Linking Levels, Learning Outcomes and Assessment Criteria – EHEA version

Jenny Moon, Bournemouth University, UK

Jenny@Cemp.ac.uk Feb 2007

Note: Most of the material in this paper is included in more detail in a book by the same author – The Module and Programme Development Handbook, published by Routledge Falmer, London (2002), though the material on level descriptors is modified to reflect EHEA developments

1.00 Introduction

In recent years, most UK higher education has shifted to an approach centred on the outcomes of learning. The change has implied the requirement to write modules and programmes using outcome-based terminology. This paper is designed to introduce the terminology and to demonstrate how the main descriptive structures should interrelate. The paper uses an integrated approach to the design of programmes and modules as a context for the description of level descriptors, learning outcomes and assessment criteria and their relationships.

Firstly we set the context. In the EHEA there is an overarching framework of three cyles – which comprise qualifications up to a Batchelor's degree, those at Master's and those at Doctorate standard. There are allowances for short cycles, mainly in the first cycle, that reach a level below that of the full cycle.

A qualification (eg Batchelors degree) is a programme and most programmes are broken up into smaller elements that are assessed within the unit. In the UK, we use the term 'modules' and that is the terminology that is used in this booklet. An equivalent in other places is a 'course'. Modules are accredited (credit is attributed to a module) at a particular level. The amount of credit attributed to a module is based on the amount of learning needed to achieve learning outcomes in given time. ECTS is the unit used across EHEA. Where ECTS are related to credits in the UK, one credit in the UK has been taken as worth half of an ECTS.

It is usual in the UK for modules to be described in a module description form in which there are usually specified aims, learning outcomes, and details of the assessment and sometimes of the content. There is also information about the level of the module, the module leader, the number of credits attributed to it and any other modules to which it is related. The term 'learning outcome' is taken, in the context of this paper, to imply a statement written about the learning that is expected to be demonstrated at the end of a module. In the Bologna /EHEA processes definitions of learning outcome used and to clarify our present use in the broader context, Appendix 7 describes the range of definitions that have been used. In this paper we refer to learning outcomes that are used to describe modules / courses and that are developed by the teachers of those modules.

Programmes, in the UK are described in a programme specification. This contains information about overall educational outcomes that are expected to be achieved by successful graduates. There is further information about the component modules and assessment procedures etc.

The work on assessment criteria in this paper is newer than that on levels and learning outcomes. It is only recently that we have seriously considered the relationship of assessment criteria to the other elements. These issues are under consideration in many institutions at present. In many workshops we will not actually cover the section on assessment criteria, but it is presented in this paper because it is an essential part of the coherent structures of a module.

The principle that underpins this paper is that learning outcomes relate to assessment criteria and the process of assessment. The standard is guided by a set of level or qualification descriptors. These guide the writing of learning outcomes and are therefore an essential element in the structure presented (see below).

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2.00 A context for levels, learning outcomes and assessment criteria through an overview of curriculum design

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A basic model that underpins the sequence of the paper is shown in Fig 1. The model represents an ideal sequence for module development. The model provides a rationale for ensuring the existence of a relationship between level, learning outcomes, assessment criteria, assessment and teaching methodologies. The model (Fig 1) is concerned with establishing student achievement at threshold standard. It does not, at this point, take into account the addition of a grading system above threshold. An elaborated version of model provides a design that incorporates grading. (Fig 4).

See Fig 1 over the page.

Fig 1 Basic model of module development



The model (Fig 1) depicts the following sequence. The sequence is also used to structure the writing in this paper.

Level descriptors (or if nothing else is available, qualification descriptors) and module aims guide the writing of learning outcomes. A set of level descriptors may act directly as a guide for the writing of learning outcomes or the level descriptors may be translated into descriptors for the discipline or programme. In either case, the level descriptors ensure that the outcome statement is clearly related to a particular level and they provide an indication of agreed achievements. Learning outcomes are derived from consideration of level descriptors and aims. Learners must achieve the learning outcomes to gain credit for the module. Aims provide a rationale or a direction.

Learning outcomes imply the assessment criteria. Assessment criteria may be developed fully from the learning outcome or partly from the nature of the assessment task – but in either case they must relate to the learning outcome. There are many reasons for developing assessment tasks – such as to provide feedback and these will affect the manner in which an assessment task is designed. However, the purpose of the task with which we are concerned here is to test that the learning outcomes have been achieved. A teaching strategy, on this model, is seen as being designed in relation to assessment processes, providing the support necessary to enable the students to be successful in attaining the threshold indicated in assessment criteria.

It is important to check the coherence of the cycle. This means going through it as often as necessary, ensuring that each part that is linked to another part by lines on the diagram, and clearly linked in terms of the structure of the programme. Any element in the cycle of development can be revised except the agreed level descriptors that are fixed and represent a form of standards.

3.00 Generic level descriptors (with reference to Qualification Descriptors)

3.01 Introduction

Level descriptors are generic outcome statements of what a learner is expected to have achieved at the end of a level of learning – in this case in higher education. The EHEA definition of level is

'A series of sequential steps (a developmental continuum) expressed in terms of a range or generic outcomes, against which typical qualifications can be positioned'

Levels provide a structure to education, ensuring that the learning that is achieved through programmes progressively becomes more challenging. There are a many of sets of level descriptors in existence. Most are fairly similar in their content, though they differ in the detail (see below). Descriptors that are more detailed provide more guidance in terms of language in the writing of learning outcomes. This allows modules to be ascribed to a particular higher education level, a process that is essential for functioning within a credit framework. The reference to level descriptors has become essential in the UK, for the organisation of a modular system - as now exists in most UK higher education institutions.

We need to distinguish between level descriptors that are a guide for the development of appropriate learning material in modules (courses) and those that are guides to what students need to have achieved in order to gain a qualification in higher education. The latter are technically 'qualification descriptors'. We now look at how these ideas are being applied in the European Higher Education Area. In the EHEA, a structure of three cycles of higher education has been adopted - up to first degree stage, Masters and Doctoral study. Descriptors from Ireland have been adapted and adopted for these

stages ('The Dublin Descriptors'). It is intended that these (qualification) descriptors provide an overarching framework - the European Qualification Framework, which is designed to relate to 'local' (national) qualification frameworks that are already in existence. It is proposed that there will be an additional table of eight 'reference points' or 'levels' (ie level descriptors) that will describe typical learning in more detail. These will help to guide the attribution of standards and the appropriate development of courses within the EHEA framework.

3.02 Using descriptors

Most descriptors in the level descriptors are relevant to most programmes but there is not a necessity that all should be represented in a programme. For example 'group working' may not be developed in some programmes.

The descriptors can be used directly to guide learning outcomes. However, as we have suggested above, it has been found helpful for groups of staff to 'translate' the generic descriptors into subject language. The descriptors then become 'owned' and can guide more easily the writing of learning outcomes. This process of translation, that might only take an hour for each level, is valuable as staff development, requiring a group to consider in depth the expected outcomes of student work – and their work with students. As we have suggested above, it is appropriate to recognise that some descriptors may not be addressed in the programme. Similarly there may be specific areas that need new descriptors to be added (an example has been graphic design skills in architecture programmes).

