The Uses of Learning Outcomes

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ABSTRACT   *This paper argues that learning outcomes need to be reclaimed from their current use as devices for monitoring and audit, and returned to their proper use in aiding good teaching and learning. We require a broader, flexible and more realistic understanding of learning outcomes, better suited to the realities of the classroom and of practical use to those teachers who wish to respond to the enthusiasm of their students. To this end, a new model is produced that starts from the idea of an articulated curriculum, and embraces both intended and emergent learning outcomes. The model employs the distinction between predicted and unpredicted learning outcomes, together with the distinction between those that are desirable and those that are undesirable. The resulting account is intended to aid understanding of the nature and proper use of learning outcomes in teaching and learning.*

Problems with Intended Learning Outcomes

Readers who teach and reflect upon their teaching will be familiar with the experience of running parallel seminar groups based on lectures and of trying to reconcile a number of conflicting demands. These demands might include maintaining a focus on and achievement of the learning outcomes listed in the module documentation, whilst attempting to involve the students in the subject matter by responding to and incorporating their ideas and insights, and of ensuring that each seminar group covers roughly the same subject matter.

Those same teachers will know from experience that achieving a satisfactory reconciliation for any single seminar group is difficult and that ensuring parity of experience and therefore opportunity for all the groups is virtually impossible. Given the differences between individuals within seminar groups and the consequent characters of the groups themselves, ensuring that each group follows the same programme, addressing the published learning outcomes to the same extent and achieving those outcomes is an impossibility.

On the one hand, a tight focus on the published learning outcomes in order to pursue and achieve them, requires the teacher to strike a fine balance in managing the interactions with and from the students in the form of contributions or questions. On the other hand, encouraging students contributions, and interactions with both the material and the teacher ensures that specific learning outcomes might well not be addressed, and that whole areas of subject matter are either missed or

inadequately covered. The teacher is in a tight corner, for it seems that in order to engage students deeply and significantly with the material and to create the conditions in which they can construct their own understandings s/he must relinquish some degree of control over the focus and direction of classroom interactions and activities. Whilst this may result in students achieving significant insights into the material, it almost guarantees that the syllabus is covered either inadequately or in an unbalanced manner.

Experience of developing and framing learning outcomes in a range of settings and discipline areas, by means of the *Learning Outcomes Game* (Coxall *et al.*, 2001), consolidated the opinion that, whilst some degree of specificity was both necessary and desirable, it should not be the sole focus of attention. These experiences have demonstrated repeatedly and consistently the need for teams to define learning outcomes, which are both responsive and flexible, not only in terms of their interpretation in relation to specific discipline areas, but also in relation to the ways in which they are pursued and addressed in the learning and teaching settings. In this sense, defining learning outcomes is not a 'once and for all' activity, but an iterative process (Wisdom, 2001).

We have been struck by these tensions and contradictions in our own teaching, between the drive for clarity, transparency and specificity involved in the framing and pursuit of learning outcomes and the realities and complexities—what Lampert (1985) terms the 'constructive ambiguity' of the classroom—in which the teacher attempts to broker conflicting interests and demands. Each teacher will vary in the degree to which they might interpret a question or some other classroom event, as potentially contributing towards the learning outcomes or deflecting attention away from them.

Tensions Between Best Practice and Bureaucracy

It is one of the ironies of the current context of higher education that monitoring and assurance systems should be generating veritable bureaucracies within institutions at the same time as policy has discovered, and is celebrating learner autonomy, independence and lifelong learning. The teacher is stuck in the middle between tight adherence to achieving pre-specified outcomes, on the one hand, and optimising the opportunities for the development and support of independent, autonomous and lifelong learners, on the other. The resulting fog of rhetoric and justification threatens to stifle originality and responsiveness within classrooms.

