



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Writing Learning Outcomes

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## Forward

Learning outcomes exemplify a particular methodological approach to the expression and description of curriculum. Framing this approach is the Bologna agreement (1999) and the subsequent work of the Bologna process whereby all third level institutions across the European Union have been asked to write their programmes and modules in terms of learning outcomes.

A learning outcome is a student-centred statement of what you want your students to know, understand or be able to do as a result of a completed process of learning. Learning outcomes are generally seen to contribute positively to teaching, learning and assessment at institutional level. At national level, quality assurance should benefit, and at international level learning outcomes can increase transparency, mobility and comparability.

This guide has been prepared to provide an introduction to learning outcomes and to help you write learning outcomes for your programmes, courses and modules. It is divided into four main sections:

Section one introduces learning outcomes, explains what they are and why we use them. Section two addresses the differences between aims and learning outcomes. Section three concentrates on how to write learning outcomes, while section four comprises a brief case study that offers some practical strategies for constructing curriculum-wide learning outcomes.



For further support and resources on learning outcomes, please visit the  
Trinity College Bologna Desk at <http://www.tcd.ie/vp-cao/bd/vpindexbd.php>

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## 1. INTRODUCTION TO LEARNING OUTCOMES

### 1.1. What is a Learning Outcome?

A learning outcome is student-centred statement of what you want your students to know, understand or be able to do as a result of completing a process of learning. They thus seek to describe the student's learning progress in terms of the knowledge acquired, the comprehension of that knowledge, the capacity to apply it, and the capacity to analyse, synthesise and evaluate ([John Scattergood, 2006](#)). A 'process of learning' could range from a one-hour class—such as a lecture, tutorial or laboratory demonstration—to an undergraduate or postgraduate programme. So when it comes to learning outcomes, you can think big or small.

### 1.2 Why Use Learning Outcomes?

There is debate in the literature about whether it is effective and appropriate to express educational intentions in terms of learning outcomes. This debate is considered in [Curriculum Debates in Higher Education: Section 5](#) a document that provides an overview of the pedagogic issues underpinning approaches to curriculum design and development.

However, wider contextual issues, for example European developments such as [Bologna](#) also frame discussions in relation to the expression of curricula in Higher Education. Learning Outcomes are acknowledged as one the basic building blocks of European higher education reform. They exemplify a particular methodological approach for the expression and description of the

curriculum (modules, units and qualifications) and level, cycle and qualifications descriptors associated with the 'new style' Bologna qualifications frameworks ([Adam, 2008](#)).

The Bologna process specifies that by 2010 all programmes throughout the European Union will be written in terms of learning outcomes. For an introduction to the Bologna Process, see [The Bologna Framework](#).

We would also recommend Declan Kennedy's introduction to learning outcomes, a guide written to assist university teachers and administrators in applying learning outcomes to the courses and programmes they devise. [Writing and Using Learning Outcomes – a Practical Guide](#), is available from The Bologna Desk.

Even critics of outcomes-based approaches to curriculum design and development in higher education agree that:

A set of stated 'learning outcomes' can be less understood as a blueprint for their faithful reproduction and *more as a guide to a set of educational hopes and efforts* (emphasis added, [Barnett & Coate 2005](#) p. 46)

[Adams \(2008\)](#) argues that Learning outcomes make a contribution to three main levels and dimensions of education.

(i) At the institutional level they have curriculum implications for teaching, learning and assessment. Here learning outcomes can be used to express learning at the level of the unit or module. In so doing they clarify for

the learner what is expected of him or her as well as the skills/competences, understanding and abilities that they will acquire on successful completion of their study. For the teacher, learning outcomes clarify what exactly the module will deliver and unite this with the appropriate mode of delivery and assessment. The dynamic process of marrying outcome and learning with assessment is not simple but does lead to improved courses. The qualification itself can also be described in broader learning outcomes that link to external reference points leading to better design. This results in qualifications that are fit for their now clearly stated purposes.

