UCE GUIDE TO WRITING LEARNING OUTCOMES

This guide can also be downloaded from the SSDD website: www.ssdd.uce.ac.uk/outcomes

1. Introduction

This document is designed to help you write appropriate learning outcomes when developing and revising your modules and programmes, and when devising assessment tasks. It explains:
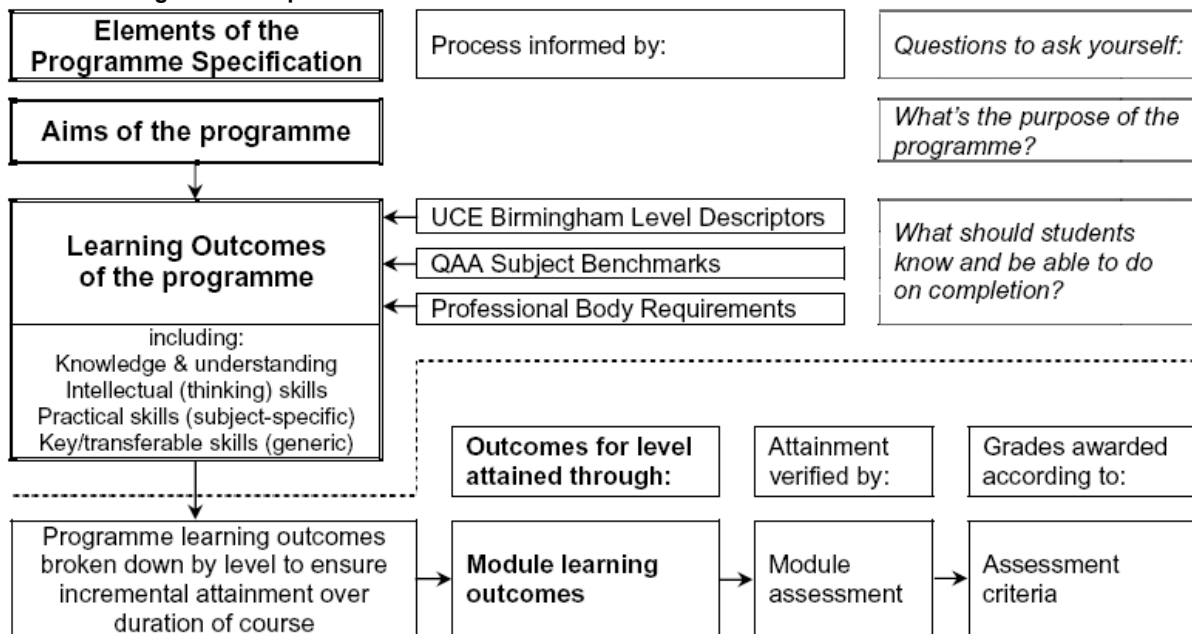
- what learning outcomes are
- the learning outcomes process
- the benefits of using learning outcomes
- how to use learning outcomes at programme level
- how to use learning outcomes at module level
- how to write learning outcomes
- how to link outcomes to assessment

A number of sources have been used to create this document. These are stated on page 4 should you want to read around the subject further. **If you are new to this process, you may also find the information in the Appendix helpful.** Underlined terms are explained in the Glossary section there.

2. What are learning outcomes?

Learning outcomes are the specific intentions of a programme or module, written in specific terms. They describe what a student should know, understand, or be able to do at the end of that programme or module. Learning outcomes are written bearing in mind the UCE Birmingham level descriptors for that level or award.

3. The learning outcomes process

4. What are the benefits of learning outcomes?

Designing your courses using learning outcomes leads to a more student-centred approach: it marks a shift from the content of a module or course (namely, what staff members teach) towards its outcome (in other words, what the student is able to do on successful completion of the course or module).

Learning outcomes can:

- help to guide students in their learning in that they explain what is expected of them, in turn helping them to succeed in their studies.
- help staff to focus on exactly what they want students to achieve in terms of both knowledge and skills.
- provide a useful guide to inform potential candidates and employers about the general knowledge and understanding that a graduate will possess. Good, clear learning outcomes will also be useful when compiling information for student Progress Files, which will soon be required of all universities.