We have detailed previously our concerns and identified the limitations of an approach that focuses too closely on defining and pre-specifying learning outcomes (Hussey & Smith, 2002). We concluded that such learning outcomes are imbued with a spurious sense of precision and clarity, that they are insensitive to different contexts and disciplines, that they are in danger of being interpreted by students and tutors as thresholds—hurdles to be cleared—and that they need to be contextualised in order to make any practical sense of them. The focus on intended learning outcomes, we suggested, has more to do with administrative and regulatory necessity than with education in the sense of students' deep engagement with the

curriculum. Too tight a focus on intended learning outcomes leads to little more than what Barnett (1994) defines as 'instrumental reasoning'. In brief, we claimed (Hussey & Smith, 2002) that learning outcomes as currently framed are often misconceived and cannot serve the purposes for which they are adopted. We argue that too tight a focus on learning outcomes is at odds with notions of good learning, good teaching and empirical experience. The current concern with pre-specification is based on a simplistic and, therefore, inadequate conceptualisation of curriculum and a view of development that is framed in predominantly unilinear and cognitive terms. We argued that conceptualising the development process as an ever-expanding spiral of understanding, as originally proposed by Bruner (1960) represents a more realistic stance.

Let us be clear, we are not arguing that learning outcomes should be abandoned, only that there are serious faults with current ideas about their use. We hold that learning outcomes can be framed only in general terms and should be used with flexibility so that they can include those that emerge in the practical realities of teaching. In completing that analysis we were at pains to move beyond what might be seen as no more than a destructive and negative critique, in order to propose a broader, more realistic and practical approach to defining and using learning outcomes. The remainder of this article outlines this broader notion of the concept of learning outcomes and identifies the theoretical and empirical understandings that support it.

Not all Learning Outcomes are Intended

Classrooms are complex and busy places in which a plethora of variables operates and teaching and learning are inherently 'fuzzy' activities characterised by ambiguity and uncertainty between input and outputs. Forest (1997) refers to the complexity of what happens in classrooms and to the inherently idiosyncratic nature of learning. Drawing on organisational theory, he refers to the role of chance in combination with the mix of teacher, learner and setting in bringing about learning moments. The teacher might have in mind some end and attempt to establish an environment that directs attentions and activities towards an outcome or outcomes. However, the results are at best mixed, dependent as they are on what happens between the principal players—students, tutors, subject matter and setting.

We were struck by the idea that many objects of classroom attention arise, indeed emerge from what happens in those classrooms. In seeking to engage and motivate students most teachers use student questions, observations and interactions as a means of focusing their attentions on what the teacher recognises as more or less legitimate objects of attention. Teachers will go out of their way to stimulate such reactions, thinking and deciding on their feet whether or not to incorporate and pursue them. Recent work by McAlpine *et al.* (1999a) identifies the notion of a teacher's 'corridor of tolerance' in relation to the extent to which they are willing and able, or not, to capitalise on the potential opportunities.

For example the teacher might well wish to use a student's question, or area of uncertainty, to illustrate a significant concept, not at that moment entirely related to

the topic under consideration, yet knowing that the concept is framed within a learning outcome and the subject of an assignment task. Temporarily suspending her/his plan for the session, the teacher uses the current interest in this topic and related concepts to explore and consolidate them. The teacher is seeking to balance content, assessment and intended and emerging learning outcomes. However, the student's question may give rise to other questions or discussion that, whilst related to the content of the module as a whole, is very definitely unrelated to the topic under consideration in the class. Such is the interest and motivation of the students for this issue, that the teacher feels that not to address it would be to miss a significant learning opportunity. These 'learning moments' are familiar to many, both as learners and as teachers at all levels from primary school to postgraduate level and the extent to which, as teachers, we address them is a function of that range of factors in McAlpine *et al.*'s, 'corridor of tolerance'.

There is now an abundance of literature to support the contention that effective learning is the result of students interacting deeply with the subject matter supported by a setting that is organised to encourage the engagement of their interests, insights and reflections (see Sadler-Smith, 1996, for references). The effective teacher combines enthusiasm for their subject (Rowland *et al.*, 1998) with a responsiveness to individual and group needs. In doing so, the teacher has to be prepared to shift the locus of control away from her/himself towards the student, thereby reducing the chances of achieving a set of pre-specified outcomes and of 'covering' the syllabus. However, shifting the locus of control may maximise opportunities for deep learning and the occurrence of those happy circumstances—the learning moments—when tutor and students embark together on some topic arising as a result of what has happened in the classroom.