(ii) At the national level learning outcomes play a wider role permeating the ways in which the national qualifications framework is described and the tools used to describe it. Quality assurance is improved, as explicit guides to standards can emerge based on level descriptors, qualification descriptors and subject benchmark statements. These descriptors and statements themselves take the form of learning outcomes – statements that show what a student will achieve at a particular level of study in a type of qualification, or in a specific discipline.

(iii) At the international level learning outcomes play a subtly different role than at the local and national levels. They will by definition be much broader and less precise than any national descriptors. For example, the European Higher Education Area has adopted the broad generic ‘Dublin’ descriptors as the cycle descriptors for its Bologna overarching qualifications framework. These cycle descriptors provide a context to help national authorities develop their own more detailed level descriptors. Provided common approaches are used by different states within their own national systems, learning outcomes open up the possibility of real transparency, mobility and fair recognition on a scale impossible in the past. At the international level they aid transparency, recognition and comparability by providing common overarching reference points

In the current College context, [John Scattergood \(2006\)](#) has identified three reasons why it is important to have learning outcomes:

- a) They articulate (to the educational institutions, employers, and society in general) what qualifications mean in non-subject specific terms.
- b) They enable unconventional educational routes (for example, via distance learning, e-learning, work-based learning, part-time study) to be related to more normative routes.



- c) They enable learning outside the normal frames to be accommodated (p. 2).

Scattergood also notes ([Scattergood, 2008](#)) that the HEA is now requesting that third-level institutions, in furtherance of the implementation of the National Framework of Qualifications, establish a set of written learning outcomes not just at a generic level, but for all programmes, courses, modules and units [p.3]. Scattergood observes that as this has been made this a condition of future funding, “It is essential, therefore, that Trinity College should not only comply with the HEA request for the establishment of written learning outcomes at programme, course, module and unit level, but that it should seriously engage with the learning-outcomes based approach to third-level education because learning outcomes are part of a broader agenda which is radical in its intentions.” [p.4]

### **1.3 Are You Already Working with Learning Outcomes?**

You might already be working with learning outcomes, or principles consistent with an outcomes-based approach. You might be using this approach at the level of course or programme design or in your weekly classes. Regardless of the context in which you might be using them, it’s always worthwhile considering whether your learning outcomes are an accurate expression of what you want your students to learn. Here are three suggestions to prompt reflection.



### **Suggestion 1**

Refresh your understanding of principles underpinning the use of learning outcomes by reading [Section 2: Preparing to Use Learning Outcomes](#)

### **Suggestion 2**

Do your learning outcomes genuinely reflect what you want your students to learn? Our [checklist](#) will help you answer this question.

### **Suggestion 3**

Reflect on your learning outcomes with the wider College context in mind. Generally a review of the curriculum should consider content; learning outcomes; teaching methods; and assessment methods.

Both subject-specific and generic learning outcomes are also necessary, so it is worth asking the following three key questions:

- Does each *subject* in each year have clearly stated learning outcomes for students?
- *Why* were these learning outcomes considered by the department to be the most important?
- Are there any *additional* learning outcomes (for example, generic skills) that could be added across the curriculum? (emphasis added)

You might also ask yourself:

- Do your subject learning outcomes emerge from a consideration of what you want your students to learn while in your department?



- Do your subject learning outcomes capture different amounts of learning, at different [levels](#) in your department?

You could use these questions for individual reflection or to brainstorm with colleagues when reviewing current learning outcomes.

## 2. AIMS AND LEARNING OUTCOMES

It is important to distinguish between programme, module or class aims, on the one hand, and learning outcomes on the other. Although aims and learning outcomes are often linked in discussions of and activities related to curriculum design and development, they do serve different functions. Aims can inform the development of learning outcomes, and the two should be aligned and consistent.

### 2.1 Aims

[Jackson, Wisdom and Shaw \(2003\)](#) explain that aims are ‘broad purposes or goals’. Aims can be expressed at the degree or programme level or at the course, module or classroom level. At the programme or degree level, they are generally aspirational and likely to address broad graduate attributes; at the level of courses, blocks of study or modules, they are more specific.

Irrespective of the level at which they are used, aims are broad statements of what you as a teacher or teaching team intend to achieve with your students.