5. The learning outcomes process at programme level

When designing a new programme, the QAA requires you to produce a programme specification, for which you use the University template. This specification includes the aims of the programme and the learning outcomes for the programme. It is essential that these programme outcomes refer to the outcomes of the **entire** programme leading to the relevant award, and when writing them, you must take UCE Birmingham's level descriptors, the QAA's subject benchmarks and, where applicable, Professional Body requirements into consideration. You are required to categorize your programme outcomes in terms of:

- knowledge and understanding
- intellectual skills
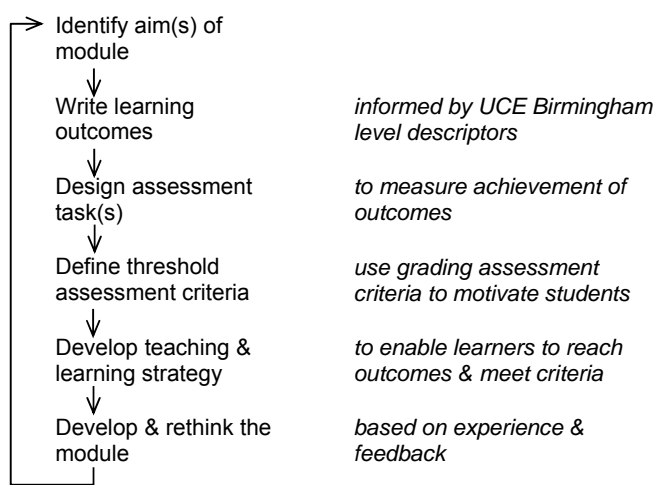- practical skills
- key/transferable skills

Once you have devised your programme outcomes, you need to make sure that their attainment is clearly achievable through the module outcomes on the programme. If your programme covers more than one level (such as a Bachelor's degree) you may find it useful to break down the aims of the programme over the levels so that you can verify that students are progressively working towards the programme outcomes throughout the course.

If you have any longer-term outcomes on a programme and feel a student may only be able to demonstrate them on completion of the programme, state them as programme outcomes, rather than module outcomes.

6. The learning outcomes process at module level

A well-structured module should show clear alignment between the learning outcomes and the assessment criteria used on the module; in turn this requires you to design appropriate assessment tasks, and to deliver the module in a way which enables students to reach the required outcomes. This alignment between learning outcome, learning and teaching method, assessment tasks and assessment criteria makes the whole process transparent to the students and to other interested parties, and helps you to ensure that there is coherence in your modules. Use the chart below as a guide in this process.

Identify aim(s) of module
↓
Write learning outcomes — *informed by UCE Birmingham level descriptors*
↓
Design assessment task(s) — *to measure achievement of outcomes*
↓
Define threshold assessment criteria — *use grading assessment criteria to motivate students*
↓
Develop teaching & learning strategy — *to enable learners to reach outcomes & meet criteria*
↓
Develop & rethink the module — *based on experience & feedback*

Although the outcomes of each module have to correspond with UCE Birmingham's descriptors for that level, you don't have to attain *all* the descriptors in every module. Instead, you should make sure that students attain all descriptors on successful completion of *all core modules* at each level of a programme.

7. Writing Learning Outcomes

Your learning outcomes should specify the **minimum** acceptable standard for a student to be able to pass a module or course (threshold level). This means that it is important to express learning outcomes in terms of the **essential** learning for a module or course, so you should have a small number of learning outcomes which are of central importance, not a large number of superficial outcomes.

We recommend that you aim for between four and eight learning outcomes for each of your single modules, and up to twenty-five outcomes for an entire programme.
Start **programme outcomes** with the phrase:
> 'A successful learner from this programme will be able to …'

Start **module outcomes** with the phrase:
> 'On successful completion of the module, you will be able to …'

These phrases lead you to use **action verbs** so that students are able to **demonstrate** that they have learned or achieved the outcome. Verbs relating to knowledge outcomes – 'know', 'understand', 'appreciate' – tend to be rather vague, or to focus on the process students have gone through (e.g. 'undertake action research') rather than the final outcome of that process (e.g. 'formulate strategies appropriate to their topic'), so use action verbs – 'solve', 'evaluate', 'analyse' – to indicate how students can demonstrate acquisition of that knowledge.
Make sure you only use one verb per learning outcome, and that you keep the sentence structure simple to avoid misinterpretation. Avoid unnecessary jargon; if absolutely necessary, use more than one sentence to ensure clarity.

