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Learning Outcomes in Higher Education

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ABSTRACT The design of learning experiences in higher education is becoming increasingly outcome-led, but there is confusion regarding what constitutes these outcomes, disquiet concerning their ostensible association with behaviourism, and apprehension concerning their implementation. This article traces the evolution of learning outcomes through rational curriculum planning to the development of expressive outcomes, and suggests a definition of learning outcomes which includes subject-based, personal transferable and generic academic outcomes. The three principal criteria of behavioural objectives are analysed in relation to learning outcomes. Outcomes may subsume learning objectives, but the two are not synonymous and learning outcomes are not fettered by the constraints of behaviourism. Learning outcomes represent what is formally assessed and accredited to the student and they offer a starting point for a viable model for the design of curricula in higher education which shifts the emphasis from input and process to the celebration of student learning.

Introduction

It is a bitter irony that the current literature of curricula design is replete with equivocation and obfuscation regarding the definition of educational intention. Yet this is by no means a recent phenomenon: Popham et al. in 1969 (p. 35) stated that objectives, goals, intents, aims and outcomes are perceived, by some, as being interchangeable; and Cohen & Manion, (1977, p. 28) asserted that aims, goals, tasks, objectives and learning outcomes are ‘used freely and apparently indiscriminately’. This dilemma arises from the liberal use of a number of labels to connote statements of purpose which operate at different levels of specificity, with the result that the literature of educational intention has become, ‘a minefield of terminological confusion’ (Rowntree, 1982, p. 31). The current discussion concerning what might be understood by the term ‘learning outcomes’, has reopened the debate regarding the concepts of intention and the terminology used to describe them. The focus is on the extent to which outcomes are synonymous with, or subsume, the notion of objectives. But the concept of an objective is itself multifaceted, lacking a single definition which is universally accepted. The meanings and connotations underpinning the term ‘objective’ therefore require clarification in order to establish what might be currently understood by ‘objectives’ and the extent to which this is implicit in the way in which the term ‘learning outcomes’ is being used in higher education today.

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Objectives

Function

The specification of objectives is perceived as the starting point in designing curricula using 'rational planning models', so called on the grounds that it is rational to prespecify the goals of an activity prior to engaging in it. Tyler (1949), the first major proponent of this form of planning, explained the importance of objectives thus:

if an educational programme is to be planned and if efforts for continued improvement are to be made, it is very necessary to have some conception of the goals that are being aimed at. These educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and tests and examinations are prepared. (p. 3)

Terminology

Educational Objectives

Definitions of objectives abound, but they typically express educational intention. Tyler used the broad descriptor 'educational' objectives which he defined as specifying 'the kinds of changes in behaviour that an educational institution seeks to bring about in its students' (1949, p. 6). At this time 'behaviour' was not used by Tyler in a narrow specific sense as in the adjective 'behaviouristic', but rather, 'to include thinking and feelings as well as overt action' (1949, p. 6). Indeed he ostensibly viewed objectives as 'general modes of reaction to be developed, rather than highly specific habits to be acquired' (1949, p. 37). But there exists a tension in his work between this broad notion of an educational objective, and the specific objectives which he considered to be pertinent to the process of curricula design. In practice, Tyler emphasised the specification of narrow objectives which could be seen to derive from a given learning experience to the exclusion of broader educational outcomes which might develop from the wider process of education. He stated that when planning, 'only those objectives which might result from learning and which are educationally obtainable should be included' (1949, p. 37). In stating that the objectives must be 'educationally obtainable' there is also an assumption that there is an achievable, tangible and therefore observable product of learning which is capable of being specified in advance.

Working from this premise, Tyler also rejected the definition of objectives as topics, content, and concepts that are to be dealt with in a course because they fail to indicate what the students are expected to do with the content, and therefore do not specify what is supposed to ensue from the learning experience. Similarly he found unacceptable the idea that objectives may be written in the form of generalised patterns of behaviour, for example, to develop critical thinking, because, whilst they do relate to desired changes in behaviour, they are vague and fail to stipulate the specific context and curricula component to which this behaviour applies. He thus concluded that the most useful form of expressing objectives is in 'terms which identify both the kind of behaviour to be developed in the student and the content or area of life in which this behaviour is to operate' (1949, pp. 46-47). An example of such an objective is: 'to write clear and well-organised reports of social studies projects' (Tyler, 1949, p. 47); this includes an indication of the kind of behaviour expected—writing clear and well-organised reports—and also states the area with which the reports are to deal.

Tyler's definition of objectives can be seen to place the responsibility on the institution to identify the desired behaviour to be developed in the student. In so doing his model clearly emphasised the pivotal role of the educator and the importance of specifying contextualised
observable behaviours when designing curricula. But whilst his term ‘educational’ objectives acknowledges the role of the former, the precise definition of learning objectives which emerged from his work, rendered the use of the term ‘educational’, which connotes the broad holistic development of an individual, somewhat incongruous given the level of specificity of learning objective demanded by his work. The gap between Tyler’s aim of developing ‘general modes of reaction’ and the reality of the precision of his objectives reduces the term ‘educational’ objectives to rhetoric.