Aims can link a specific course of study (programme, module or class) to wider conceptions of the purpose of study at a particular level.



Examples of different kinds of aims are given below.

### Examples

The overall aim of a European business studies **degree** might be:

to provide a specialist programme for students wishing to undertake a business career within or involving Europe.

A **course** in media production studies might aim:

to provide students with a package of practical studies that spans the main commercial media (TV, film, photography, print and radio) while additionally allowing them to specialise in one or more specific medium and specific types of skill (for example, editing in video).

A **module** in health care studies might include in its aims

to provide a critical overview of the organisation and work of the healthcare system and to generate an awareness of the research that has been conducted into selected areas of the practice of health care.

(Examples adapted from the Oxford Centre for Staff and Learning

Development First Words series: [3.2 Writing Aims and Learning Outcomes](#) .)

## 2.2 Learning Outcomes

Compared to aims, learning outcomes are more concrete and specific statements of what students are expected to do, think or feel (value) as a result of an identified process of learning and teaching. Learning outcomes can be both subject-specific and generic. Depending on the learning and teaching process to which they apply, they cover the categories shown in Table 1 below.

For further information on the differences between aims, learning objectives and learning outcomes, see [Declan Kennedy, \*Writing and Using Learning Outcomes: A Practical Guide\*](#).

**Table 1: Categories of learning outcomes (Taken from [Bingham 1999](#) )**

Category	Subcategory	Examples
Course or discipline outcomes	Factual course knowledge and comprehension	Terminology, concepts, principles, theories, facts, procedures
	Professional knowledge; professional skills and abilities	Knowledge of people and situations which has been acquired from experience, for example projects, case studies, work experience of



		relevance to the professional/vocational area (if relevant)
Generic outcomes	Personal qualities	Motivation, initiative, imagination, creativity, industry, autonomy
	Cognitive skills	Analysis, fault-finding, self-reflection
	'Key' generic abilities or graduate attributes	Critical thinking, teamwork, communication, numeracy, problem-solving, information literacy

An example of a set of learning outcomes is provided below from the Trinity College BAI Engineering programme. These are programme outcomes, and as such are broad statements of what a learner is expected to know, understand, and be able to demonstrate after successful completion of the academic programme. The first three of these programme outcomes refer to the disciplinary subject matter while the latter three refer to more generic skills.

Upon successful completion of the programme, graduates will be able to demonstrate:

- a) The ability to derive and apply solutions from a knowledge of sciences, engineering sciences, technology and mathematics;
- b) The ability to identify, formulate, analyse and solve engineering problems;
- c) The ability to design a system, component or process to meet specified needs, to design and conduct experiments and to analyse and interpret data;
- d) An understanding of the need for high ethical standards in the practice of engineering, including the responsibilities of the engineering profession towards people and the environment;
- e) The ability to work effectively as an individual, in teams and in multi-disciplinary settings together with the capacity to undertake lifelong learning;
- f) The ability to communicate effectively with the engineering community and with society at large.

### **2.3 Turning Programme Aims into Module Learning Outcomes**

[Jackson, Wisdom and Shaw \(2003\)](#) provide the following example of turning programme aims into content and then into learning outcomes. The teachers in this example are academic developers and the module is Course Design in Higher Education. Although this example might give you some ideas for your

own situation, it is not necessarily offered as a model. It should be noted that Jackson, Wisdom and Shaw are working within a curriculum structure that begins with the identification of overall programme aims, which might not apply to you.

Interestingly, as part of this process, Jackson, Wisdom and Shaw also anticipate learning outcomes for themselves—‘the development of the knowledge, understanding and resources to teaching these subjects in these contexts’ (p. 6). This is an often overlooked aspect of curriculum design and development.

### **Turning Programme Aims into Module Outcomes**

#### ***Aims (inherited from [..] document)***

- Introduce and review practice of course module design.
- Help participants identify and write appropriate learning outcomes and consider planning strategies, teaching, learning and assessment.
- Help participants develop strategies to promote quality learning, practice marking and consider methods of course and self-evaluation.