Shifting more control over to students is a high-risk strategy, teachers run the risk of being accused of indecisiveness, lack of direction or perhaps missing important topics, and students of not knowing what they are supposed to be doing and of becoming alienated. There is far more safety in the teacher retaining control, and dictating the pace and direction of progress through the content. Student-responsive learning is less predictable and less trackable. In an age that seeks to quantify and measure, it represents an unwise option; far safer and more respectable to stick with a teacher-centred pedagogy in which outcomes can be safely pre-specified, tracked and measured. Such a vision, however, is palpably at odds with the realities of the classroom.

The Articulated Curriculum

An articulated curriculum is one in which all the elements both influence and interact with each other in order to stimulate and support active learning, and more readily reflects what happens in classrooms: a mess of intentions, ambiguities and interactions.

Biggs (1999) outlines the notion of Constructive Alignment in which the curriculum elements of objectives, teaching and learning activities, and assessment tasks are balanced, as are the links between constructivist understanding on the part

of the students and the design of teaching. Effective alignment ensures consistency throughout, maximising transparency of intentions, selecting, and using teaching and learning methods likely to achieve the intentions and assessment tasks clearly reflecting those intentions. The entire system is designed to oblige the student to learn, indeed, Biggs refers to the students being 'entrapped' within a web of consistency engaging them with the appropriate learning activities and objectives.

Whilst accepting Biggs' notions of engagement and obligation, we are wary of creating conditions that entrap the students. Establishing a context that encourages, even obliges students to engage actively with their own learning is one thing; establishing one which requires their passive adherence appears antithetical to the processes of learning and education.

We propose a view of curriculum that owes much to the work of the Volkswagen Project based at the University of Sussex in the 1970s. It is a view of curriculum that perceives the respective elements to exist in a state of mutual interaction and influence: an articulated curriculum (Figure 1). Such a curriculum represents more realistically what happens during both the planning and implementation phases of the curriculum. In an articulated curriculum, the intention is to combine the elements in a state of equilibrium, whilst acknowledging that events and activities both within and without the classroom act to shift the balance. Outside the classroom the teacher's influence is minimal; however, inside the classroom s/he can attempt to manage conditions in order to balance the curricular elements in such a way as to maximise student understanding and achievement.
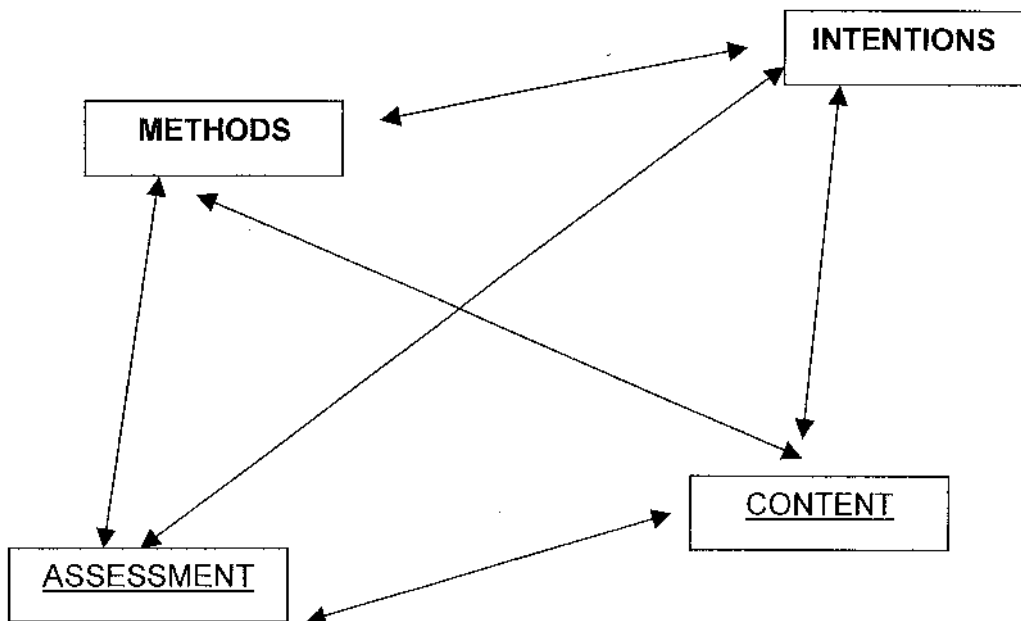

FIG. 1. The articulated curriculum.

