (Sadler 1987, p 201-2)

As we indicated earlier in this paper, Sadler suggests that the belief underpinning this form of standard setting is that, given adequate powers of articulation, verbal descriptions could be refined to a point where they provide a formal definition of a level of quality or competence which would transcend particular tests and exemplars and which would enable long term trends to be identified. He considers this to be unattainable in practice because, unlike sharp standards, verbal descriptions are always somewhat vague or fuzzy. Linguistic terms such as 'highly original', 'competent', 'articulate' and 'clearly stated' depend for their interpretation upon the context. We need to be more explicit about 'how clearly' but this inevitably remains fuzzy because we do not all use words in precisely the same way. With verbal descriptions the boundaries between successive levels are not 'precise and crisp' (p 203).

Since verbal description cannot be more precise than the language will allow, fuzzy standards cannot be transformed into sharp standards simply by using more detailed or elaborate language. Nevertheless, we should not discard the use of verbal descriptors since sharp standards are not necessarily better. Criterion-referenced
assessment represents an attempt to produce such sharp standards and, as we suggested earlier, these sharp standards require that we use proxy tests or tasks with sharp cut-offs for indirect measurement of such things as reading, problem solving and product making. Where multiple criteria must be applied, the very lack of precision inherent in a verbal description enables mental compensations and trade-offs to be made in judging work. According to Sadler:

Whereas in both norm-referenced or criterion-referenced assessment it is the total score which is used either for ranking or reporting a particular level of achievement, in standard-referenced assessment it is the configuration or pattern of performance taken over a series of testing episodes and assessment tasks, which takes precedence. (p 193)

Stated simply, the assessor's grading task is to find the class or grade description which best fits the object in question, in the knowledge that no description is likely to fit perfectly. (p 206)

A strength of standard-referenced assessment is that it does not demand standardisation of student work, 'standards not standardization' pleads Wiggins (1991), 'standards are met by rigorous evaluation of necessarily varied students' products and performances against those standards' (p 19).

Sadler argues that standards should be based on a combination of exemplars and verbal descriptors.

Exemplars [alone] are not sufficient because of the large numbers which would ... be necessary. ... [Also] because of unavoidable variations in the interpretation of terms, verbal statements need concrete referents. ... Neither is sufficient on its own. The two are, however, complementary and constitute a promising basis for a standard-referenced assessment system. (p 206-7)

Other commentators have also argued for such a combination. Fredericksen and Collins (1989) use somewhat different terminology from Sadler but, in effect, suggest that the assessment of outcomes should include four components:

- sets of tasks which are representative of the range of the knowledge, skills and strategies expected of the student;
- verbal descriptions of the characteristics of each aspect of the activity;
- an extensive library of exemplars which represents different ways to achieve the standards on the tasks and explanations of how the work was judged; and
- a training system for improving assessors' judgements.

As we suggested earlier, in the United States there is a widespread movement towards the development of content standards and performance standards, which have roles not unlike Sadler's verbal statements and exemplars. Thus content standards provide narrative descriptions of desired outcomes while performance standards provide concrete examples of the level and quality of work students must show to be considered to have mastered the outcome (O'Neil 1993a; Simmons & Resnick, 1993). Similarly, the Toronto Board of Education in Ontario, Canada, has developed a standard-based assessment system based on verbal statements and 'benchmark libraries' of exemplars of work at various levels (Rutledge 1993).

**Professional judgement**

Sadler (1987) proposes a school-based assessment system referenced to standards which are based on a combination of verbal statements and exemplars.

This approach is compatible with the judgmental processes teachers use, naturally and without apology, in teaching. It may be applied to a wide variety of school subjects and tasks, it may be used to harness and regulate the professional qualitative judgments of teachers for
making sound grading decisions, and it helps to make educational standards accessible to the
students. (p 206-7)

There are two aspects to this argument for school-based standard-referencing. The first
is that if standard-referenced assessment is intended then teachers are in the best
position to make the kinds of judgements about student's learning which are needed.
The second is that standards-referenced assessment has greatest potential to directly
enhance teachers' professional judgement and students' learning when the standards
are applied in schools.