#### ***What I want [.. ] participants to learn (content)***

1. What learning outcomes are and how they can be used to design modules, plan teaching and students’ approaches to learning and assess student learning.
2. The theory of constructive alignment that underlies the outcomes model of



learning.

3. How to apply this knowledge and learning through doing.
4. How to construct an assessment strategy, a range of methods, how to construct criteria, grading models, marking cultures, ways in which feedback might be given and assessment issues.
5. Methods for evaluating curriculum designs and the impact of teaching on students' learning (including student feedback mechanisms).

*This translates into....*

***Provisional intended learning outcomes (for participants)***

1. To develop knowledge about the subjects of curriculum design and assessment in the contexts of an outcomes approach to learning.
2. To be able to apply this knowledge to the evaluation of course and assessment designs.
3. To construct new understandings about the curriculum and assessment that will improve their ability to design courses and modules from basic principles.
4. To recognise their own learning outcomes and develop their conceptions of teaching and learning.

### **3. WRITING LEARNING OUTCOMES**

Although there are many good practice guides, there is no one or correct way to write learning outcomes in higher education. You can write learning outcomes for whole programmes (for example, an undergraduate history, mathematics or chemistry degree) or for single courses or classes (for example, a year of statistics within an undergraduate programme or a module

or unit covering several weeks and to which you are allocating appropriate ECTS credits). Broadly speaking, the approaches to writing outcomes outlined below can be used irrespective of the context. It is probably true to say, however, that the more ‘micro’ the context—that is, the module rather than the programme level—the more likely it is that your outcomes will be discipline-specific in their expression. However, generic outcomes, skills and competencies should not be overlooked at module level.

For more information on writing learning outcomes, see [Declan Kennedy \*Writing and Using Learning Outcomes: A Practical Guide.\*](#)

[John Scattergood \(2008\)](#) has written some general remarks on writing learning outcomes for the Trinity College Dublin Bologna Desk. Most theorists and practitioners agree that, generally, learning outcomes should be:

1. summaries of essential areas of learning that result from a course of study
2. written in the future tense, often expressed as ‘you will be able to’
3. explicit and clearly expressed
4. limited in number
5. expressed with a verb indicating the relation to of the outcome to ‘domains (or types) of learning’
6. written with a level of learning/ learner in mind.

### 3. 1 Summarising Essential Areas of Learning

To write your learning outcomes so that they summarise essential areas of learning, try thinking about what students *must* know, feel or be able to do before they leave your course of study.

You can do this in several ways; here are three suggestions:

- If you're conducting an individual or team teaching brainstorming exercise, you might aim to develop a list of key topics to start with. Remember, however, that this is only a start—a list of topics is not the same as a list of learning outcomes.
- You could focus on 'ways of thinking and practising'. This is often defined as the essence of the discipline as enacted by specialists. This is explained in [Curriculum Debates in Higher Education: Section 5](#)
- You might like to try a more conceptual approach. [Curriculum Debates in Higher Education: Section 6](#) introduces an approach to curriculum development called 'threshold concepts'. This approach emerges from debates about 'critical blocks' to student learning in a discipline. It identifies concepts that are difficult to grasp, but once learnt, are transformative. These concepts can frame curriculum design and planning.

It is sometimes easy to fall into the trap of writing relatively trivial learning outcomes—for example, 'you will be able to list the three laws of thermodynamics'. It's unlikely that the ability to list or memorise something represents an essential area of learning; rather, this ability is more likely to be the basis of a more significant skill, such as explaining the role of the first law



in nuclear fission. Remember therefore to focus on the real goals of learning in your course of study.

### 3.2 Writing in the Future Tense

It is common to write learning outcomes in the future tense because they are generally seen as the 'products' of the learning process, which result from a specified period of study. There is some debate about whether it is appropriate to view learning as a product, as [Curriculum Debates in Higher Education: Section 5](#) explains. Working within a learning outcomes frame of reference largely confines expression in this way. If you're uncomfortable with this idea, you might like to think of learning outcomes as indicating transformations in student understanding. Ask yourself: 'How do I want my students to be different after they have completed my course?'