To help you write your outcomes, use **Bloom's Taxonomy** (1956), which despite its age is still one of the best aids available – treat it as a substitute thesaurus. Bloom identified six categories of learning – knowledge, comprehension, application,

analysis, synthesis, and evaluation – which you can use at any
academic level. The first two of these relate specifically to knowledge and understanding, while the remaining four involve intellectual skills. While it might seem tempting to concentrate on the lower two categories for lower level modules, we recommend that you do engage your students in higher level activities, albeit on a smaller, more focused scale, from the outset.

When writing your outcomes, bear in mind the specific UCE Birmingham Level Descriptors relevant to that level of study: use of Bloom's taxonomy will help you to respond to the first section of the Level Descriptors, which relate to knowledge and

understanding, and intellectual (thinking) skills. For learning outcomes which relate to **specific skills** (as seen in the second part of the Level Descriptors), then you need to phrase your wording to describe **how** each skill is performed (for example, 'will be able to communicate effectively and succinctly through oral presentation').

> For **examples of learning outcomes**, see the Appendix, section 3.
>
> Ideas for **good practice** are in section 4.

8. Linking outcomes to assessment

As already stated, you need to ensure that assessment tasks are designed to fulfil the outcomes of a module. One way of ensuring this is by directly linking your assessment criteria to your learning outcomes: this may involve a simple one-to-one correlation between outcome and criterion, or you may wish to have more than one criterion for

each outcome. This method makes the assessment process all the more transparent to students, and enables them to see the purpose of assessments more easily. Making regular reference to the module outcomes also helps reinforce this understanding.

> For a step-by-step **guide to writing assessment criteria**, see the Appendix, section 5.

It is often helpful to combine intellectual outcomes and skills-based outcomes when devising assessments. For instance, if your outcomes state that students will be able to:
- analyse contrasting strategies for dealing with organizational change,
- demonstrate that they are effective team workers, and
- reflect on the role they play in group work,

you can then conflate these through one assessment, such as a group presentation with supporting group documentation including individual statements

about the role each individual played in the final piece of work. Three outcomes can therefore be attained through one assessment, and you will need distinct assessment criteria to account for each of the stated outcomes.

> For ideas on **motivating students with these criteria**, see the Appendix, section 6.

Plans to expand this guidance online

If you would like to send us any of your learning outcomes to use as examples for dissemination across the university, please e-mail your module outlines or course documents to david.green@uce.ac.uk, or send them to: Dr David Green, SSDD, Edge Building/E212, UCE Birmingham, Perry Barr Campus.

Sources

BLOOM, B S, ed. (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals: Handbook I: Cognitive Domain.* New York: Longman.
GOSLING, D & MOON, J (2001). *How to Use Learning Outcomes & Assessment Criteria.* London: SEEC.
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QUALITY ASSURANCE AGENCY (2000). *Guidelines for Preparing Programme Specifications.* Gloucester: QAA
QUALITY ASSURANCE AGENCY (2001). *The Framework for Higher Education Qualifications in England, Wales and Northern Ireland.* Gloucester: QAA
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WALSH, A & WEBB, M (2002). *A Guide to Writing Learning Outcomes.* London: Learning & Teaching Development Unit, Kingston University. www.kingston.ac.uk/LTDU/lo.htm

Appendix providing the following information:

1. A glossary of key terms	4. Good practice in writing learning outcomes
2. Bloom's Taxonomy (1956)	5. Steps in writing assessment criteria
3. Examples of learning outcomes	6. Motivating students using criteria

1. Glossary of key terms

Programme specification
A programme specification is a concise description of the intended outcomes or learning from a programme in Higher Education, and the means by which these outcomes are achieved and demonstrated. The Quality Assurance Agency (QAA) requires programme specifications for all award-bearing programmes, and sets out the minimum information needed for each programme. They are intended to provide a foundation for public assurance of academic standards and permit HE programmes and awards to be related to the national Qualifications Framework.