When the descriptors are used for writing learning outcomes, it is important not just to look at the descriptors for a particular level, but to look at the same descriptors for the level below and that above the level under consideration.

3.03 The Dublin descriptors (December 2004) and other initiatives

Qualifications that signify completion of the higher education short cycle (within or linked to the first cycle) are awarded to students who:

> have demonstrated knowledge and understanding in a field of study that builds upon general secondary education28 and is typically at a level supported by advanced textbooks; such knowledge provides an underpinning for a field of work or vocation, personal development, and further studies to complete the first cycle;

> can apply their knowledge and understanding in occupational contexts;

> have the ability to identify and use data to formulate responses to well-defined concrete and abstract problems;
> can communicate about their understanding, skills and activities, with peers, supervisors and clients;
> have the learning skills to undertake further studies with some autonomy.

Qualifications that signify completion of the first cycle are

awarded to students who:

> have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education27, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;

> can apply their knowledge and understanding in a manner that indicates a professional29 approach to their work or vocation, and have competences30 typically demonstrated through devising and sustaining arguments and solving problems within their field of study;

> have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues;

> can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences;
> have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

Qualifications that signify completion of the second cycle are awarded to students who:

> have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research31 context;

> can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;

> have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgements;

> can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and nonspecialist audiences clearly and unambiguously;

> have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

Qualifications that signify completion of the third cycle are awarded to students who:

> have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;

> have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;

> have made a contribution through original research that

extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;

> are capable of critical analysis, evaluation and synthesis of new and complex ideas;

> can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;

> can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society.

A set of level descriptors has been developed within the European Commission to guide lifelong learning. This table does deal with levels and not qualifications. This set of descriptors (also called 'reference points) matches closely to the Dublin Descriptors, but includes intermediate levels, indeed, it also deals with sub-higher education levels. It provides descriptors for 8 levels and is intended to provide a common framework for a wide range of learning that might be vocational or technical as well as conventional higher education. This does provide some guidance for the development of modules /courses that part of qualifications. These descriptors are subject to consultation and are to be found on

http://europa.eu.int/comm./education/policies/2010/doc/consultation_eqf_en.pdf

(a point of interest)

Moon, looked at the elements that are used to describe student education in the SEEC descriptors a set of descriptors that is widely used in the south of England. These descriptors were developed in the early days of these developments in higher education. They informed the development of many other sets of descriptors and correspondingly similar elements tend to be present in many other sets of descriptors. The 'strands' are in two sets:

Strands that relate to the context of the learning

Change in the complexity of knowledge that is presented – the degree of challenge of the material of learning to the learner;

Change in the complexity of tasks that the learner is expected to be able to tackle. This may be expressed in terms of the degree of predictability or structure in the task;

Change in the support for or guidance given to learners - the degree of management of that learning or guidance in tasks and the amount of student autonomy allowed for or expected.

Strands that relate to the learner's qualities and abilities

Learner's skills that are not directly related to the development of academic learning – these may be vocational or employability-related;

The capacity of learners to be autonomous - the degree of the learner's responsibilities for her actions in the learning and tackling tasks in the context of formal education and / or in the workplace;

The ability of learners to study, to research and to manage learning resources and information;

Self-awareness, self-knowledge, self-management and the ability to evaluate own performance;

The sophistication of the learner's skills of manipulation of knowledge (analysis, synthesis evaluation and application);

The capacity of the learner to deploy knowledge in tackling tasks / solving problems;

The learner's range of knowledge and understanding of a discipline / disciplines;

The learner's understanding of the nature of knowledge and knowing.

This list of elements may be useful as a guide in the development of new sets of level descriptors. More detail is given in Moon, (2004).

4.00 Guidance for writing and using learning outcomes

4.01 Introduction

The use of learning outcomes and associated threshold assessment criteria provides a mechanism for describing learning either in prospective terms - to be achieved, or in retrospective terms - learning that has been achieved already (eg for accreditation of prior learning purposes). Learning outcomes are relatively general statements, related to level descriptors and to assessment and assessment criteria, that focus on the standards of achievement required in assessment of that learning.

While the principle purpose of learning outcomes concerns standards of student learning, and the relationship of learning to assessment, there are many other ways in which such statements may be used. Appendix 2 lists more of these. Bearing in mind the different uses of learning outcomes, the audience for them may need to be considered. Since communication is usually important, the comprehension of the audience needs to be taken into account and very technical language should be avoided.

It is common now, that learning outcomes are categorised into the apparent characteristics of learning to which they refer. They may be written with reference to subject specific knowledge and understanding, cognitive or core academic skills and other skills (key / transferable - or other terminology).

Although the development of such categorisation systems may be justified on the basis of convenience (see below), there is a logical problem in this procedure. We take for an example, a cognitive or core academic skill such as analysis. The existence of categorisations suggests that we should be able to describe the analysis processes undergone by – say a level 2 student – in a statement that is devoid of reference to content or the nature of the material that is being analysed. The statement should simply consider the nature of the analytical processes. In reality, the sophistication of analytical skill is largely determined by the complexity of the material that is being analysed. A child of five can analyse – so long as the material for analysis is sufficiently

simple. On the basis of this argument, it is illogical to try to write learning outcomes that are categorised.

There may be practical values in attempting to introduce some categorisation of learning outcomes. In particular, this relates to key or transferable skills that are developed in modules. The practical skill content of programmes is a current major concern in higher education, and the indication of where skills are developed within modules through learning outcomes provides an easy method of mapping the skill content of modules and ultimately of the whole programme.

A factor that may influence the manner in which learning outcomes are constructed is the development in the UK of **subject benchmarks** (Appendix 3). Subject benchmarks are written for honours degree level and hence are likely to be more influential on learning outcomes written for modules at level 3 – but of course, benchmarks should only influence learning outcomes if they influence too the content of the learning.

Generally speaking, the term 'learning outcome' has been applied to the outcomes of relatively small blocks of learning such as modules or short courses. However, the introduction of **programme specification** (Appendix 4) has provided a somewhat similar structure for whole programmes – described at the 'programme outcome'. Appendix 4 describes the characteristics of programme outcomes in relation to learning outcomes.

4.02 Definition and examples of learning outcomes

In terms of definition:

A learning outcome is a statement of what a learner is expected to know, understand and be able to do at the end of a period of learning. Learning outcomes are linked to the relevant level and since they should generally be assessable they should be written in terms of how the learning is represented.

Sometimes the definition of a learning outcome is written in terms of 'the learner will (be able to do something)...'. In these days of litigation, it is safer to use the notion of 'expected to be able...' since a teacher has no real control over a student's learning. An alternative is to use the term 'intended' or 'anticipated' learning outcomes.