A Spiral Conception of Development

Bruner (1960) identified one of the functions of the curriculum as the progressive introduction to the learner of concepts and frameworks at increasingly complex levels. Fundamental and structuring ideas would be encountered repeatedly in a spiral process involving the redefinition of fundamental ideas and concepts at evermore sophisticated levels of understanding and application. In Bruner's words:

> … to be in command of these basic ideas, to use them effectively, requires a continual deepening of one's understanding of them that comes from learning to use them in progressively more complex forms. (Bruner, 1960, p. 13)

Such a view of development to our minds, would best be enshrined in learning outcomes that acknowledged the need to understand anew at different levels, and that were both pursued and achieved within teaching and learning situations, which encouraged and utilised the ideas and interactions of the learners. Our argument is that learning outcomes cannot be defined with the kind of precision that has been supposed, that they stand in need of interpretation within a context (Hussey & Smith 2002).

Bruner's thesis has implications for the use of learning outcomes at the various levels or stages within education. The idea, currently popular—that first year degree students must describe, second year students must explain and evaluation should characterise their work in the third year—must be replaced with the idea that these activities are visited and revisited as the students progress and in accordance with the requirements of the subject matter.

Intended and Emergent Learning Outcomes

The notion of 'emergent learning outcomes' is derived and extrapolated from Megginson (1994, 1996) who uses the concept of emergent learning strategies to explore why some learners are more or less able to draw upon their experiences in order to learn and to assume greater responsibility for their own learning. Megginson is concerned with assessing the extent to which an individual adopts planned or emergent learning strategies, and the degree of flexibility that individual has in moving between one and the other. Megginson's focus of attention is with the learner, their degree of awareness and management of their learning strategies.

Acknowledging the usefulness of the notion of emergence, our focus of attention is with both learners and teachers, and the extent to which the former are encouraged to contribute and engage actively with the processes of learning in the classroom, and the extent to which the latter seek such contributions and are sufficiently skilled enough to assess their value in relation to the desired learning outcomes. It follows that the greater the students' involvement in and with the learning, the greater the possibility of different learning outcomes emerging.

A range of factors determines what emerges:

- the quality and extent of relationships and interactions between students, teachers and subject matter;
- the curriculum strategy employed by the teacher to explore that subject matter;
- the motivations and commitments of all parties;
- the overall climate of relations within the specific classroom and the wider institution.

The extent to which emergent learning outcomes (ELOs) contribute to the achievement of intended learning outcomes (ILOs) varies. Some emergent outcomes are relatively close to the intended learning outcomes and can be perceived to contribute directly towards their achievement. The contribution of others is less direct, being capable of inclusion on the basis of their contribution to the student's knowledge of the subject in general, whilst the contribution of other emergent learning outcomes is to the field of studies in general and might be included on those terms. Yet other ELO's contribute to the overall development of the students as autonomous, self-managing learners, far beyond the field of study.

Whether or not emergent outcomes are acknowledged and incorporated into the overall curriculum strategy, as we have seen, is dependent upon what the teacher is willing and able to accommodate within his/her 'corridor of tolerance', the respective width or narrowness of that corridor being a function of the teacher's capacity for reflection-in-action, (Schon, 1983) and his/her practical expertise and experience.