Instructional Objectives

This inconsistency was removed by the shift from the use of the term ‘educational’ to ‘instructional’ objectives which was embodied in Mager’s seminal work in 1962. (see Appendix 1 on significant stages in the specification of objectives). The modification of language represented by the change of descriptor, suggests a movement along a continuum from the more general to the specific. By replacing ‘educational’ with ‘instructional’, the link between the achievement of prespecified objectives as a direct result of the instruction which a student receives is emphasised. Mager’s model specifies that objectives should fulfil three criteria (see Appendix 1). First the language used to describe the performance of objectives should be tightened up so as to preclude ambiguity and to refer to observable student actions. Mager (1962, p. 20) suggests that ‘there are many slippery words that are open to a wide range of interpretation’, words like: to know; to understand; to really understand; to appreciate; and to grasp the significance of, and that these ‘broad terms or “fuzzies” ’ (Mager, 1962, p. 20) should be replaced by words which are not open to misinterpretation, like: to write; to recite; to identify; to sort; to solve; to construct; and to compare. Second the conditions under which the performance is to take place, should be stated unequivocally; and third the criterion, ‘the quality or level of performance that will be considered acceptable’ (1962, p. 23), in each discrete objective should be clearly stated. Mager gives an example of such an instructional objective as to ‘be able to write a musical composition with a single tonal base within four hours. The composition must be at least sixteen bars long and must contain at least twenty-four notes. You must apply at least three rules of good composition in the development of your score’ (1962, p. 36). As can be appreciated from this example of an objective, the approach involved the breaking up of complex tasks into highly discrete and defined elements and the measurement of each in order to see if the required criterion, or standard, had been achieved. By emphasising assessment through the use of standards, the scope of feasible objectives is necessarily limited to those which are capable of being measured quantitatively.

The position advocated by Mager demanded a more systematic and mechanised approach to curriculum design than the relatively liberal and less specific stance espoused by Tyler. Mager’s definition represented the views of individuals, trained not in curriculum, but in psychology, who dominated the development of curriculum planning and the design of materials in the 1960s. This was very much the decade of the educational scientist and technologist in which the positivist paradigm heavily influenced educational initiatives emphasising control, measurement and the desire to produce teacher-proof materials. The work of Popham, a leading proponent of the movement, is symptomatic of this thrust. Focusing on technical design, he set up the Instructional Objectives Exchange in Los Angeles where objectives could be purchased by those who could not write them themselves.

Whilst Mager’s construct is characterised by the clarity of definition it brought to the specification of objectives, it is equally notable for the emphasis it placed on objectives being used to describe what the learner is able to do at the end of a course of instruction, rather
than specify what instruction might constitute in terms of content or what the intentions of the teacher might be. Ironically his descriptor, ‘instructional’, seems to emphasise the role of the teacher and the course, yet in his work, Mager differentiates clearly between course description, and an objective. The former is concerned with what the course is about, with what the teacher intends to do, with what will later be termed ‘teaching objectives’, whilst the latter is confined to the achievements of a successful learner on completion of the course. By specifying that an objective describes what a student achieves, Mager brought the learner more into the framework of curriculum design as a participant in the process of education. He maintained that by making it clear to students what the results of their learning should be, they are provided ‘with the means to organise their own efforts towards the accomplishment of those objectives’ (1962, p. 6). Thus, in spite of what the descriptors might suggest, it was Tyler’s model, and not Mager’s, which had stressed the role of the institution and the role of instruction in bringing about changes in behaviour. Mager’s belief in the role of the student in the achievement of objectives suggests that the use of the term ‘instructional’ to describe educational achievements for the learner is as equally inappropriate as the use of the broad descriptor ‘educational objectives’ had been for Tyler!

**Behavioural Objectives**

A further shift in the terminology to the use of the term ‘behavioural’ objectives (see Appendix 1) served to clarify the relationship between the learner and the teacher, between instruction and learning, which had not been explored by Mager, yet which remained at the heart of rational planning. The term ‘behavioural’ emphasises that the changes in student behaviour, the objectives which are measured and celebrated, are those which result directly from the interaction of learner and teacher, from the learning experience. Eisner (1979) suggests that these behavioural objectives are achieved through a distinct curricular emphasis, through drill and practice, which result in the reliable performance of a given task rather than being brought about as an indirect consequence of curriculum activities. Learning can take place without teacher/learner interaction, but curriculum design based on behavioural objectives, in the manner described by Macdonald-Ross (1973), precludes the acknowledgement and recognition of any outcomes which might accrue, either from a learning experience initiated by a student independent of a teacher or, unintentionally, from a teacher/learner interaction which has been constructed specifically to achieve a given purpose.