### 3.3 Expressing Outcomes Clearly and Explicitly

You will sometimes see learning outcomes that indicate an expectation that students will 'know' or 'understand' something after completing a course of study. Generally speaking, we recommend that you avoid using terms 'know' or 'understand' because they are not explicit or measurable. That is, how can you be sure that students know or understand something? How can you assess this? Presumably, only when you see them doing something else, such as explaining certain concepts or applying various principles and so on.

For example, ‘to understand the principles of palliative care’ presumably implies an understanding of key concepts and their application to real situations, so we might specify these outcomes as follows:

- to be able to explain the principles of palliative care in the treatment of oncology patients
- to be able to apply appropriate strategies in a palliative care case study.

### 3.4 Limiting the Number of Outcomes

The number of learning outcomes you specify will depend to some extent on the context of learning, and on whether they are programme or module level, but they should generally be few enough to be memorable and meaningful.

We suggest between four and eight.

### 3.5 Using Verbs to Indicate Domains of Learning

Learning outcomes are expressed with a verb indicating a relationship to domains or types of learning. You can do this using specific verbs which you can select from one of the ready-made taxonomies available.

Perhaps the most influential taxonomy is [Benjamin Bloom](#) *Taxonomy of Educational Objectives* (1956). Basically, Bloom categorised learning into three domains: cognitive, affective and psychomotor:

- The **cognitive domain** includes recall, recognition of knowledge and the development of intellectual skills/abilities.

- The **affective domain** incorporates emotion, feeling and character.
- The **psychomotor domain** concerns physical movement and coordination.

Traditionally, the cognitive domain has most interested educationalists, and they have drawn on Bloom's 'Cognitive Hierarchy' as a way of describing levels of academic or intellectual achievement. This hierarchy is produced in Table 2 below, which indicates the relationship between the different levels. It's important to note that each the skills in each level provide a foundation for the development of skills in the next level.

Table 2 also offers a selection of verbs commonly used when writing learning outcomes for each skill level. These verbs provide a useful 'vocabulary' to draw upon in the writing of learning outcomes.

**Table 2: Bloom's Cognitive Hierarchy**

Level	Skills	Verbs
1. Knowledge (Least complex)	Ability to recall or recognise previously learned material	State, define, describe, list, label, identify
2. Comprehension	Ability to grasp meaning of material	Calculate, explain, relate, discuss
3. Application	Ability to use knowledge in new and concrete situations	Apply, use, select, solve, compare



4. Analysis	Ability to break down material to demonstrate understanding	Analyse , order, predict, interpret, justify
5. Synthesis	Ability to put together to form new wholes, to think imaginatively and creatively	Synthesize, design, propose, reconstruct
6. Evaluation (Most complex)	Ability to make judgements based on definite criteria	Judge, evaluate, justify, discuss critically

For a more comprehensive list of verbs see the [McBeath Action Verbs for expressing Learning Outcomes](#).

[David Gosling and Jenny Moon \(2001\)](#) offer a fuller, but non-hierarchical list of levels and verbs, which they also recommend for writing assessment criteria.

The examples below are adapted from the UCE Birmingham Guide to Learning Outcomes. The example shows how learning outcomes are used to specify academic performance at the levels of knowledge and understanding, intellectual thinking, and skills.

#### **Knowledge & understanding**

On successful completion of the module, students 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 their current approach to education.



- Discuss Romantic poetry in relation to the major themes of Romanticism.
- Describe the underlying principles governing gene transmission and expression.

**Intellectual (thinking) skills: application**

On successful completion of the module, students 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, students 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, students 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, students will be able to:

- Explain the reasoning behind their allocation of scarce resources in the treatment of patients in an Accident and Emergency setting.
- Prioritize conclusions they reached from an analysis of paint techniques, giving reasons.



### **Practical skills (=subject-specific)**

On successful completion of the module, students will be able to:

- Express themselves 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 (=generic)**

On successful completion of the module, students will be able to:

- Work effectively as part of a team.
- Reflectively evaluate their own learning and personal planning processes.