In simple terms the range of emergent learning outcomes can be set out as follows (Figure 2):
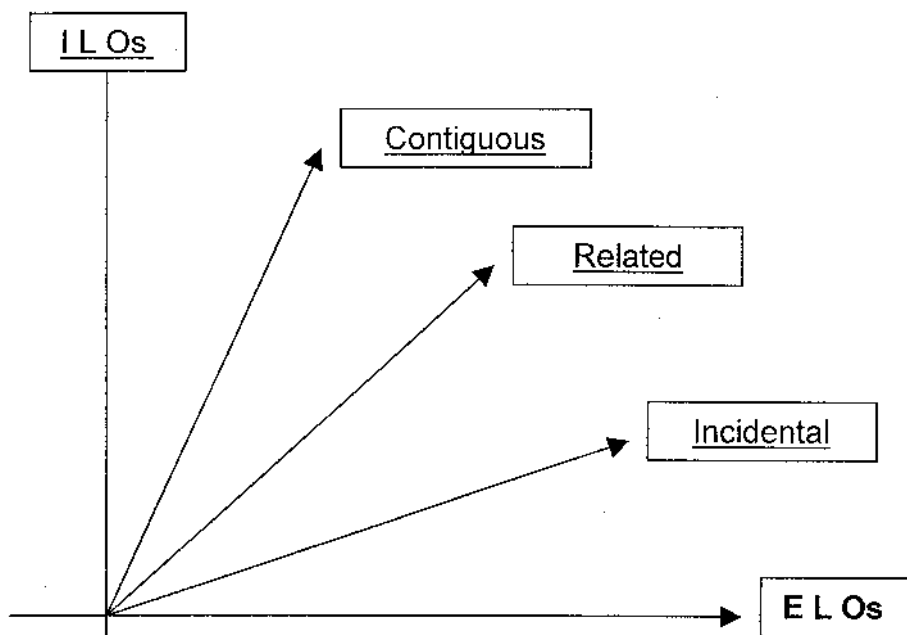

FIG. 2. The range of learning outcomes.

- *Contiguous Learning Outcomes* are those which are sufficiently close to the intended learning outcomes to be considered by the teacher as making a positive contribution towards their achievement.
- *Related Learning Outcomes* are those which are considered to contribute to the subject matter in terms of its consolidation or extension within the area, they broaden, elaborate and increase sophistication.
- *Incidental Learning Outcomes* are those which, whilst not contributing significantly to the specific subject matter, are considered by the teacher to contribute towards knowledge and experience within the field in general.

The Predictability and Desirability of Emergent Learning Outcomes

The recognition that not all learning outcomes can be pre-specified, and that some may emerge from activities within the classroom, raises questions about their predictability and desirability. Ideally, the teacher will pre-specify a manageable number of broadly defined outcomes that are of prime importance for the progress of the students' education and a competent teacher should be able to predict that these intended outcomes will be achieved, at least by most students. The teacher will also expect that other outcomes are likely to emerge, but there will be great variation in the degree to which their occurrence can be predicted or their exact contents anticipated. A major factor here will be the amount and quality of the teacher's experience. An experienced and reflective teacher will be able to predict a number of familiar scenarios with reasonable confidence, thus being prepared to facilitate or avoid them according to his or her judgement of their value.

The predictability of the emergent learning outcomes will also depend to some extent upon how close they are to those that the teacher pre-specified. It is reasonable to assume that the closer emergent outcomes are to what was intended, the greater the probability of identifying them in advance and the less of a dilemma they pose in terms of decision-making for the teacher in relation to their position within the corridor of tolerance. It follows that the further away from the intended learning outcomes an emergent outcome is, then the greater the dilemma posed to the teacher. Whether an apparent side-track is worthy of pursuit will depend on a range of factors and the teacher will have to make that decision on the hoof. Such Reflection-in-Action (Schon, 1983) calls for both skill and experience. In general, highly experienced teachers will be able, not only to predict emergent learning outcomes, but also identify those that are likely to make a positive contribution to learning.

The distinction between desirable and undesirable learning outcomes introduces a topic of quite a different kind, involving as it does, matters of value. At the most immediate level this simply refers to the point, already touched upon, that not all emergent outcomes make positive and functional contributions towards students' learning in a subject area. Indeed, the contribution of some emergent outcomes might well be disruptive and dysfunctional. That is to say, given the programme of study embarked on by the teacher, there may be seductive misunderstandings,

cul-de-sacs and diversions that are best avoided. Experienced teachers know that certain subjects or topics within their areas of speciality hold particular challenges for students in terms of comprehension or apprehension. Their experience tells them that there are common misunderstandings around which they must steer students, at least in the early stages of their learning.