Thus the use of ‘behavioural’ objectives considerably narrows the scope of the learning outcomes which are legitimised in curricula designed with their use. Eisner (1979, p.105) suggests that the adoption of the adjective ‘behavioural’ to replace ‘instructional’ (see Appendix 1) was not by accident, but ‘reflects an increased emphasis on the behaviour of the student and on discrete forms of student activity’. The term ‘behaviour’ had not featured in the definition of objectives given by Mager (1962, see Appendix 1); he chose instead the adjective ‘instructional’ rather than ‘behavioural’ as a descriptor. He considered that the term ‘behaviour’ put people off because it made them believe that the objectives necessarily had something to do with behaviourism or with behaviourists. This he rejected, saying that, ‘objectives describe performance, or behaviour, because an objective is specific rather than broad or general and because performance, or behaviour, is what we can be specific about’ (Mager, 1962, p. 23). Mager thus equates the terms ‘performance’ and ‘behaviour’, but eschews the latter. It might be inferred that the change in nomenclature reflected a change in the perceived character of objectives, but actually the necessary elements of behavioural objectives as summarised by MacDonald-Ross (see Appendix 1) were exactly those defined by Mager in 1962, that is that they are unambiguous. specific statements of student
behaviour which include the *conditions* under which the behaviour will occur and the *standard (criterion)* of performance which is acceptable. The term 'behavioural' emphasises what counts as a legitimate outcome of learning, and simultaneously reaffirms that these outcomes should be expressed in a very tightly specified statement of observable action. Macdonald-Ross's definition is more prescriptive than Eisner's 1969 summary (see Appendix 1) of the stance of the leading positivist curriculum writers, (Tyler, Gagné, Bobbitt and Bloom), which did not include a standard of expected behaviour, posited by Mager in 1962. However, it still serves as the model definition which continues to inform rational planning—curriculum planning using the 'objectives model'.

The phasing out of the term 'instructional objectives' in favour of 'behavioural objectives' with its attendant specificity and its behaviouristic overtones, effected a polarisation of reaction to the notion of an educational objective. At one extreme rational planning was rejected and labelled as reductionist by those who did not accept that a subject can be reduced to disjointed facts and concepts if the integrity of a discipline is to be respected. This 'atomisation' was, and remains, an anathema, particularly to those involved in curriculum design in higher education, where a high level of analysis and synthesis is implicit in what constitutes learning in undergraduate study. Yet at the other extreme, the tenets of behaviourism underpin the more recent planning models of Wheeler (1967), Kerr (1968), Taylor (1970), and Merrit (1972).

**Non-behavioural Objectives**

Paradoxically, the predominance of behavioural objectives served to stimulate a reaction to the narrow strait-jacket that they imposed upon curriculum designers. This took the form of the re-emergence of non-behavioural objectives; for example, understanding concepts; appreciating art forms; and developing critical thinking, which cannot be expressed in behavioural terms and which are not readily assessable. Writing in 1949, Tyler had acknowledged the existence of such objectives in the form of generalised patterns of behaviour, but had eschewed them as unhelpful in designing curricula both because they are couched in vague and imprecise language and because they do not stipulate the content to which the objective relates. Such non-specific objectives also fail to meet Mager's criteria for assessment (1962, see Appendix 1)—reiterated by MacDonald-Ross (1973)—that there must be an indication of the conditions and standard of students' expected performance associated with each objective.

**Teaching Objectives**

Whilst early curriculum literature gives non-behavioural objectives somewhat superficial treatment, Cohen & Manion (1977) posit a model which attempts to differentiate between non-behavioural and behavioural objectives. The latter identify 'the learner's overt achievement' (p. 33) (for example, the 'pupils will list and identify six figures of speech') whilst the former are either less precise patterns of behaviour (for instance, the class will be able to 'detail the images which conjure up a landscape of winter and death', p. 32), or an element of curricula content or what the teacher, rather than the learner, plans to do (for example, 'To further the class's understanding of Hardy's "The Darkling Thrush" ', p. 32) (see Appendix 1). Cohen & Manion's sole criterion for assigning the adjective 'non-behavioural' was that the objective so described did not specify the precise terminal behaviour by means of which an assessment could be made regarding what has been achieved, whilst the word 'objective' itself was used by them to describe both the intentions of a teacher, and the
achievement of learners. This represents a significant departure from the tight definition of an objective relating solely to student achievement (see Appendix 1) which had been posited by Mager.

The suggestion that objectives might prescribe teacher activity had hitherto been rejected by curriculum writers, notably Tyler (1949), Mager (1962), Eisner (in Popham et al., 1969), Bloom (1956). Tyler (1949, p. 44) had acknowledged the possibility of both teaching and learning objectives, but eschewed the former, which he referred to as 'things which the instructor is to do', because he believed that, 'any statement of the objectives of the school should be a statement of changes to take place in students'. Similarly Popham (Popham et al., 1969) acknowledged the difference between:

what a teacher, for example, wants to have happen to the kids and what a teacher decides to do in order to have it happen. Now in the first case you have intents regarding the behavioural changes that will occur in learners. In the second you have procedures that you’re selecting for which you have some hunch that consequences will emerge. (p. 22)

But he went on to say that, ‘if we start to call these [teacher] activities ‘objectives’, then considerable confusion emerges’. This was a truly prophetic statement; the relatively clear waters of educational intention have certainly been muddied by the acceptance that objectives may specify what a successful learner will achieve, and what teachers intend to do or what teachers intend that learners will do. The resultant ambiguity has led to the use of the term ‘teaching objective’ to describe teacher intent, for example ‘to introduce students to the principles of education research’ and ‘learning objective’ to describe what a student should be able to do after the learning experience that he/she could not do before (Mager, 1962, see Appendix 1).