(From [UCE Birmingham Guide to Learning Outcomes](#) )

The range and choice of verbs might be influenced by the academic level of the module or the place of the module in the undergraduate programme of study (for example, whether it's taken at first as opposed to third year).

Consideration of the level of learning is central to the business of writing learning outcomes.

### ***The affective domain***

Bloom proposes three domains of learning, and we commonly see learning outcomes that address the cognitive domain. More rarely, we see the psychomotor and affective domains. The following example illustrates the use



of learning outcomes that, in some cases, combine the cognitive and affective domains—a potentially controversial strategy.

The following example comes from the author's experience teaching a twelve-week, first-year module on Academic Skills for Undergraduates. In this module, we wanted students to learn how to identify sources of information; locate diverse sources of information; discriminate between sources; and use sources appropriately. These essential areas of learning translated into the aims and outcomes below.

#### **Academic Skills for Undergraduates: Aims and outcomes**

This module aims to:

- develop students' appreciation of the intellectual demands of studying at degree level
- develop the generic skills needed to perform effectively at university
- examine the importance of being critical while gaining and using information from various sources.

After completing this course, you will be able to:

- confidently *identify* appropriate sources of information
- *select, use and critically interpret* text in various contexts
- *explain and use* different forms of writing
- use an appropriate system of referencing, as required.

You can see that most of ‘what we wanted students to be able to do’ fell into the cognitive domain and therefore our verbs are all taken from the lists in [Table 2](#) above.

The first learning outcome, however, suggests that students will ‘confidently identify’ appropriate sources of information. ‘Feeling confident’ is clearly outside the cognitive domain, and instead belongs to the affective domain.

This outcome was not an oversight—we wanted to ensure that once students had completed the module, they would feel confident when it came to finding and sifting through sources of information for different purposes. In this case, confidence was a particularly important outcome because our learners were mature-age students returning to study.

Confidence might be seen as a controversial inclusion because it, along with other outcomes in the affective domain, are often thought to be difficult to assess. As lecturers, we become adept at assessing knowledge from acquisition to evaluation in the cognitive, and even psychomotor, domains. Assessing the affective domain is considered much more subjective, much more intangible. Consequently, we seldom see affective learning outcomes.

If learning outcomes are well written, they form the basis of the assessment tasks. Indeed, this is one of the principles of a constructively aligned curriculum, as explained in [Curriculum Debates in Higher Education](#).

It can also be argued that the principles of constructive alignment can work the other way too, helping us to solve the problem of assessing achievement

in the affective domain—that is, identify an appropriate assessment method to assess the outcome. In this case, we used student self-assessment to gauge the level of confidence.

### 3.6 Specifying Levels of Learning

What is a ‘level of learning’? [Jenny Moon \(2002a\)](#) suggests that:

A level is an indicator of relative demand; complexity; depth of study and learner autonomy (p. REF).

Level descriptors evolve from this and describe ‘the characteristics and context of learning expected at each level’ ([Moon 2002a](#)).

To some extent, level descriptors offer a universal language that enables comparisons of level of study, not only across domestic institutions but also across countries. Partly as a result of Ireland’s commitment to the Bologna agreement and guided by the National Framework of Qualifications, the College has now defined and agreed on the following [College-level descriptors](#)

- Ordinary Bachelor Degree (Level 7, National Qualifications Framework)
- Honours Bachelor Degree (Level 8, National Qualifications Framework)
- Higher Diploma (Level 8, National Qualifications Framework)
- Master’s Degree (Level 9, National Qualifications Framework)
- Postgraduate Diploma (Level 9, National Qualifications Framework)



- Doctoral Degree (and Higher Doctorate) (Level 10, National Qualifications Framework).

These descriptors provide a clear and useful guide for those involved in writing learning outcomes because they:

- provide a context from which it will be possible to articulate a clear sense of progression through the years of undergraduate study and onto postgraduate study and research
- may also help to cross reference various professional body requirements
- remind us of the complexity and/or the degree of competence we might expect learners to exhibit at different stages of study.

Because level descriptors are generic, it is important to see them as indicators or guides. Indeed, some might not be relevant for the programme of study or module you are designing or revising. So how do we write learning outcomes that reflect an appropriate level of learning?