Learning outcomes do not usually specify curriculum, but more general areas of learning. There may be exception to this in science and applied science subjects (see 4.04). It is unlikely that there will be more than eight learning outcomes per module. If there are more than ten, they are probably specifying too much curricular detail and will be unmanageable in the process of assessment.

It is important to relate learning outcomes to a level. This means that it is not appropriate to use the same learning outcomes for a module that may be delivered at two different levels. In such situations, while the teaching may be the same, the learning outcomes and assessment should differ, relating to the relevant expected level of learning.

Examples of learning outcomes:

Eg 1 Level 2 B.Ed programme

At the end of the module the learner is expected to be able to -

- explain the more common reasons for difficult behaviour in primary school children in class situations, indicating standard techniques for ameliorating that behaviour.

or - within the context of a class situation, demonstrate and evaluate the use of appropriate examples of positive reinforcement for the purpose of the improvement of behaviour.

Eg. 2 Level 3 English Literature.

At the end of the module, the learner is expected to be able to -

- demonstrate detailed understanding of the influences of the historical and social context within which the chosen text is set, both from the study of the text itself and from the study of other contemporary literature.

(Comment: this learning outcome could mention the text by name, but by focusing on the skills to be acquired, one avoids being tied to the same text in the future).

Eg 3. Level 2 Physics

At the end of the module, the learner is expected to be able to -

- perform correctly calculations on wave functions and in the solution of the Schroedinger equation for a range of one-dimensional problems.

Eg.4 Level 3 Physics

At the end of the module the learner is expected to be able to –

- describe and explain the function of the basic devices of optoelectronics; optical fibres; liquid crystal displays; bi-polar and surface field effect transistors and MOS light emitting diodes.

Some forms of module may seem to be problematic for description in advance through statements of learning outcome. An example is negotiated learning or modules that are described as 'independent studies' where, as a part of the module, the learner identifies the subject matter to be studied (and represented in a project, essay etc). In such cases the learning outcomes (quite logically) will relate to the learning of the skills of autonomous learning, project skills and other matters that will usually be the rationale for the design of such a module anyway.

Here is an example of a negotiated learning learning outcome at Master's level

At the end of the module the student is expected to be able to:

- write an appropriate and agreed learning contract with correctly structured learning outcomes;
- fulfil the learning contract, demonstrating efficiency and autonomy in the management of the required research, learning and reporting

4.03 Learning outcomes, aims and objective

The difference between learning outcomes and aims is that aims are written in terms of teaching intention and indicate what it is that the teacher intends to cover in the block of learning (curriculum coverage). Learning outcomes are descriptions of what the learner is expected to learn in the period of learning defined. They should imply the standard of learning expected. Aims are therefore more about teaching and the management of learning, and learning outcomes are more about learning.

Objectives complicate the situation. They may be written in the terms of teaching intention or expected learning outcome. Objectives that are called 'behavioural' or 'learning objectives' are more likely to be written in learning outcome format. This complication is a good reason for abandoning the use of the term 'objectives' in the description of modules or programmes.

Since learning outcomes and aims have different functions, it can be useful to write an aim for a module in addition to learning outcomes. An aim can be a statement of general teaching intention and coverage as well as indicating the content of the module and its relationship to other learning or the whole programme (etc). In effect, an aim provides direction.

4.04 Issues of control in aims and outcomes

It is worth thinking about the issue of control in aims and learning outcomes and this has implications for the kinds of outcomes that are written. Because statements of aim are teaching intentions, they are very much within the control of those teaching. Teachers decide what material is to be covered and they teach it. Learning outcomes are less within their control because it is not possible to force a learner to learn. Only a learner can control learning and therefore the achievement of learning outcomes.

Another point, emerges from the consideration about control. Mostly in higher education, learning outcomes are written for testing at the end of a module. However, in the case of much vocational education, the ability of the learner to demonstrate learning at the end of a block of learning is of little use. S/he will need to demonstrate that that learning has affected her/his practice in the workplace at a later stage and these longer term learning outcomes are even less under the control of those designing or teaching the initial programme. However, in the real world, they are of much greater significance. There is nothing to prevent the writing of both types of learning outcome for a module, so long as both are assessed. Exceptionally, however, it may be useful to anticipate longer-term learning through outcome statements that, in reality, cannot actually be assessed.

4 05 The components and language of learning outcomes

A well-written learning outcome is likely to contain the following components:

• A verb that indicates what the learner is expected to be able to do at the end of the period of learning.

- Word(s) that indicate on what or with what the learner is acting. If the outcome is about skills then the word(s) may describe the way the skill is performed (eg 'jump up and down competently').
- Word(s) that indicate the nature (in context or in terms of standard) of the performance required as evidence that the learning was achieved.

In the example above (3.02): 'demonstrate detailed understanding of the influences of the historical and social context within which the chosen text is set, both from the study of the text itself and of the study of other contemporary literature'.

the verb is 'be able to demonstrate' (what the learner has to do);

the words that indicate on what or with what the learner is acting - the influences of the historical and social context etc.

the words that describe the nature of the performance are 'demonstrate detailed understanding' and 'the study of the text' and ' the study of other contemporary literature.

The third component of the learning outcome tends frequently to be omitted. Since it is the component that mainly provides the main links to assessment criteria and level descriptors its presence is important to ensure the links in the cycle (Fig 1). However, when there are clear assessment criteria that are obviously linked to the learning outcome in other components, the third component is be less important.

In addition, learning outcomes written for different disciplines may differ in their components because of the structures of knowledge. In science disciplines or in some parts of science disciplines, there is a generally agreed hierarchy of knowledge so that the aspect of optoelectronics mentioned in the example above, is acknowledged to be level 3 material for example. The nature of the subject matter, in such cases, will itself determine level and extra words that indicate the depth of knowledge may not be necessary. In contrast, in many humanities and arts subjects, a knowledge component may be encountered in modules at any level and issues such as the depth or context of the knowledge will indicate the level of the module.

In terms of sequence, some learning outcome statements may not order the components as above – and a learning outcome statement does not need to be written in one sentence alone. However, many learning outcome statements that run into multiple sentences are actually several learning outcomes – and problems may arise when it comes to assessment.

Another important factor about the language of learning outcomes relates to fundamental factors about learning. We assess the representation of learning – not the learning itself. A learner may 'take in' ideas and may have learnt them, but until we can see the ideas represented (in an essay, report, verbal statement etc), we cannot know that the learning has occurred. There will always be different ways in which the same learning can be represented and learners may be more able at one form of representation than another. A dyslexic student may have learned something but she may be unable to represent it in writing. Learning outcomes need, therefore to be written in terms of the representation of learning (eg not 'be able to understand', but 'be able to demonstrate understanding of...').

Some useful vocabulary for writing learning outcome and assessment criterion statements is included in Appendix 1. Some of the words are about the process of learning and some about the representation of learning. It is appropriate to mention the quality of learning in a learning outcome, so long as this is accompanied by words that indicate how that learning should be represented – thus making the learning outcome assessable.