Expressive Objectives

Perhaps more significantly, Cohen & Manion’s model (1977) suggests that curricula might be planned in somewhat less stringent terms than is required when specifying behavioural objectives. The requisite of precise observable objectives in rational curriculum design precludes the planning of learning experiences for which the outcome cannot be pre-stated at a level of specificity capable of being translated into clear-cut behaviours which are capable of being measured and assigned with an indication of what constitutes an acceptable standard of performance in a given context. The reductionist thinking which results from such a prescriptive approach imposes a strait-jacket on curriculum planning; this is the major source of criticism of behavioural objectives and has received widespread documentation (Stenhouse, 1975; Eisner, 1979; Taylor & Richards, 1987; Kelly, 1989; Marsh, 1992). Eisner, for example, argued forcibly that, ‘one should not feel compelled to abandon educational aims that cannot be reduced to measurable forms of predictable behaviour’ (1979, p. 98). He maintained that there is a place for expressive objectives, which he describes as, ‘the outcome of an encounter or learning activity which is planned to provide the student with an opportunity to personalise learning’ (Popham et al., 1969, p. 130). Eisner later named these less specific and more individualised objectives ‘expressive outcomes’, (see Appendix 2 on significant stages in the specification of learning outcomes).
Learning Outcomes

Terminology

In adopting the term 'outcomes' in place of objectives, Eisner differentiated between the latter, which imply a preformulated specific goal and the former which, 'are essentially what one ends up with, intended or not, after some form of engagement' (1979, p. 103). Otter's definition of learning outcomes as, 'what a learner knows or can do as a result of learning' (1992, p. i) affirms Eisner's perception of outcomes as being what the student achieves as opposed to what the teacher intends to teach. Outcomes, in Eisner's terms, are broad overarching consequences of learning which do not meet the stringent criteria which necessarily apply to behavioural objectives, where the latter are unambiguous, specific statements of expected behaviour which include the conditions under which the behaviour will occur and the standards of performance which are acceptable (see Appendix 1). This is not to suggest that the use of outcomes in planning curricula precludes a statement of intention regarding what one will end up with, but rather that, 'the precise dimensions of the outcomes cannot be specified to the level of clarity or specificity that instructional objectives ought to have' (Eisner, in Popham et al., 1969, p. 23).

Learning Objectives

In teasing out just what the essence of these outcomes might be, Eisner's work (1979) offers an appropriate framework (see Appendix 2). He suggests that the outcomes of a learning experience include subject-specific, student and teacher-specific outcomes.

Subject-specific outcomes relate directly to, and result from, the content that is taught in a given context. An example of such an outcome taken from a second year undergraduate research methods module in education and the social sciences is 'that on completion of the module the student will be able to apply knowledge of validity, reliability and triangulation to a chosen research issue'. This provides a clear statement of what the student will be able to do as a result of the learning experiences which have been planned; in this respect it resembles an objective as defined by Tyler and Mager. It does, however, differ from both an instructional and behavioural objective in three important ways. First, the outcome is not expressed in the form of one precise discrete element—the student is expected to have both knowledge of validity, reliability and triangulation, and the ability to apply this to an issue which he/she has chosen. The outcome is thus far more complex than an instructional or behavioural objective. Second, there is no precise statement of the specific 'area or content of life' (Tyler, 1949, pp. 46-47) or the 'conditions under which the performance is to occur' (Mager, 1962, p. 21) or the 'conditions relevant to the performance' (MacDonald-Ross, 1973). The student is free to apply the required knowledge to a research issue of his/her choice. This results in the outcome which is actually achieved by a given cohort differing in detail from one student to another and precludes the homogeneity of response which is a necessary condition of behaviourism. Finally there is no standard of performance which is explicitly expressed in each subject-specific outcome (compare this with the example of an objective already given from Mager: 'be able to write a musical composition with a single tonal base within four hours. The composition must be at least sixteen bars long and must contain at least twenty-four notes. You must apply at least three rules of good composition in the development of your score' (1962, p. 36, my emphasis). Whilst each subject-specific outcome is accompanied with an explicit statement of the assessment task by which it will be assessed and the criteria by which the outcome will be graded, this does not imply that each outcome is to be assessed discretely; the outcomes are 'bundled' into a composite assessment task.
This grouping of subject-specific outcomes into ‘bundles’ represents a significant departure from the assessment of objectives as advocated by Mager (1962), who demanded that the standard of performance should be explicitly stated and assessed separately for each objective.

This is explained by reference to the following five outcomes which are ‘bundled’ into a single assessment task in the research methods module referred to above.