There are, of course, other value judgements behind those made by the teacher about what emerges during a teaching session. The designer of the course of study, who may or may not be the teacher, will have decided what content and methods ought to be included. Behind the designer, there are broader debates about the curriculum and the nature of worthwhile education. The educational institution may decide on what courses are to be offered and yet others may stipulate benchmarks or validate the course, and so on. Clearly, these matters are beyond the province of this paper: what matters here is that a teacher is inevitably faced with the task of deciding on the educational value of what is evolving before him or her in the seminar or classroom.

Figure 3 elaborates the model outlined in Figure 2 and introduces the notion of outcomes as being desired or undesired:

- *Quadrant A*—predicted and desirable; this represents the achievement of a traditional intended learning outcome.
- *Quadrant B*—unpredicted, yet highly desirable, representing the capitalisation of a 'learning moment'.
- *Quadrant C*—predicted and highly undesirable, a common pitfall, which students are likely to fall into unless suitably guided.
- *Quadrant D*—unpredicted and undesirable; an unanticipated turn in direction which, in the teacher's opinion, could be highly dysfunctional and detrimental to students' learning.

The lower left quadrant of Figure 3, between desirable and unpredicted outcomes, represents that outlined previously in Figure 1, containing contiguous, related and incidental learning outcomes.

Within each quadrant there are degrees of predictability and desirability. For example, as well as highly desirable and predictable learning outcomes, quadrant A will include many that are less desirable and less predictable; others that are barely predictable yet highly desirable and so on. Similarly, quadrant B will contain learning outcomes that, while unpredicted, vary in their desirability from high to hardly desirable at all. The teacher will be well aware of the dangers in quadrant C and will expect the most predictable outcomes to emerge unless tactics are adopted to avoid them. Those that are only mildly undesirable might even be tolerated if this maintains a positive atmosphere in the classroom and if they can be corrected easily at a later date. Quadrant D presents the most difficulty. A teacher may see learning outcomes emerge that they had not predicted and which they feel are undesirable. Obviously, the more experienced practitioners will be alert to this possibility.

Thus, quadrants A and B to the left side of the figure represent, not so much the corridor, but an envelope of tolerance in which the teacher decides the extent to
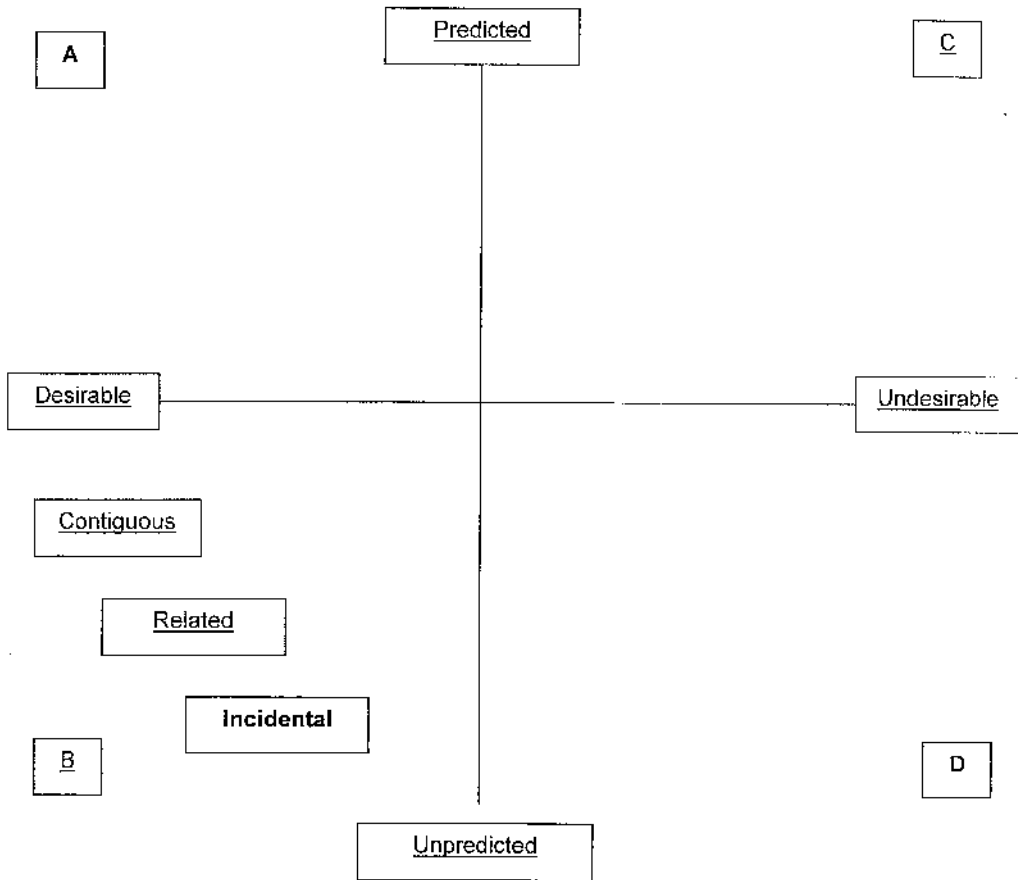
FIG. 3. A model for learning outcomes.