4.06 Learning outcomes and their location at minimum / threshold standard

Learning outcomes are **statements of essential learning**, and as essential learning, they are written at minimum acceptable or threshold (pass / fail) standard. The learning described in learning outcomes is the learning that must be attained in order that the learner can pass. In effect, learning outcomes are written at the pass / fail point.

There are important implications of the paragraph above. That learning outcomes are essential means that a learner attains or fails to attain a learning outcome. If the learner attains some learning outcomes and fails to attain others, s/he should fail the module. In practice many institutions do not operate this system and compensation is allowed – some outcomes passed 'better' compensate others that are not passed. Technically this represents a confusion between a grading system and the use of a threshold learning outcome system.

Grading is a separate operation from passing or failing to pass a learning outcome. The criterion for attaining a learning outcome will match the pass / fail point for the grade assessment criterion (see the material on assessment criteria below). Many people are surprised when they realise that learning outcomes are written at threshold standard, however the use of such a standard is fully justified in terms of creating a clear relationship with assessment and level. There are other important reasons for this too, that concern the essential qualities of higher education learning. They are demonstrated in Fig 2.

Fig 2 Learning outcomes and the qualities of higher education learning



The figure above represents a notional view of student achievement, from 0 to 100%. Learning outcomes drawn at a pass / fail point of 40% can be said to 'tie down' in description, only the lowest 40% of achievement. They tell the student what s/he must do in order to pass the module. In this way they form a sort of contract between the teacher and the student – 'If you achieve these, I will let you pass the module'. It seems completely fair to tell a student what s/he must do to pass.

The important point that is made by this model is that the 60% of learning above the learning outcome does not have to be 'tied down' in description though it may be described in (optional) grading assessment criteria or more generally in 'desirable learning outcomes – see below. It is 'space' in which the essential qualities of higher education learning can be expressed either in the teaching process or in the student's learning – exploration of ideas, reflective thinking, creative expression and so on. Seen in this way, the writing of learning outcomes is fair to students, provides accountability and a form of liberation of learning.

Ironically, it is often the same people who say that learning outcomes should be written for the average (modal) student who also complain that learning outcomes tie down or 'dumb down' learning. It is when learning outcomes are written at modal 'standard' in effect, that they tie down more learning. Another problem that arises with the modal placement of learning outcomes is raised by the question – where is 'modal standard'- is it 55%?, 60%? 65%? In order to relate learning outcomes to assessment we would have to know where they are located on a grading scale.

It may be useful to note on this diagram (Fig 2), that learning outcomes written at 100% act as competency statements – and the only options are then 'pass' or 'not yet ready to pass'.

4.07 Learning outcomes and assessment – some further points

While learning outcomes are meant to have a clear relationship to assessment, in practice this tends to be a somewhat confused area. Certainly, all learning outcomes should be assessable – in other words they should be written in terms that enable testing of whether or not the student has achieved the outcome. We have mentioned above that learning outcomes need to be written in the language of representation of learning.

While we can say that all learning outcomes need to be assessable – capable of being assessed - they may not all need to be actually assessed in practice and a decision on this may be an institutional issue. Clearly there are situations in which all learning outcomes do need to be assessed – such as where license to practice or competence to perform an essential vocational task is concerned. In other situations, however, it may be appropriate to recognise that we often sample learning outcomes for assessment. In an examination paper in which students have a choice as to which questions to answer, they may not be tested on every learning outcome. It may be important, in sampling learning outcomes, to say that all students should at least expect to be tested on each learning

outcome – even if the assessment task actually samples.

5.0 An introduction to writing and using assessment criteria

In general terms an assessment criterion is a statement that prescribes with greater precision than a learning outcome, the quality of performance that will show that the student has reached a particular standard. The standard may be the threshold that is described by the learning outcome or the standard that is required in order to gain a particular grade.

What are assessment criteria in relation to assessment methods and tasks etc? While assessment methods are the tasks undertaken by the student – such as writing an essay that is subject to assessment, assessment criteria are the basis on which a judgement of the adequacy of the work is made. There are many different ways to present assessment criteria, unlike learning outcomes.

Example of assessment criteria:

Learning outcome – level 1 At the end of this module, the student will be expected to be able to explain and demonstrate the main features of effective academic essay at level 1.

The assessment method is to write an essay and an assessment criterion that is developed might be:

The essay will be word-processed and between 1500 and 2000 words on a given topic. The essay will relate to its title, will be clearly written and structured, will demonstrate the contribution of further reading, and thinking. The student will be able to explain how the essay demonstrates these features and how they contribute to its overall effectiveness.

Example of assessment criteria

Learning outcome - Level 2 B.Ed programme: At the end of the module the learner will be expected, within the context of a class situation, to demonstrate and evaluate the use of appropriate examples of positive reinforcement for the purpose of the improvement of behaviour.

Assessment method – In the context of three teaching sessions, observed by her mentor, the student will demonstrate three examples of positive reinforcement in the class situation as a means of encouraging improvement of behaviour.

Assessment criteria:

- The learner will demonstrate at least three examples of positive reinforcement in order to improve behaviour.
- The examples will show that the learner understands the principles of positive reinforcement.
- They will be appropriate to the context and situation within the classroom at the time.
- The learner will be able adequately to evaluate the effectiveness of her own actions and the consequences of it, recognising any obvious ways of improving her practice.

The use of assessment criteria implies that a criterion-referenced system for assessment is in place. This is appropriate in an approach to module development that focuses on the outcomes of learning.

- In a criterion-referenced system, the judgement of the learners' work is made on the basis of its quality in relation to pre-defined criteria – the assessment criteria.
- A norm-referenced system is based on a pre-arranged distribution of gradings or passes and failures probably in terms of percentages of the whole group.

(It is not infrequent in higher education that a norm-referenced system quietly underlies and influences what is declared to be a criterion-referenced system. For example, concern about the low or high number of first class honours degrees in several cohorts can encourage adjustment of that number in later cohorts, even in a system that is overtly criterion referenced)

6.0 The place of assessment criteria in current higher education

At present the use of effective assessment criteria often seems to be a long way behind the use of learning outcomes and level descriptors.

- In some institutions the developments could be said to have gone too far, with religious describing of mechanistic criteria following every statement of every learning outcome.

- In other situations, however, in a module description form, the slot that requires some detail about the criteria often elicits information about the assessment method.

There tends to be a pervading resistance to assessment criteria. This is summed up in 'I know a good piece of work when I see it', an attitude that indicates a lack of comprehension of many issues in higher education today and of the rights of a student;

There are **more subtle reasons why assessment criteria are not used.** Making learning and the requirements of learning more transparent can expose difficult issues.

Eg in English modules where different approaches, taken by different lecturers are explosed when second marking takes place and there is disagreement.

It is important to **think about assessment criteria in the context of the assessment process**. There are different reasons for assessing. The form that the criteria take may need to reflect this.

7.0 The issue of precision

There is a concern about learning becoming too prescriptive in writing assessment criteria. This is often encouraged by a formalised template with boxes to fill in.. There may be a dictate that each learning outcome should be followed by several assessment criteria. There is a sense that we become ruled by paperwork and administration.