**Subject-specific Outcomes**

On completion of the module participants will be able to:

(i) make a clear statement of a research issue and appropriate research questions;
(ii) select and justify a research approach, appropriate for a specific research issue;
(iii) select and justify an appropriate methodology and data collection instruments for a specific research issue;
(iv) identify the major sources of literature relevant to a given research issue;
(v) apply knowledge of validity, reliability and triangulation to a chosen research issue.

Assessment of outcomes i–v will be by a written assignment. Students will be assessed according to given criteria.

Outcome (i) might be considered to be the key outcome because it is necessarily linked to each of the other four outcomes and provides a focal point for the assessment task. In addition, outcome (ii) and outcome (iii) are linked whilst outcome (ii) and outcome (v), and outcome (iii) and outcome (v) are interdependent. The lecturer’s perception of the conceptual scheme implicit in the module content has thus been clarified for the student through the statement of the learning outcomes, but the intellectual challenge of the module has not been compromised by the reduction of the module outcomes to discrete elements. The process of ‘bundling’ is essential in the assessment of learning outcomes in higher education where subject matter cannot be reduced to disjointed facts and concepts if the integrity of the subject matter or discipline is to be respected and if the high level of analysis, and synthesis implicit in learning at this level is to be retained.

This uncoupling of subject-specific outcomes from the stricture of behavioural objectives represents a significant turning point in terms of the potential for the use of outcomes in curriculum design in higher education. Subject-specific outcomes may be very loosely termed ‘objectives’, but where they are so called they are increasingly referred to as ‘learning objectives’ to differentiate them from instructional and behavioural objectives (see Fig. 1, which illustrates the evolution of learning outcomes) and from teacher objectives. The use of the term ‘subject-specific outcome’ to replace ‘learning objective’ serves both to clarify the meaning of the terminology and to facilitate the shedding of the mantle of behaviourism with which the word ‘objective’ is associated. But whatever terminology is employed, neither is synonymous with learning outcomes for neither represents the totality of the consequences of learning in higher education.

**Personal Outcomes**

The learning outcomes movement seeks to recognise and celebrate student achievement which both includes and transcends subject-specific objectives. Eisner (1979) in his trichotomy of outcomes (see Appendix 2), suggested that both student and teacher-specific outcomes are as much about education as are subject-specific outcomes. For Eisner student-specific outcomes constitute what he terms ‘personalised learning’, that is what the student
Learning Outcomes in Higher Education

Educational objectives

Instructional objectives

Non-behavioural objectives

Expressive objectives

Behavioural objectives

Teaching objectives

Subject-based outcomes (UDACE, 1989)

Student outcomes

Personal outcomes

Personal transferable outcomes

Generic academic outcomes

Subject specific outcomes

Learning objectives

FIG. 1. The evolution of learning outcomes.

has learned which has not been directly taught, learning that has occurred in an individual independent of direct teacher/student interaction, and learning which may be only tangentially related to the pre-specified subject-specific outcomes. These outcomes are not wholly predictable, and are, to an extent individualised, being dependent upon the extent to which the student engages in the learning experience and takes responsibility for his/her learning. As Barnett suggests,

the tutor hopes to set the student off on the right path, and hopes to see the student being successful. Once the contact has been made, the outcome is to a considerable degree unpredictable; the tutor cannot fully control it, for it is the student that is, or is not, successful. (1988, p. 248)

The individual characteristics of such outcomes were emphasised in the Unit for the
Development of Adult Continuing Education (UDACE) (1989, p. 3) descriptor of 'personal' outcomes (see Appendix 2) which subsumes what had been previously labelled by Eisner as student and teacher-specific outcomes (see Fig. 1).

The use of the term 'personal outcomes' serves to differentiate between subject-specific achievements and the more individualised outcomes of learning associated with what a student can do and knows beyond a given subject specialism, but it fails to articulate specifically what these personal outcomes might be and consequently its use does not inform the design of curricula. Thus more appropriate descriptors are posited (see Appendix 2), namely, 'personal transferable outcomes' and 'generic academic outcomes'. Both of these forms of outcomes derive from Eisner's 'student-outcomes' (see Fig. 1), because they may be only tangentially linked to subject-specific outcomes and because they are, to an extent, individualised. They may have been taught directly, for example, 'the ability to differentiate between evidence and example', or indirectly through the actions of a lecturer, for example, 'the development of effective oral communication skills', or they may have been learned by the student as a consequence of his/her involvement in a learning experience, for example, 'how to take responsibility for one's own learning'.