The first argument recognises that teachers have access to information about students
that can hardly be available in the context of external 'one-off' assessments (Morony &
Olssen 1994). If we want to assess students' achievement on significant outcomes of
learning then multiple sources of information will be needed and a great deal of this
information can be gathered incidentally to ongoing learning activities. For example,
speaking of an outcome in the Australian mathematics profile which stated that
students should 'appreciate that all measurements involve error and estimate the
extent of error in direct and indirect measures', Morony and Olssen comment:

To be able to report that a student has achieved an outcome, a teacher will need to employ a
range of assessment strategies in order to obtain the necessary information. A range of work
samples or responses to direct written questions may well provide evidence of proficiency with
techniques for managing errors, but other methods such as observation or interview will be
needed to ensure that the student has the necessary appreciation of errors. (p 394)

Furthermore, as they point out, it would be unlikely that a single instance of
performance would constitute sufficient evidence of achievement of the outcome.
When what students know, understand and can do is clear, there is no need to
accumulate additional data. Often, however, the conclusion will be reached that there
is insufficient evidence for a decision to be made. In this case, teachers have the option
of collecting more evidence (Bailey 1993). Indeed, such processes offer the student 'the
right of appeal'. Bailey suggests that one of the best features of a judgemental model of
assessment is that we can call for more evidence in a doubtful case, we don’t have to
rely on making inferences from a fixed and predetermined set of assessment tasks.
Finally, teacher assessment offers the possibility of assessment which is responsive to
differences of culture and circumstance, although it certainly provides no guarantees
of such (Porter 1994).

An 'evidence-based judgemental model' of assessment relies on the 'professional
ability of competent teachers to make sound qualitative judgements of the kind they
make constantly in teaching' (Sadler 1987, p 193). Sadler remarks that, while there is
considerable evidence of the fallibility of teachers' judgements, such research typically
refers to teachers making intuitive judgements with little external control or support
by way of standards, rules or guidelines on the processes involved. School based
standard-referenced assessment is premised on the view that teachers' judgements can
be dependable provided that clear standards are developed and that teachers are
assisted to develop the relevant conceptual tools and provided with practical training.
Given the explicit specification of standards and a process for developing common
standards, teachers' qualitative judgements can produce acceptable degrees of
comparability within and amongst schools (Griffin 1994; Marzano 1994; Resnick 1994).

A process which is increasingly promoted as supporting comparability of judgements
within and between schools is the use of student portfolios. Students may be expected
to compile a portfolio of 'best' work over an extended period of time and submit the
portfolio as part of the assessment process. Typically a portfolio would be expected to
include certain types of work. For example, in Vermont, children in 4th and 8th grade produce portfolios of work in writing and mathematics (Abruscato 1993). The contents of the writing portfolio are as follows:

The writing portfolio comprises:
1. a table of contents;
2. a ‘best piece’;
3. a letter;
4. a poem, short story, play, or personal narrative;
5. a personal response to a cultural, media, or sports exhibit or event or to a book, current issue, math problem or scientific phenomenon;
6. one prose piece from any curriculum area other than English or language (for fourth graders) and three prose pieces from any curriculum area other than English or language (for eighth graders);
7. the piece produced in response to the uniform writing assessment, as well as related outlines, drafts, etc.

Teachers within a school or teachers from across a school district might meet to compare portfolios of work and discuss how to judge them, in the process becoming more skilled in making judgements. In some cases, random samples of portfolios are collected by a system in order to monitor comparability of judgements.

The use of portfolios appears to also have considerable power for professional development which is the second argument in favour of the form of standard-referenced assessment recommended by Sadler. Evans (1993) describes how the third grade teachers in one school ‘met in a tiny storage room — portfolios in hand — to look more closely at the third grade language program’ (p 71). They were surprised at how closely the portfolios reflected their students, how much they could tell about students they did not teach, and how much they learned about what needed to change in their own practice. The most powerful point for them, however, was the following:

The power of looking directly at student work as a team cannot be overstated. Real student work gives teachers a starting point for conversations that get to the essence of what happens in classrooms. (p 71)

Evans describes another school’s conclusions after they worked together to develop exemplars (models) of good writing and rubrics for grading student work:

More important, we felt, were the discussion and negotiation that occurred .... That sense of being a community of learners continued for the entire year. Our ‘community of learners’ has since expanded to students and their parents. We use our models and rubrics to train young writers to examine their own work and that of their peers. (p 72)

A common key feature of the use of student portfolios is that expectations are made explicit to students (what outcomes they could demonstrate, what standards they could meet) so they are in the position to, and can learn to, evaluate their own work.