Subject benchmark statements
Subject benchmark statements set out expectations about standards of undergraduate degrees in a range of subject areas. They describe the attributes, skills and capabilities that a graduate with an honours degree in a specific subject might be expected to have. Each statement has been written by a group of academics and other specialists (such as representatives from professional bodies, industry and commerce) from the subject area. For some subject areas, you may need to refer to more than one set of benchmark statements.

Level descriptors
Level descriptors are generic statements describing the characteristics and context of learning expected at each level. These help guide your expectations of students and they are designed to ensure equivalence and consistency of standards across subject areas. They are set out in the University's Academic Regulations and Policies and are based on those recommended by the QAA.

The first section of the descriptors for each level is a statement of outcomes which students should be able to demonstrate to be accredited at that level. These relate to **knowledge and understanding** of the subject, and the **intellectual skills**
required to make use of this knowledge and understanding.

The second section of the descriptors states the wider abilities which a typical student could be expected to have developed at that level. This incorporates both **practical skills** (i.e. those which are relevant to competence in your own specific context, such as lab skills, performance skills), and more general **key/transferable skills** (communication, problem solving, self-evaluation). Depending on your context, these two categories of skills may well overlap.

> **NOTE**
> Learning outcomes and assessment criteria should be reviewed against these descriptors in order to develop modules and assign credit at the appropriate level.

Assessment criteria
These are descriptions of what the learner is expected to do in order to demonstrate that a learning outcome has been achieved. They are set at a threshold level of achievement (in other words, a bare pass), and any performance above that level can be differentiated by applying **grading criteria** (see section 6 below).

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2. Bloom's Taxonomy (1956)
Comments in *italics* are our own brief explanations of the differences between the six levels of the taxonomy. The list of verbs here is not exhaustive, and some appear under more than one heading.

Knowledge and understanding   *Intellectual skills*

Knowledge *Recalling important information*	**Comprehension** *Explaining important information*	**Application** *Solving closed-ended problems*	**Analysis** *Solving open-ended problems*	**Synthesis** *Creating 'unique' answers to problems*	**Evaluation** *Making critical judgments based on a sound knowledge base*
define	translate	interpret	distinguish,	compose	judge
repeat	restate	apply	analyse	plan	appraise
record	discuss	employ	differentiate	propose	evaluate
list	describe	use	appraise	design	rate
recall	recognize	demonstrate	calculate	formulate	compare
name	explain	dramatize	experiment	arrange	revise
relate	express	practise	test	assemble	assess
underline	identify	illustrate	compare	collect	estimate
	locate	operate	contrast	construct	
	report	schedule	criticize	create	
	review	sketch	diagram	set up	
	tell		inspect	organize	
			debate	manage	
			question	prepare	
			relate		
			solve		
			examine		
			categorize		

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3. Example learning outcomes
The examples provided here are taken from a range of disciplines. Outcomes relating to knowledge and understanding and to intellectual skills use Bloom's Taxonomy as their basis. There are then two further categories relating to practical (i.e. subject-specific) skills, and key/transferable (i.e. generic) skills.

Knowledge and understanding
On successful completion of the module, you will be able to:
- Explain the meaning, character and identity of place, and how landscape is constructed.
- Identify the theories of learning that are implicit in your current approach to education.
- Discuss Romantic poetry in relation to the major themes of Romanticism.
- Describe the underlying principles governing gene transmission and expression.

> **Pointers on knowledge and understanding outcomes**
> - Avoid learning outcomes which are *too broad* in scope, such as 'Recall the fundamental concepts of Structural, Mechanical and Electrical Engineering.'
> - Avoid learning outcomes which are *too narrow* in scope, such as 'State the six categories in Bloom's Taxonomy.'
> - Avoid overloading your modules with *too much 'content'*: knowledge and understanding outcomes emphasize what your students will be able to comprehend and explain, but this isn't as important as being able to *use* the information through application, analysis, synthesis and evaluation.

Intellectual (thinking) skills: application
On successful completion of the module, you will be able to:
- Apply Kolb's model of learning to the design of a teaching programme.
- Illustrate, using phonetics, the problem of sigmatism in children.