At their most detailed extreme, **assessment criteria will detract from the challenge** of the task for a student as they will tell a student what to do to gain high marks. On the other hand, if the assessment process is meant to help a student to learn (instead of just letting you know their standard of learning), then your use of criteria to help them to learn can be completely justified.

Sometimes precise detail in writing assessment criteria is more appropriate than in others. It may be appropriate in vocational situations where there is an issue of license to practice, but not in a level 3 essay where students should be tested on their ability to write – not told how to do it.

Learning outcomes and assessment criteria **can 'tidy-up' learning** in a manner that may please administrators but detract from the real learning experience (Moon, 2000). On the other hand, there are concerns sometimes that providing too much information about what features of work will be credited will mean that all **learners work to the minimum**.

We seek an informed balance. With levels and learning outcomes, we attempt to reach greater precision but with assessment criteria, sometimes it will be a matter of ensuring that the quality of learning is not destroyed by too much precision in assessment criteria. The balance should take into account, the purpose for assessment. So long as your use of assessment criteria is fair and open and well considered in terms of the purpose of assessment, there are no rights and wrongs.

8.0 Definitions of assessment criteria

There are different types of assessment criteria. Two are distinguished by the different jobs that they do in relation to learning outcomes. The third is 'the rest' – the two are:

Threshold assessment criterion - a standard of performance that a learner must reach in order to demonstrate the achievement of a specified element of learning – ie the threshold standard.

Grade assessment criterion - a specified standard of performance that the learner must reach in order to be allocated a particular grade within a hierarchy of grades. In this case there is likely to be a series of grade assessment criteria related to the different grades.

For a credit system or for basic use in quality assurance, it is only the threshold criteria that are of importance – they indicate whether or not a student has reached the standard to attain a pass for a module and whether or not she has gained the credit that will build towards the qualification. There are other forms of assessment criteria that we deem 'the rest' – a variety of less precise means of writing criteria.

'The rest': other forms of assessment criteria that tend to be more generalised in terms of the curriculum they cover (eg sometimes across all levels for any discipline for any task! inevitably less precise – and more significantly, they are not directly associated with learning outcomes.

9.0 Writing assessment criteria

Assessment criteria are generally simpler in their format than learning outcomes, and more varied in their format.

In either type of assessment criterion, there needs to be some sort of statement either of what the learner will do or a reference to the quality of the work that will be evident in the task in order to meet the criteria for success in the task. Eg reference to

- something that must be present (presence of correct grammar)
- or absent (absence of spelling mistakes)
- something should be done in a particular way (report needs to match a given format)
 - some role that must be fulfilled (*'the report will accurately describe the processes of preparation for the task, the task itself and the outcomes'*).

They may be presented in a tabular form, or as bullet points.

Assessment criteria should test, assess or relate to the learning that is mentioned in the learning outcome. Eg If you say students must 'write something', you should not test them orally.

In terms of the **standard** implied by a learning outcome being at threshold...

- for threshold assessment criteria, there is a match.
- for grade assessment criteria, the learning outcome will be written at threshold but grades will imply description of quality above threshold

In writing learning outcomes it is important to **introduce tentative language such as 'the student is expected to...**' because it is not possible to make a student learn. In the case of assessment criteria it is appropriate to use 'the student will....', because the student will only pass the threshold line, or gain a particular mark if she has fulfilled the criterion

Although they need to match the learning implied by the learning outcome, **assessment** criteria can be developed broadly from the learning outcome statement or from the assessment task

Fig 3 An illustration of the relationship between assessment criteria and learning outcomes

Learning outcome statements (especially the third component) imply threshold assessment criteria



Where the **criteria are closer in wording to the learning outcome**, they are likely to be fairly generalised in reference to what the learner should do – allowing for the development of alternative assessment tasks and they are likely to be fewer. Where the criteria are developed from the task they are likely to be more detailed

In writing assessment criteria, threshold assessment criteria give you more detail of what an assessment task needs to show in order to demonstrate that the learning has been achieved.

An example - the example, is worked from the basis of a sample learning outcome statement (level 1 – from module on skills in academic writing):

Learning outcome *At the end of this module, the student will be expected to be able to explain and demonstrate the main features of effective academic essay at level 1.*

The assessment task might be to write an essay

A threshold standard assessment criterion that is developed it might be: The essay will be word-processed and between 1500 and 2000 words on a given topic. The essay will relate to its title, will be clearly written and structured, will demonstrate the contribution of further reading, and thinking. The student will be able to explain how the essay demonstrates these features and how they contribute to its overall effectiveness.

More detailed threshold assessment criteria that are developed from the task might be:

The essay will demonstrate an appropriate working knowledge of word processing for production of level 1 written work, including layout and spell-check;

- grammar and spelling will be accurate;

- there will be reference to at least 7 relevant books / papers;

- these will be correctly referenced in the recommended manner;

- there will be some evidence of analysis of ideas;

- there will be some demonstration of synthesis of ideas at least in a summary and conclusion;

- there will be an appropriate structure with evidence of introduction, development and conclusion;.

In addition, in an oral session, with reference to his/her essay, the student will discuss the

features of an essay that make it effective, and will show how these features work towards the effectiveness of the essay.

The assessment criteria in the example above **say what must be present in the essay** for it to be judged to be acceptable. Since all of the statements are written at threshold, all should be reached in order for the learner to have achieved the learning outcome.

Grade assessment criteria provide a scaling of how well learners achieve above the threshold.

- They provide an incentive for learners to achieve at a higher standard than the minimum.
- We have said that these criteria relate to the standard set in the learning outcome only in so far as the grade assessment criterion that is at the pass-fail point must coincide with the learning outcome

10.0 The use of desirable learning outcome statements

Desirable learning outcome statements can help in the writing of grade assessment criteria. You need to be clear that they are 'desirable' and not mandatory – that they give direction rather than dictate. They can be valuable for marketing purposes of for communication with employers when you do not want to say talk about what the minimum acceptable standard is.

In order to maintain coherence in module development, it is appropriate to **write desirable learning outcomes as a development** from the usual (threshold) learning outcomes. An example is given below – first there is the statement of the learning outcome written at threshold.

Learning outcome Eg 15: Level 1 Introduction to Acting Drama programme At the end of the module, the student will be expected to be able to work with others in small task-orientated groups, participating and interacting in the group in a productive manner for him/herself and for the group as a whole

An **example of a desirable learning outcome** that could guide the writing of grade assessment criteria is:

The high-achieving learner will be able to work with and to lead others in small taskorientated groups, participating and interacting in the group in a productive manner for him/ herself and for the group as a whole. S/he will be aware of his / her role in the group, and able to describe his/her strategies and actions.