Wagner, in discussing school reform generally comments:

For many, moving toward an outcome-based curriculum, where students exhibit mastery through portfolios and exhibitions, centers attention on a concrete change. The results are often dramatic in terms of improved student motivation and performance. (Wagner 1993, p 27)

Frederiksen and Collins, who use the term ‘systematically valid’ to describe assessment practices which ‘induce curricular and instructional changes in education systems (and learning strategy changes in students) that foster the development of the [desired] cognitive traits’ (1989, p 27), endorse the value of verbal statements and a library of exemplars for communicating to teachers what work of various standards looks like. Darling-Hammond speaks of the consequential validity of such assessment processes and comments that engaging teachers in these kinds of ‘judgement-based’ activities:
... becomes a powerful vehicle for professional development, for supporting teachers in looking at and understanding student learning, for investigating the effects of teaching on learning, and for transforming their practices so that they becomes more effective. (Darling-Hammond 1994a, p 507)

Toronto, Canada, probably provides the most publicised example of a system-wide approach to the standard-referenced assessment of student outcomes based on teachers' judgements. Its approach becomes clear from the following quotation.

The Toronto Benchmarks scheme is essentially a set of standards intended to provide a stable framework for making judgements, including judgements about individuals. One of its primary functions is to allow teachers to make statements about a student's performance without reference to the performance of other individuals, although implicit reference to general performance levels is of course present. ... The benefits of such undoctored data to pedagogy, program review, student feedback, parental understanding and policy forming are clear. What we wanted was to avoid the reductionist effect of both norm-referenced and criterion-referenced schemes. We also wanted ... teacher control of the professional task of student assessment. ... So we groped towards what we later found out is a standards-referenced assessment scheme, complete with verbal descriptions and exemplars of student performance. (Rutledge 1993, p 26)

The Toronto Benchmarks involve 'fuzzy standards' in Sadler's terms.

All the important cognitive skills are complex and multi-dimensional, so the imprecision of the verbal statement in Ministry goals allows the experienced evaluator to make subtle mental adjustments and necessary tradeoffs to weigh the factors — and the dynamics among the factors — in complexly appropriate ways. (Rutledge 1993, p 26)

School-based assessments often involve a combination of different types of assessment. An assessment schedule might consist of a range of different tasks with some items or tasks scored according to specific criteria (e.g. 2 marks for 3 correct and distinct reasons, 1 mark for 2 correct and distinct reasons, 0 marks otherwise) and others judged qualitatively (usually normatively and sometimes according to implicit standards) in order to assign 'holistically' a score such as 7 out of 10. The numbers obtained are then combined in some way to determine a total score, perhaps for the term or year, and this total score is used to assign grades or levels of achievement according to predetermined distributions of grades (norms) or cut-off points (criteria). Computing overall scores masks the fact that certain parts of students' work have been subjectively assessed and each category of performance arbitrarily assigned values. Nevertheless, this is often regarded as an 'objective' way to determine a grade (Wiggins 1994) since two students with the same score are deemed to have achieved equally. The assignment and reporting of overall levels of achievement by teachers on the basis of the 'pattern of performance taken over a series of testing episodes and assessment tasks' (Sadler 1987, p 193) would constitute an innovation for most systems and schools but one which Don Rutledge, who was instrumental in developing the Toronto Benchmarks, suggests all teachers should embrace, 'I believe that teachers everywhere should take this fork in the road that supports sound pedagogy and encourages professionalism' (1993, p 28).