Intellectual (thinking) skills: analysis
On successful completion of the module, you will be able to:
- Appraise the key issues of market segmentation in a brewing industry case study.
- Compare Hofstede's theories of culture with those of Trompenaars and Hampden-Turner.

Intellectual (thinking) skills: synthesis
On successful completion of the module, you will be able to:
- Create a set of criteria to assess Home Office implementation of immigration rules.
- Design an engine component that conforms to the following criteria…

Intellectual (thinking) skills: evaluation
On successful completion of the module, you will be able to:
- Explain the reasoning behind you allocation of scarce resources in the treatment of patients in an Accident and Emergency setting.
- Prioritize conclusions you reached from an analysis of paint techniques, giving reasons.

Practical skills
On successful completion of the module, you will be able to:
- Express yourself in writing for different professional and academic audiences.
- Employ appropriate ICT skills in order to forecast demographic trends.
- Use web-creation tools to produce an interactive website suitable for use by young schoolchildren.

Key/transferable skills
On successful completion of the module, you will be able to:
- Work effectively as part of a team.
- Reflectively evaluate your own learning and personal planning processes.

4. Good practice in writing learning outcomes: suggestions
Open-ended learning outcomes
Not all learning is pre-planned: in many subjects (especially creative ones), students are expected to choose their own route through a module, and you can devise open-ended learning outcomes to reflect this. For example, you could say that: On successful completion of the module, you will be able to:
- draw creatively on experience to devise work which integrates art forms
- apply theory critically to analyse your professional experience
- evaluate the impact of your clinical intervention
- use a self-reflective approach to devising, developing and delivering project work.

Avoiding plagiarism
Learning outcomes can also be used to help avoid plagiarism:
- Learning outcome: You will be able to demonstrate the origins of your ideas by accurately referencing all sources used in your work using the Harvard system.
- Assessment criterion: Accurate use of the standard referencing styles within the text for all sources used.

5. Suggested steps in writing assessment criteria:
1. consider which learning outcome is being assessed (e.g. demonstrate critical awareness of social housing issues)
2. consider the assessment task set (e.g. present a self-made artefact to the group to represent your critique of social housing issues)
3. work out requirements for successful performance of the assessment, or the attributes required for this (e.g. clarity and fluency in terms of presentation; logical argumentation and marshalling of information in terms of content)
4. if necessary, specify the range to clarify contextual factors and the level (e.g. demonstrate critical awareness of social housing issues since the introduction of right-to-buy in the UK, making appropriate reference to the recommended reading for the module)
5. focus on what is essential and categorize the requirements or attributes into clearly worded criteria
6. check that the criteria are measurable or assessable in valid and reliable ways and that the criteria are clear and unambiguous (for instance, ask colleagues to read the criteria to see if they interpret them in the same way)
7. repeat steps 3, 4, 5 and 6 until fully satisfied.

6. Using assessment criteria to motivate students

In order to motivate students further, it can be helpful to use grading assessment criteria: while your learning outcomes have established the minimum requirement to pass a module, and can be linked to the minimum standard to fulfil a particular assessment criterion, **grading criteria** indicate what a student must demonstrate to achieve a higher grade. You will then have a set of statements to help you differentiate the level of a students' performance. The idea behind this is that, rather than focusing on the threshold level stated in the outcomes, students can see the criteria for a First, or a Distinction, and will shift their focus to the highest level. For example:

Learning outcome:	Assessment criteria				
	Fail	**Third**	**Lower second**	**Upper second**	**First**
By the end of the module, students will be able to: **use evidence appropriately in support of an argument**.	Unsubstantiated or invalid conclusion, based on anecdotes and generalizations only	Limited evidence of finding and conclusions supported by the literature and theory	Evidence of findings and conclusions grounded in theory or literature	Good development shown in arguments based on theory or literature and beginnings of synthesis	Analytical and clear conclusions well grounded in theory and literature, showing development of new concepts

Grading criteria of this sort not only encourage students to aim higher, but also give them greater confidence in the objectivity and transparency of the marking process. In addition, they enable you to complete your marking and return the work more quickly, which can also aid student motivation.