#### *Translate level descriptors into discipline-specific terms*

[Jenny Moon \(2002b\)](#) suggests that you can write specify appropriate levels of learning by ‘translating’ generic level descriptors into terms that are meaningful in your discipline or subject area. That is, different disciplines have different understandings of common academic terms—for example, ‘critical thinking’, ‘analysis’, ‘communication skills’. It is important to be clear about what each of these means in your discipline. An example is given below.



### **College-level descriptor, Ordinary Bachelor's Degrees (Level 7, NQF)**

Qualifications which signify completion of the first cycle at Ordinary Bachelor's level are awarded to students who have completed a programme of study which enable them to show:

- (7) that they can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences

### **Suggested learning outcome for a first-year English course**

After completing this course, you will be able to:

- use the conventions of essay writing (structure, referencing, style) to compare and contrast the theories of key thinkers in the field of postcolonialism, particularly as these pertain to Irish literary history.

### *Compare knowledge to depth of understanding*

In translating the College's generic level descriptors into discipline-specific terms, you might find it helpful to focus on depth of understanding. For example, think about the extent to which first-year undergraduates might 'know about' a certain phenomenon, concept, and/or application in contrast to how final-year student or postgraduate might know about the same topic.

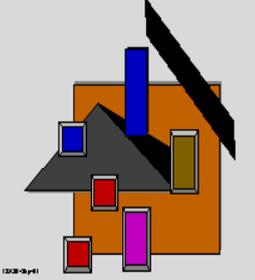
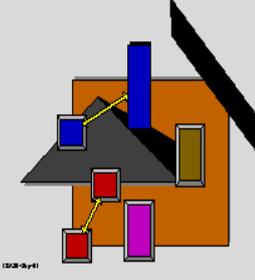
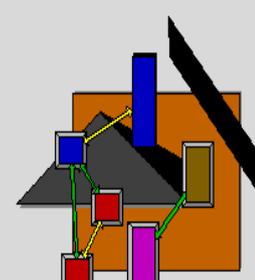
One of the most commonly quoted ways of considering 'knowledge' in relation to depth of learning and understanding in higher education is Biggs' SOLO Taxonomy (2003). Based on a study of outcomes in a range of academic areas, SOLO stands for 'Structure of the Observed Learning Outcome' and



provides a systematic way of ‘describing how a learner’s performance grows in complexity when mastering (sic) many academic tasks’ ([Biggs 2003 p. 38](#)).

The Taxonomy has five levels and moves from a more quantitative account of ‘what a student knows’ to a more qualitative account of ‘knowing’. [John Atherton \(2005\)](#) provides a visual representation of the Taxonomy which is adapted in Figure 1 below.

**Figure 1: The SOLO Taxonomy**

<p><b>1. Pre-structural</b></p> <p>Learner acquires bits of unconnected information, which have no organisation and make no sense.</p>	
<p><b>2. Unistructural</b></p> <p>Learner makes simple and obvious connections, but does not grasp overall significance.</p>	
<p><b>3. Multistructural</b></p> <p>Learner makes several connections, but misses the meta-connections between them, as well as the overall significance.</p>	
<p><b>4 Relational level</b></p> <p>Learner appreciates the significance of the parts in relation to the whole.</p>	
<p><b>5 Extended abstract level</b></p> <p>Learner makes connections within the given subject area and beyond, and is able to generalise and transfer principles.</p>	

Like Bloom’s Taxonomy, the SOLO Taxonomy encourages the use of verbs that reflect the different levels of understanding it identifies. [Jackson, Wisdom and Shaw \(2003\)](#) have pointed out that each discipline may have its own verbs and each verb has a topic object or context. See Table 3 below for Jackson, Wisdom and Shaw’s suggestions for verbs that describe different levels of understanding.