Both personal and generic outcomes are perceived as being transferable to a wide range of contexts and in this respect they differ from subject-specific outcomes. The notion of 'transferability' is taken from the work carried out by the National Council for Vocational Qualifications (NCVQ) which has advocated the teaching of transferable skills 'based on the assumption that the acquisition of the core skills in some areas of competence and contexts offers the potential of generalisation or transfer to other areas and contexts which employ the same skill' (Jessup, 1990). Core skills, which generally refer to problem-solving, communication skills, numeracy, personal effectiveness and information technology skills, are now considered to be an integral element of competency-based curricula such as NVQs and the Management Charter Initiative (MCI) and are instrumental in providing the impetus and framework for the inclusion of non-traditional personal outcomes in higher education curricula. Yet whilst competency-based education has its origins in teacher education (Elam, 1971; Burke et al., 1975; Burke, 1989), it is still not widely associated with non-vocational undergraduate study in universities, either new or old. The idea of being competent meaning 'performing to professional or occupational standards' (Jessup, 1991) smacks of training rather than of education, in its broad sense, and in consequence is eschewed by many academics who are committed to the belief that higher education is of intrinsic, not extrinsic worth, who share the view that 'to be educated is not to have arrived at a destination; it is to travel with a different view' (Peters, 1965, p. 110), and who fail to recognise that the intrinsic and extrinsic are not mutually exclusive.

The form of learning outcomes posited for use in higher education does, however, differ from that of competency-based outcomes associated with vocational education. Personal outcomes are divided into 'personal transferable skills' and 'generic academic outcomes' (see Appendix 2). The latter connote a set of qualities which characterise a graduate and which involve some kind of 'balance of knowledge, skills, creative thought and motivation' (Otter, 1992, p. 2). These outcomes are deemed to be developed through undergraduate study, but are thought to transcend discrete subjects, and typify the cognitive attributes of graduates. (The key academic outcomes which have been identified at the University of Wolverhampton are given in Appendix 3.) The former are akin to NVQ core outcomes and describe those skills which are associated with an individual who has received training and/or education at an advanced level. They are not necessarily confined to graduates, but they represent the skills which graduates are deemed to require as part of their portfolio of attributes which will enhance their employability and their personal capability. (The list of the key transferable
skills which have been developed at the University of Wolverhampton is given in Appendix 4.) Rather than referring to ‘personal transferable outcomes’, the term ‘capability’ is preferred by Stephenson & Weil (1992) and Stephenson (1994), and Higher Education for Capability (HEC) which defines the attribute of capability as a student’s ability to:

(i) take effective and appropriate action, (ii) explain what they are about, (iii) live and work effectively with others and (iv) continue to learn from their experiences, both as individuals and in association with others, in a diverse and changing society. (Stephenson & Weil, 1992, p. 1)

The transferable nature of capability is emphasised by HEC, which stresses the importance of students’ ‘application, understanding, integration, autonomy, development, responsibility and collaboration’ (Stephenson, 1994). But the characteristic of transferability is not immediately explicit in the descriptor ‘capability’, hence the expressed preference for ‘personal transferable outcomes’ (see Appendix 2 and Fig. 1) which emphasises the individuality and wide-ranging applicability of this form of outcome.

The development of the trichotomy of outcomes has also evolved from UDACE’s definition of personal and subject-based outcomes (see Appendix 2 and Fig. 1). But UDACE does not differentiate between subject-specific and academic outcomes, combining them as ‘the ability to apply knowledge in different situations and the processing skills acquired through the use and application of knowledge’ (UDACE, 1989, p. 3). Whilst the lack of emphasis on subject knowledge inherent in this definition might well be appropriate for vocational education, the subject orientation of undergraduate study requires articulation of the specific knowledge, understanding and skills which have been achieved within the context of a given subject. Hence the separation of subject-specific from generic academic outcomes in the model posited in this paper.

Thus the term ‘learning outcome’ is used in higher education to encompass core subject-based outcomes, personal transferable outcomes and generic academic outcomes (see Appendix 2 and Fig. 1). It has been suggested that learning objectives, subsumed within the subject-based outcomes, do not represent the totality of the consequences of learning in higher education and that the achievements of students in terms of personal outcomes should be articulated and celebrated. Whilst potentially contentious, this assumption is both recognised and given credibility by the Higher Education Quality Council (HEQC) guidelines for assessment which differentiate between learning objectives and other forms of outcomes by indicating that a possible form of enquiry, on inspection, is: ‘how an institution reassures itself that practices fully cover all declared learning objectives and learning outcomes’ (HEQC, 1993). Notwithstanding the reservations of some academics, outcome-based education is gaining momentum through the Enterprise in Higher Education initiative launched in 1989, sponsored by the former Employment Department (ED), and through the current thrust for universities to develop and accredit NVQs at levels 4 and 5. A recent press release from the Committee of Vice-Chancellors and Principals (CVCP), confirms the involvement of universities with the ED, the NVCQ and the Scottish Vocational Education Council (SCOTVEC) in the extension of vocational qualifications, ‘provided that they integrate and develop cognitive, core and subject-specific abilities to levels which are comparable with those already attained in existing HE [higher education] programmes of vocational education’ (CVCP, 1994).
Learning outcomes have evolved both from rational curriculum design (see Fig. 1) and the work of Eisner. Consistent with the work of Tyler (1949), Mager (1962), MacDonald-Ross (1973) and Eisner (1979), the use of outcomes emphasises student achievement and affirms that curriculum planning should begin with what is learnt rather than what is taught. It is acknowledged that there is a dichotomy between learning and teaching intentions, but the process of defining and expressing learning outcomes should enable lecturers to reflect upon what they intend their students to learn and thereby articulate the relationship between what they teach and what students do, in fact, learn.