Some commentators, who regard the major purpose of the articulation of outcomes as being to improve the collection and management of achievement data, interpret outcomes in much the same way as the 'objectives' of criterion-referenced assessment. This has occasionally led to the criticism of outcomes that they are not amenable to yes/no check-listing processes for deciding students' achievements or do not meet the levels of specificity needed for criterion-referenced assessment (see, for example, Rowe's report from the OSMIS project 1994). Such critics consider that each 'outcome'
should be more precisely defined in order to reduce the ambiguity of decisions about whether or not the outcome has been achieved; in other words, to reduce the demands on professional judgement. This position is quite at odds with OBE which relies for its success on enhancing the quality of teachers' and students' judgements about learning.

School-based standard-referencing based on verbal descriptors and exemplars, however, appears to hold considerable promise for OBE. Firstly, it offers the potential to combine the dual demand for assessment practices which directly inform teaching and learning and are public and hence accessible to the broader community to which schools must remain accountable. Secondly, it encourages, enhances and respects the professional judgement of teachers without which OBE cannot function. Thirdly, while it does not assume that all students will achieve at the same level, it does expect progress to be defined with respect to the same outcomes for all students. For Wiggins (1991), a vocal supporter for the use of standard-based assessment, the issue is clear:

The only way to improve schools ... is to ensure that faculties judge local work using authentic standards and measures. ... And it means doing away with the current extremes of private, eccentric teacher grading, on the one hand; and secure, standardized tests composed of simplistic items on the other: in both cases we prevent students and teachers from understanding intellectual excellence and raising their own standards. (p 19)

Impatient policy-makers will clamor for the efficient external leverage provided by multiple-choice tests that allow for easy (if misleading) comparability. And naive teachers will continue to think that their groundless and unreliable grading habits are adequate to uphold, never mind raise, genuine standards. Let us somehow find the vision and confidence to resist both such views. (p 24)

CONCLUSION

A strength of OBE is that it forces school communities to confront important educational issues. As Muncey and McQuillan (1993) suggest, when things remain unstated and unquestioned, there is often an implicit assumption that people working together have a reasonably common set of beliefs and purposes which inform their practice whereas, in fact, wide divisions may exist. Defining broad goals is an important step but it is insufficient by itself.

Lofty-sounding mission statements routinely adorn school conference rooms ... But if a mission statement is to be a road map for change, it must be both broadly understood and translated into explicit criteria for assessing results. When small committees of educators and parents develop statements about teaching 'critical thinking' or 'citizenship skills,' for example, nothing really changes. It is quite different for an entire community to define skills in terms of specific outcomes ... Creating a vision of a better school must include definitions of real outcomes and discussions of how they can best be assessed. (Wagner 1993, p 26)

Within an outcome-based system students are held responsible for their learning of the provided curriculum, schools and teachers collectively are held responsible for ensuring that students are provided with the curriculum, learning conditions and environment necessary for their success, and systems are held responsible for building schools' capacity to provide the conditions necessary for students success.

If OBE is to fulfil its promise of enhancing teaching and learning, then both teachers and learners have to be able to recognise when an outcome is achieved and what progress towards it looks like. If it is to achieve its promise of improved equity, then the criteria by which students will be judged must be transparent, common and fair. If it is to achieve its promise with regard to accountability, then systems, schools and
teachers must be able to show that their basis for determining achievement of students, schools and the system demonstrably reflect the outcomes. For these reasons, proponents of OBE consider that the articulation of expected student outcomes cannot be separated from the basis for determining when the outcomes have been achieved.

REFERENCES

Abruscato, J. 1993, 'Early results and tentative implications from the Vermont portfolio project', Phi Delta Kappan, 74, 6, 474-477.


Australian Teachers Union 1991, Teacher education policy and teacher appraisal policy, Carlton, Australian Teachers Union.


EDWA 1994, Student Outcome Statements: Working Edition 1994, Education Department of Western Australia, Perth, WA.


Gandal, M. 1995, 'Not all standards are created equal', *Educational Leadership*, 52, 6, 16-21.


Library Digitised Collections

Author/s:
Willis, Sue; Kissane, Barry

Title:
Outcome-based Education: A review of the literature

Date:
1993

Persistent Link:
http://hdl.handle.net/11343/115681