**Table 3: Verbs for describing levels of understanding ([Jackson, Wisdom and Shaw 2003 p. 4](#))**

Level of understanding	Description	Verbs
Minimal	Sufficient to deal with terminology, basic facts	Memorise, identify, recognise
Descriptive	Knowing about several topics	Classify, describe, list
Integrative	Relating facts together and understanding basic theory	Apply to known contexts, integrate, analyse, explain aetiology
Extended	Able to go beyond what has been taught, deal creatively with new situations	Apply to novel contexts, hypothesise, reflect, generate

#### 4. STRATEGIES FOR WRITING OUTCOMES: A CASE STUDY OF CURRICULUM REFORM

[Hubball and Burt \(2004\)](#) provide an interesting account of their experiences of curriculum reform using a learning-centred approach in the Faculty of Pharmaceutical Sciences at the University of British Columbia. Their account offers some interesting and practical recommendations for others, including a list (p. 56) of strategies for developing clearly defined programme-level learning outcomes (that is, curriculum-wide learning outcomes).

A slightly amended version of Hubball and Burt's list is reproduced below. You'll notice they consider outcomes in relation to the cognitive, affective and psychomotor domains and also specify 'nine global outcomes' (generic programme or graduate outcomes) required in their faculty.

##### **Practical Strategies for constructing curriculum-wide learning outcomes**

- Develop/brainstorm desirable learning outcomes—compare with other departments. Adapt learning outcome templates to suit needs and circumstances, rather than 're-inventing the wheel' or rigidly complying with templates.
- Develop responsive, higher-order and accountable learning outcomes rather than narrow/simplistic measurement-driven outcomes or lofty outcomes without due consideration for assessment and evaluation.
- Consider global (related to core programme) and specific (related to programme streams) learning outcomes from the cognitive, affective and



psychomotor domains. For example, nine ability-based global outcomes in the Faculty of Pharmaceutical Sciences included critical thinking; scientific inquiry; mathematical skills; independent learning skills; information access and evaluation skills; ethical behaviour; communication skills; social awareness; interpersonal and teamwork skills; and application and integration of knowledge.

- Overly rigid, narrow or prescriptive curriculum learning outcomes are often undesirable, and unlikely to be faithfully implemented in practice. Curricular learning outcomes, therefore, should be developed in response to the needs of faculty, students and society, and be sufficiently flexible so that they can be realistically accountable and adapted to local situations and changing circumstances.
- Integrate learning outcomes with evaluation, programming and contextual factors.



### ACTIVITY 1: LEARNING OUTCOMES CHECKLIST

	Answer	Action?
1. Are you happy that outcomes, as currently expressed, reflect what you would want your students to be able to do, think or feel by the end of their course of study?		
2. To which domains do your learning outcomes belong—doing (psychomotor), thinking (cognitive) and/or feeling (affective)?		
3. Is the balance of learning outcomes across domains appropriate for the type of programme/course you are teaching?		
4. Are the outcomes expressed appropriately: <ul style="list-style-type: none"><li>• Are they written in the future tense?</li><li>• Are they clear and concise?</li><li>• Are they limited in number?</li><li>• Do they use relevant verbs?</li><li>• Do they specify an appropriate level of learning?</li></ul>		



5. Are you confident that the outcomes 'fit' with the [level descriptors](#) of the award or programme/course?

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## ACTIVITY 2: DEVELOPING LEARNING OUTCOMES

### 1. Identify a course, unit of study or a topic for which you have responsibility.

- Think about what you want your students to be able to do, think and/or feel after completing your course.
- Why do they need to learn these things? What would these things look like in practice?
- What would you need to see to be convinced that students were able to do these things? What would be the characteristics of a successful performance?
- Are there particular contexts, conditions or circumstances under which students need to be able to do these things?

At this point, you might have a topics, behaviours, ideas for assessment, ideas about the differences in performance between students at different levels and so on.

### 2. Use this list as the basis for drafting your learning outcomes.

- Review the characteristics of effective learning outcomes on p. 16 of this document.
- Consider the examples given on pp. 22–23.
- Select appropriate verbs from the lists in Tables 1 and 2.
- Write your learning outcomes.



### **3. Review your draft.**

- Use the checklist in Activity 1.
- Ask a colleague to review the outcomes. Ask the colleague to tell you what he/she thinks he/she is going to get out of the course.
- Is your colleague's answer consistent with your vision?



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