This presupposes that the learning outcomes are clearly expressed, in a form which enables learners to know at the commencement of a course or module, what it is they are expected to achieve in relation to subject content, personal transferable skills and academic outcomes. But this is not tantamount to pre-specifying unambiguous statements of predicted behavioural objectives which derive from a given learning experience. This is unacceptable on three grounds. First there is no intention that outcome statements should seek the unity of response which necessarily characterises behavioural objectives. Secondly there is no assumption that the outcomes derive uniquely from either the teaching objectives or the course/module content. This is not to undermine or denigrate the role of the lecturer, but rather to emphasise the role of the student in accepting responsibility for his/her own learning and to acknowledge that learning might take place in a variety of settings. Thirdly, there is no explicit expectation that the course/module must necessarily be completed in order to achieve the outcomes, some of which may be claimed through Accreditation of Prior Experiential Learning (APEL) schemes.

Equally unacceptable in higher education is the demand for behavioural objectives that indicate explicitly 'standards of the student's expected performance' (see Appendix 1). The demand for crisp, unambiguous, objective measurement of learning achievement was heavily criticised by Eisner who bemoaned the 'preoccupation with standardised outcomes' (1979, p. 15) which dominated planning in the 1960s and 1970s. Lecturers in higher education are continually making judgements about, for example, their students' ability to argue cogently, to analyse material and to interpret data. None of these are subject to absolute standards, yet all are assessable against a set of criteria.

Whilst this uncoupling of the assessment of learning outcomes from the notion of a standard of performance is significant, assessment does remain at the core of curricula designed in learning outcome form. The more subject-specific, personal transferable and academic outcomes are clearly expressed, the more the learner is able to concentrate on what he/she needs to know in order to succeed on a given module or course. This places a greater emphasis on the specification of assessment tasks and the criteria by which judgements will be made, thereby forcing both the student and the teacher to examine and articulate the relationship between learning outcomes, assessment and the experience of learning.

Learning outcomes may well subsume a form of learning objective, but the abandonment of the descriptor 'behavioural' is absolutely crucial in allowing outcome-led design to shed the mantle of behaviourism which is antithetical to higher education. A concept of learning embracing subject-based, personal transferable and generic academic outcomes is consistent with the attributes which characterise a graduate in the 1990s, but there are fundamental conceptual differences between outcome-led design and the traditional university approach which emphasises input and process. The challenge to designers of curricula in higher education is now to harness the use of learning outcomes to view learning from the...
perspective of the learner, rather than the lecturer, and thereby to enrich the quality of learning experienced by undergraduate students.

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REFERENCES


Dewey, J. (1934) *Art as Experience* (New York, Minton, Balch & Co.).


ELAM, S. (1971) *Performance Based Teacher Education—what is the state of the art?* (Washington, DC, American Association of Colleges of Teacher Education).


Appendix 1. Significant stages in the specification of objectives

1949  
**Educational Objectives (Tyler)**

An objective represents 'the kinds of changes in behaviour that an educational institution seeks to bring about in its students' (p. 6).

Objectives should include:
(i) behaviour aspect; and
(ii) content aspect.

1962  
**Instructional Objectives (Mager)**

An objective states what a ‘learner will be able to do’ after the learning experience that he could not do before. Objectives:
(i) should be unambiguous, composed of verbs that describe the *performance*, the observable actions that the learner is expected to do;
(ii) have the important *conditions* under which the performance is to occur clearly stated; and
(iii) indicate the *criterion* of acceptable performance by describing how well the learner must perform in order to be considered acceptable’ (p. 21).

1969  
**Instructional Objectives (Popham et al.)**

According to Eisner, consensus exists between Mager, Tyler, Gagné, Bobbitt, and Bloom that instructional objectives:
(i) should describe *student behaviour*, not teacher behaviour;
(ii) should describe ‘both the behaviour to be displayed and the content in which the behaviour is to occur’; i.e. *conditions*; and
(iii) should be stated at a ‘level of specificity that makes it possible to recognise the behaviour should it be displayed’ (pp. 1–2).

1973  
**Behavioural Objectives (MacDonald-Ross)**

An objective states ‘what the student will be able to do after the learning experience (that he could not do before)’ (p. 4).

Objectives:
(i) (somehow) relate properly to the general educational aims;
(ii) are brought to the appropriate level of detail by specifying the *conditions* relevant to performance;
(iii) include an indication of a *standard* of performance.

1977  
**Behavioural and Non-behavioural Objectives (Cohen & Manion)**

Objectives are ‘formulations of educational intent’ (p. 32). Behavioural objectives identify, ‘the learner’s overt achievements’ (p. 33). Non-behavioural objectives indicate what the teacher plans to do; i.e. *teaching objectives*, or the elements of the content; or behaviour in abstract terms (p. 34).