Grade assessment criteria will now be guided by both the learning outcome that provides the pass / fail point information and the desirable learning outcome that indicates the qualities of better performance that will attain a higher grade. The assessment criteria might be:

Fail – *The learner cannot or does not participate or does not work towards helpful co—operation in a group situation.*

Average pass – The learner works with others in a task-oriented group, participates and interacts in a productive manner for her/himself and the group.

High average – The learner works well with others in a task-oriented group, participating and interacting in a very helpful manner that suggests an increasing awareness of his / her role in the group and an increasing orientation towards the taking of leadership roles when appropriate.

Excellent – *The learner is able to lead and to act as a participant in a task-orientated group, is aware of his / her role in the group and is able to describe strategies and actions.*

11.0 Weighting assessment criteria

A system of weighting may be superimposed in many assessment situations. In the case of threshold assessment criteria, it is not the criteria that are weighted, but the **components of the task.** This means that some features of the work are identified as contributing to a greater extent to the achievement of threshold.

eg

Learning outcome *At the end of the module, it is intended that the student will be able to write a concise, clear and tidy report of a laboratory practical that must be laid out in the prescribed format.* (level 1 Introduction to Chemistry module).

The assessment task in this case is likely to be the writing of one or more reports that are assessed. There is some recognition in the writing of the learning outcome that 'conciseness', clarity and tidiness are judgements that are seen as less important than the use or lack of use of a prescribed format. A set of threshold assessment criteria based on the assessment of three reports might be:

- The reports are concise;
- They are clearly written so that the procedures could be repeated by another on the basis of the writing.
- They conform sufficiently well to the prescribed format. The attainment of this criterion takes priority over the others.

In other words, the conciseness, clarity and tidiness of the report will not be considered if the format is not correct.

Because **grade assessment criteria are not tied in the same way to a learning outcome**, a system of weighting would be appropriately expressed within the assessment criteria eg

Grade D Fail The report is not in the correct format, is insufficiently concise, clear or tidy.

Grade C Pass The report is in the correct format, is sufficiently concise, clear and tidy

Grade B	<i>The report is in the correct format. It is concisely written in a tidy manner with a very clear style.</i>
Grade A	The report is in the correct format, concisely written in a tidy manner. The clarity of the style of writing is exceptional and sophisticated. It would be worthy of a level 2 student.

Or

To achieve the learning outcome, the report must reach a minimum standard in the use of the correct format, the conciseness and clarity of the writing and the tidiness of the report (40% of the mark)

Above this, up to 10% more can be given for concise writing;

Up to 10% more can be given for clarity of the writing

Up to 5% more can be given for the overall tidiness of the presentation;

Up to 35% more can be given for the skilled and excellent use of the prescribed format.

The way in which the marks have been allocated here is **analytic as opposed to holistic**. In analytic marking, the marks are allocated to individual criteria or individual characteristics of the work. In holistic marking, marks are allocated on the basis of overall judgement of all or several criteria, as in the example above (Gosling and Moon, 2001).

12.0 Writing some other forms of assessment criteria

We suggested that this **third group broadly represents 'the rest'** – other assessment criteria that do not fit the first two groups. However, in more precise terms, these are usually the criteria that are more generalised, and that may not relate to any particular curriculum or to specific learning outcomes.

These forms of criteria represent probably, the **most common form of assessment criteria** in use. Sometimes they are more like 'marking guides' than assessment criteria.

One form of these generalised assessment criteria that is in very wide use in institutions deals with grading. It specifies the qualities of student performance that will merit a particular grade (or grade range) so it will be presented as a sequence of criteria.

To be allocated as a 'first', a piece of work is likely to be described in something like the following kinds of terms:

Outstanding work - extremely and accurate execution, going beyond the set requirements of the task, demonstrating wide reading which is effectively assimilated into the work.

Such a description may also be **used for application** to a laboratory report or an essay or a dissertation at any level. There are, however, some problems associated with this

commonly used system.

- the criteria are not associated with learning outcomes.
- the nature of the grading may not even indicate where pass / fail point is. For example, where degree classification terminology is used, where is the pass / fail point?
- another problem specifically relates to the degree classification system but is caused by the confused thinking around the use of generalised assessment criteria. Staff have been known to say that they cannot allocate 'firsts' to level 2 students in that these students 'just don't know enough yet'

Another problem with the generalised form of grade assessment criteria, which are applied for a range of assessment tasks, is imprecision. For example, students might be told that a piece of work should display:

- critical thinking;
- originality
- *development of argument*
- evidence to support conclusions
- the use of reference material
- an adequate conclusion

Such information is vague.

The development of a set of range statements like the following may help but still does not relate to standards. An example of such ranges is:

The student does not know what weights a marker might attribute to the ideas given in the list, and may not fully understand what, for example, 'critical thinking' might look like in a piece of work.

13.0 A final word on writing learning outcomes and assessment criteria – a tale of dubious interpretation

- words are slippery
- we do not always have a common understanding of words that are used commonly (eg 'assessment criteria', 'critical analysis' and so on.

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Appendix 1 Some Vocabulary for Writing Learning Outcomes and Assessment Criteria

Finding the right words for use in writing learning outcomes / assessment criteria can be difficult, particularly when the statements must mesh with the generic level descriptors. The following list is provided as an aid in this process. The words are organised for convenience under headings that might be seen to accord with those from Bloom's taxonomy. However, no hierarchy is intended. Some words would fit several headings and a child of 8 years can synthesise a word from a series of letters. The words are simply a vocabulary list gleaned from a variety of sources.

Activities giving evidence of knowing:

Define, describe, identify, label, list, name, outline, reproduce, recall, select, state, present, be aware of, extract, organise, recount, write, recognise, measure, underline, repeat, relate, know, match.

Activities giving evidence of comprehension:

Interpret, translate, estimate, justify, comprehend, convert, clarify, defend, distinguish, explain, extend, generalise, exemplify, give examples of, infer, paraphrase, predict, rewrite, summarise, discuss, perform, report, present, restate, identify, illustrate, indicate, find, select, understand, represent, name, formulate, judge, contrast, translate, classify, express, compare.

Activities giving evidence of knowledge / understanding

Apply, solve, construct, demonstrate, change, compute, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, use, give examples, exemplify, draw (up), select, explain how, find, choose, assess, practice, operate, illustrate, verify.

Activities giving evidence of analysis

Recognise, distinguish between, evaluate, analyse, break down., differentiate, identify, illustrate how, infer, outline, point out, relate, select, separate, divide, subdivide, compare, contrast, justify, resolve, devote, examine, conclude, criticise, question, diagnose, identify, categorise, point out, elucidate.

Activities giving evidence of synthesis

Propose, present, structure, integrate, formulate, teach, develop, combine, compile, compose, create, devise, design, explain, generate, modify, organize, plan, re-arrange, reconstruct, relate, re-organise, revise, write, summarise, tell, account for, restate, report, alter, argue, order, select, manage, generalise, precis, derive, conclude, build up, engender, synthesise, put together, suggest, enlarge.

Activities giving evidence of evaluation

Judge, appraise, assess, conclude, compare, contrast, describe how, criticise, discriminate, justify, defend, evaluate, rate, determine, choose, value, question.