which an emerging outcome might or might not be addressed and used. McAlpine *et al.*, (1999b) suggest that excellent teachers reflect both in and on action, searching for student cues indicating engagement and comprehension of the subject matter. In addition, they are particularly adept at changing either content, methods or mood in response to perceived cues, not only changing when cues suggest that the approach is not working, but when it demonstrably is succeeding.

In principle, different versions of the learning outcome diagram in Figure 3 could be produced for different points of view. While, in general, that of the teacher is the most overt and operative, a diagram could also be constructed for the student, the institution, a monitoring body and so on. There is an obvious need for the teacher to ensure that his or her learning outcomes correspond to those expected by other interested parties or that, if they differ, they do so for good educational reasons. Similarly a wise teacher will ask themselves whether their understanding of what is expected of the learning sessions corresponds to that of the students.

Designing Broader Learning Outcomes

We have argued (Hussey & Smith, 2002) that the concept of learning outcomes has become so entangled with notions of specificity, transparency and measurability as to become largely irrelevant to classroom activities and practices, as well as being unachievable. Programme developers wrestle with demonstrable, action-oriented verbs, deftly attempting to avoid too often repeating the same formula: 'By the end of this module the student will be able to demonstrate the ability to apply the concept of alienation to their own experience'. Those involved in approving or validating new programmes can become embroiled with debates about the precise niceties of the semantics; the focus on such activities being in danger of diverting attention away from the principal purposes of modules or courses. Institutions back themselves into the most remarkable corners of what is and what is not acceptable at which level, such as bans on the use of the verb 'analyse' at first-year level, or 'comprehend' at third-year level, and the complete expunging of the verb 'understand' from any level.

A sea change appears to be occurring in higher education in the UK in relation to audit and accountability, though details of QAA's 'soft touch' proposals have yet to be published. Such changes might bring about a situation in which curriculum decisions are located more with those immediately concerned with learning and teaching, and less with those responsible for the bureaucracies of audit, many of whom have long since left the classroom, or never been in one as teachers.

We have argued for the development of a broader conception of learning and framing of learning outcomes, one which is congruent with the culture of teaching and learning in higher education and, above all, of practical utility. Clearly, the situation with regard to the definition and use of intended learning outcomes is not going to change dramatically; however, we suggest that a shift towards the more realistic framing of learning outcomes could be made first by acknowledging that, in their current form, learning outcomes do not reflect the realities of learning and teaching. Secondly, accepting that student motivation is an essential element in learning, we propose that those who teach should begin to reclaim learning outcomes and begin to frame them more broadly and flexibly, to allow for demonstrations and expressions of appreciation, enjoyment and even pleasure, in the full knowledge that such outcomes pose problems for assessment.

In this article we have attempted to offer a more subtle, yet realistic, account of the notion of a 'learning outcome', that will be of service in two areas. First, the concept is essential in theoretical discussions of the processes of teaching and learning. Secondly, learning outcomes are useful as practical tools both in the activity of teaching and learning and in designing courses of study.

Acknowledgements

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