Appendix 2. Significant stages in the specification of learning outcomes

1969  
**Expressive Objectives (Eisner)**

... are ‘the outcome of an encounter or learning activity which is planned to provide the student with an opportunity to personalise learning’ (Popham et al., 1969, p. 130).

1979  
**Eisner**

Distinguished between three kinds of ‘objectives’:
(i) behavioural objectives;
(ii) problem-solving objectives; and
(iii) expressive outcomes, which relate to personal purpose and experience.

‘Outcomes are essentially what one ends up with, intended or not, after some form of engagement’ (p. 103).

1979, 1992  
**Eisner Trichotomy of Outcomes**

*Student outcomes* involve what the student has learned that has not been taught—goes beyond
classroom instruction. Personalised learning, learning from intellectual interaction, learning stimulated by the course which might only be tangentially related. 

Subject-specific outcomes are directly related to the content that is taught. These can be, but are not necessarily, related to the course objectives.

Teacher-specific outcomes
Intellectual style, standards, values.

1989, 1992 UDACE
Learning outcomes are 'what a learner knows, or can do as a result of learning' (Otter, 1992, p. i).

More specifically these are:
subject-based outcomes, knowledge, comprehension, the ability to apply knowledge in different situations and the processing skills acquired through the use and application of knowledge;
personal outcomes, including interpersonal skills like team work and negotiation, and intrapersonal skills like motivation, initiative and critical self-reflection'. (UDACE, 1989, p. 3)

1994 Allan
Learning outcomes in higher education encompass:
subject-based outcomes which subsume learning objectives and which are complex discipline-based outcomes which are capable of being assessed;
personal transferable outcomes, including acting independently; working with others; using information technology, gathering information; communicating effectively; organisational skills; and generic academic outcomes
Making use of information; thinking critically; analysing; synthesising ideas and information.

Appendix 3. Generic academic outcomes

1. Make use of information
Criteria:
* supplement notes with appropriate reading;
* reference correctly;
* select and use relevant references and quotation to support the points you are making;
* use specialist texts and journals to substantiate your arguments;
* draw together material from a variety of sources into a coherent argument.

2. Analyse
Criteria:
* identify ideas, concepts and principles that underpin theories in your subjects;
* explain the relationship between different elements of a theory;
* distinguish between evidence and argument and hypothesis;
* evaluate ideas and concepts;
* recognise the difference between assertion and argument;
* recognise and acknowledge inconsistencies in arguments.

3. Think critically
Criteria:
* examine problems from a number of perspectives;
* question and challenge viewpoints, ideas and concepts;
* make judgements about the value of evidence, concepts and ideas;
* develop and be able to justify your own opinions on significant ideas and concepts in your own subject.

4. Synthesise ideas and information
Criteria:
* relate new ideas and concepts to previous ones;
* relate theoretical ideas to practical tasks;
* integrate learning from different modules you have studied;
* organise and structure ideas, concepts and theories into a coherent whole.

(Allan et al. (1994) Record of Achievement Project, University of Wolverhampton)
Appendix 4. Key transferable skills

The ability to:

1. Communicate effectively
   (i) Writing skills: write accurately and effectively in a variety of structured formats (e.g. essay, reports, instructions), and demonstrate the appropriate conventions in each. Recognise different audiences and demonstrate use of appropriate writing styles, and relate these to appropriate audiences.
   (ii) Oral presentation skills: present material in a variety of structured formats (e.g. formal presentations, formal and informal explanations, instructions). Recognise different audiences and make use of appropriate styles, including interactive responses.

2. Organise
   Identify and use existing resources effectively; develop flexibility in approaches to the management of work in hand. Recognise task demands and manage time effectively. Monitor, review and reflect upon self-management.

3. Gather information
   Gather information (archival and library material, data, statistics) and develop effective storage and retrieval systems. Interpret, analyse and synthesise material in a variety of forms (statistical or textual data, in an appropriate context).

4. Use information technology
   Create, store, send and retrieve data in a variety of forms (word-processing, e-mail, databases, spreadsheets, graphics). Make effective use of information from a variety of sources, e.g. CD-ROM, JANet, Internet.

5. Act independently
   Develop autonomy, initiative, self-motivation and resourcefulness; demonstrate decision-making and problem-solving skills. Assess progress, and monitor, review and reflect upon own performance and achievements.

6. Work teams
   Work co-operatively in groups, share decision-making and negotiate with others. Awareness and ability to adopt a variety of roles. Listen to relevant opinions before reaching decisions and relate the ideas of others to the task in hand. Evaluate the strengths and weaknesses of group effectiveness and of own performance within it.

7. Numeracy
   Process numerical information related to real-life problems and interpret outcomes. Develop sufficient symbolic language and vocabulary skills to express and interpret a variety of coded systems.

It is important to remember that self-assessment should be incorporated into all of the above, in order that students can: identify learning processes and gains made; develop self-knowledge and the ability to reflect upon effectiveness; record, monitor and review progress; and make decisions about further development of skills.

Allan et al. (1994) Record of Achievement Project, University of Wolverhampton)