Appendix 2: Why write learning outcomes:

It is good practice to be explicit about what you expect of learner in terms of learning to be attained and the assessment. Learning outcomes link with assessment criteria and assessment practice and indicate teaching strategies. They are written in relation to level descriptors.

Learning outcomes provide an indication of the standards that you or the higher education community expects of learners – a matter of good communication and good practice;

They are a good way of communicating the learning purpose that the module is intended to fulfil. They provide information to other teachers, students and employers (etc).

Learning outcomes can be a useful tool for communication with external examiners.

The use of learning outcomes provides a means of judging and attaining consistency of volumes and standards of learning within and across institutions;

In the context of a credit-based higher education system, learning outcomes are part of the definition of credit – as part of the measure of volume of learning.

Learning outcomes, perhaps written in relation to benchmarks are a manner in which standards are expressed in higher education.

A set of learning outcomes provides information about what the learner has achieved. It is a kind of transcript.

Skills and other components of learning can be identified in learning outcomes and mapped across a programme.

Appendix 3: Subject benchmark statements

Subject benchmark statements have been in the process of development for the past few years by QAA. They are written for subjects studied in higher education and they represent the outcome of discussion in a group of subject specialists on what might be the typical achievements of students when they graduate with an honours degree in that subject area. There are 42 subjects or subject groups. Benchmarking groups were asked to produce a set of benchmarks that indicate the threshold expectation, but most also considered the achievement of a 'typical' student and some, of an 'excellent' student. The groups, however, used different terms and different criteria for decisions about what might constitute threshold and what might constitute 'typical'.

Appendix 4: Programme specifications

Programme specifications are relatively succinct descriptions of programmes in the higher education sector. They broadly conform to a template and they provide basic information about a programme for students, administrators, staff and, most significantly, for the process of QAA subject review. The aspect of a programme specification that has some relevance to this paper is the listing of programme outcomes. A programme outcome is likely to look very similar to a learning outcome in structure but in some ways will be significantly different. Programme outcomes are inevitably more generalised, covering a greater volume of learning as they refer to a whole programme and they refer not specifically to threshold standard, but to a typical student. Programme outcomes do not necessarily relate directly to the learning outcomes of constituent modules because the outcomes of a programme may be more than the sum of the parts (the modules). A general assumption is made that programme outcomes are assessable, but standards are not likely to be as clearly ascertained from them as from a module learning outcome.

Because programme outcomes are written at the level at which the programme is completed, they will need to relate to the level descriptors for that level and they may bear greater relationship to the learning outcomes for modules at that level than those at previous levels.

Programme outcomes for honours degree programmes are likely to be influenced by the relevant subject benchmarks, although QAA staff indicate that they do not expect programme outcomes to be slavish copies of the benchmarks. The statements need to indicate the character of the particular programme being described. If this character is greatly at odds with the benchmarks for that subject, then there is a requirement to make some justification of the position that has been taken.

Appendix 5 Exercises for Courses on Learning Outcomes

The set of examples of learning outcomes and assessment criteria (separate handout) is resource material for this exercise and will provide models for the work.

Choose one of the learning outcomes tasks below and then do the following exercise on writing assessment criteria using your newly generated learning outcomes. Since you are writing assessment criteria for the learning outcomes, do not get tempted into writing too much detail in the learning outcomes. For both of the exercises, note difficulties, queries or observations and?! any moments of enlightenment to explore in a larger group.

Learning outcomes tasks

For a level one study skills module, write one or more learning outcomes that relate(s) to student writing skills for any discipline – or for a specified discipline. Indicate an appropriate assessment method for testing the learning outcomes.

For a level three module that is designed to help students prepare to write dissertations, write learning outcomes that concern the writing skills that students will require. Indicate an appropriate assessment method for testing the learning outcomes

For a careers preparation module at level two, write several learning outcomes that relate to the preparation of an appropriate curriculum vitae. Indicate an appropriate assessment method for testing the learning outcomes

The skill of presenting oral material effectively is to be embedded in a module. There will be one or two learning outcomes written into the module learning outcomes. Write these learning outcomes and describe the task in which they are to be tested. You will need to decide at what level these are being written

Write a set of learning outcomes for any module in any discipline – for the whole module or part of a module. You will need to specify the level and design the learning outcomes in accordance with this. Provide an indication of the assessment task that the students will undertake in order to demonstrate that they have reached the learning outcomes. Indicate an appropriate assessment method for testing the learning outcomes.

Appendix 6 An exercise in distinguishing learning outcomes from teaching intentions

Introduction

The exercise below is based on documents for the accreditation of a short professional development course in health education submitted to a university. The regulations regarding the submission required a course description in terms of aims and learning outcomes. You will see that there was confusion. Which are aims, which are learning outcomes? To complicate matters, many of the learning outcomes are written poorly. As a reminder, there are three components to a well-written learning outcome:

- verb (what the learner will be expected to do)
- what the learner is acting on / with (usually the object of the verb)

- an indication of how one will know that the learner has reached that standard (usually indicated in terms of standard or in statements about the context or difficulty of the work).

Learning outcomes should also be testable. Think about whether the statements below are what they say what they are – aims or learning outcomes – and, if they are anything like the latter – are all of the components present?

Aim 1

The aim is to help participants to develop their role as health educators in their every day work so that health education is not separated from normal activities.

Learning Outcomes

Participants will be able to describe a range of health education methods that they might use in their work.

They will be offered the opportunity to explore their existing health education

role and identify ways in which they might develop and extend that role.

They will develop an understanding of the principles and aims of adult learning.

The programme should enable them to gain basic awareness of methods of planning of health education interventions.

Aim 2

To provide participants with an opportunity to expand their understanding of theoretical and practical aspects of working with groups.

Learning Outcomes

Participants will be able to describe the roles that people tend to adopt when functioning in groups and to discuss the roles in relation to a series of given case students of group functioning.

Participants will consider the impact of their membership in a variety of personal and professional groups.

Participants will experience three leadership styles.

Through role play, they should be able to demonstrate that they are able to cope effectively with the behaviour of difficult group members.

Aim 3

The participants will be able to explain the basic theory of communication skills.

Learning outcomes

They are expected to be able to show that they can incorporate a range of new communication skills and strategies into their existing competencies.

They will have explored their current abilities in communication in a variety of settings.

Aim 4

The aim is to equip participants with the skills to use effectively a variety of resources in health education strategies.

Learning Outcomes

To enable participants to learn effective means of using a variety of educational resources.

The intended learning is that participants will be able to evaluate health education videos for their content and potential audience using the evaluation framework provided on the course.

Participants should be able to discuss the merits and disadvantages of three

(given) health education packs, at least one of which deals with stopping smoking.

Appendix 7 Some Definitions of Learning Outcomes used at the Bologna Seminar, Edinburgh 2004

Jenny Moon, University of Bournemouth (jenny@cemp.ac.k)

I attended the Bologna seminar on learning outcomes for one of the two days and on that day I presented two sessions. From my short period of attendance, however, I sensed that there were different conceptions of the term 'learning outcome' in evidence. Indeed, I was able to observe this from some of the questions that participants asked in my two sessions. Because of this, in my session I attempted to make clear the conception of learning outcome with which I was concerned (a) below) – and used examples but it is only now that I realize that there are so many potential meanings of this term. If there is to be progress on the use of an approach to higher education through the use of 'learning outcomes', across the countries signed up to the Bologna process, there needs to be clarity about the definitions employed and guidance as to the vocabulary that we use.

I explore below some of the elements that might appropriately be termed 'learning outcomes'. I put in brackets my / the UK term that I would normally use instead of 'learning outcome'.

a) Learning outcomes (statements of learning outcome): these are statements of the learning that students must achieve at the end of blocks of learning (such as modules) that are components in a higher education programme. There are probably around five to ten learning outcomes that are written at threshold for each block and these enable the module potentially to become the transferable within a credit accumulation and transfer scheme. Learning outcomes of this type are written in association with level descriptors (see below) that provide a structure for progression. They are written by the teachers or designers of the module and may be accompanied by the statement of an aim which describes what the teacher intends to cover or address in the module.

b) Learning outcomes written by learners (learner negotiated learning outcomes) - at the end of the Edinburgh seminar there was discussion of learning outcomes written by learners. I see a contrast between this form of learning outcome and the statements of learning outcome described above (a)) because of the agent of the writing. The learner-written learning outcomes are written by the learner on the basis of projection of what she wants to be able to achieve as opposed to teacher-written statements of learning outcome (a)) that are written on the basis of their expertise in and overview of the subject matter concerned and the context of the whole programme. Teachers know about the learning that might be achieved. The learners do not know this yet. In the UK the learner-written kind of learning outcome (b)) might occur in an independent or negotiated learning module where there is no formal teaching – but where the learner individually identifies a project (cognitive or practical) to pursue. The negotiated study might well occur within an element in a programme for which there are already learning outcome statements (a)) written. Such (a) outcomes would probably be couched in terms of the development of independent learning and the ability to write own learning outcomes (of type b)).

c) Learning outcomes for programmes (programme or educational outcomes): these learning outcomes represent the expectations of learning achievements for typical learners in a whole programme. They are not just the summation of learning outcomes for elements of a programme (a)) since they are not written at threshold and they may refer to the attainment of attitudes and other factors that are not assessable. An example of programme outcomes is the set of statements required in the programme specification document for the Quality Assurance Agency (UK).

d) Learning outcomes in the form of level descriptors: these are written in generic language and represent guides to what typical learners are expected to achieve at the end of a level in higher (or other defined areas) of education. There can be a number of different sets of level descriptors in use within one country (eg UK), often with much in common. Level descriptors have a number of uses, but in particular they provide a structure for progression through their relationship to and guidance of the writing of learning outcome statements (a)). Level descriptors are written in a language that enables application in any discipline. They are made up of a range of aspects of pedagogy – not only learning. They may include aspects of student cognitive learning, skills learning, the increasing complexity of knowledge, attributes of the learner (such as autonomy), aspects of the manner in which the learner's learning processes are managed (eg increasing learner responsibility expected) etc (Moon, 2004*). Level descriptors would normally be written by a group of experienced teachers from a wide range of disciplines, and in their process of development they would be subjected to consultation processes and modified in response. An example is the Southern England Consortium for Credit Accumulation and Transfer Credit Level Descriptors.

e) Learning outcomes that are the translation of the generic language of level descriptors (d)) into subject or discipline language. This translated version of level descriptors provides a better link between learning outcomes for programme elements and the rather general language of level descriptors. They may resemble subject benchmarks (see below - g)) and they may represent guidance or be statements of learning that must be achieved. These might be written to guide the structure of a specific programme or they may be developed by quality assurance staff.

f) Learning outcomes written to describe the anticipated outcomes of qualifications (qualification descriptors): qualification descriptors are usually similar to level descriptors (d)) in their construction and form, but they describe learning at the terminating stage of qualifications. For example, the relevant qualification descriptor for a batchelor's degree would describe what the learner is expected to achieve at the terminating level for that degree. Qualification descriptors are notionally written at threshold standard. They would be constructed by teaching experts or those involved in quality assurance in higher education. An example is the Quality Assurance Agency Qualification Descriptors (UK).

g) Learning outcomes for designated disciplines (subject benchmarks): these learning outcomes are written by subject experts or the regulatory body of a profession to describe the expected achievements of learners at designated levels at various standards (eg 'threshold', 'typical' and 'excellent'). In this description, they may provide a model for the content of a programme, which it may or may not be mandatory for relevant institutions to follow. An example is the subject benchmarks developed in the UK for the Quality Assurance Agency. These were developed by teams of subject experts, subject and professional body representatives, and they are written mostly, at present, at batchelor's degree level.

h) Learning outcomes written for a whole school or institution: these are learning outcomes written in subject terminology but at a very high level of generality for a subject area within an institution. They subsume more detailed learning outcomes, which relate directly to the outcomes expected in the elements of the programme. Examples of such outcomes are the Peninsula Medical School Learning Outcomes (Peninsula Medical School, Exeter, Plymouth, Devon).

What is in common and what is different in these approaches?

One common factor in these approaches is that they are all couched in the language of anticipated learning, and not in the language of what teachers want to cover in their teaching. They are

intended learning outcomes and not teaching intentions. Perhaps the main difference is in the agency of the writing of these outcomes.

- The learning outcomes types expressed in b) are written by students.
- Those written in a), c) and possibly e) are written by the staff who are directly working with the students on a programme.
- Learning outcome types expressed in c), possibly e), f), g) and h) are written by subject experts or staff who do not work directly with students.

The learning outcomes written by subject experts or staff who do not directly work with students (last group above) are designed to represent standards or guidance about standards to be expected from a range of programmes usually across more than one institution (possibly not the case for h)). These could be called 'standard-setting' learning outcomes. The learning outcomes written by staff, who are directly working with students, are, in effect, written to provide a statement about the standard of a programme. Students are assessed against this form of learning outcomes and on this basis can be said to have achieved or not to have achieved the learning required by the programme. The learning outcomes associated with the programme tend to be matched against the standard setting learning outcomes as an assurance of the standard of the programme in question.

I summarise the similarities and differences – comprehension of which I see as essential to the Bologna process at this stage:

- in a common manner, learning outcomes relate to learning and not teaching;
- some learning outcomes are written by students as an element in their programme.
- some learning outcome statements relate are written by staff intimately associated with a programme. These represent expectations of learning and the learning is assessed against them.
- some learning outcomes are written by subject experts or quality assurance staff (I have called these the 'standard setting learning outcomes').

Moon, J (2004 – to be published at the end of the year) Progression in higher education: a study of learning as represented in level descriptors', in P. Hartley, A. Woods and M. Pill, Enhancing Teaching in Higher Education, London, Routledge Falmer.