

GUIDE TO DEVELOPING LEARNING OUTCOMES

INTRODUCTION

This guide provides information on developing learning outcomes for courses and includes information about the position of learning outcomes in relation to the design of course content and assessment.

WHAT IS A LEARNING OUTCOME?

A learning outcome is:

a statement of what a learner should know, understand and / or be able to do at the end of a defined unit of learning (for example, a module, a course or a defined part unit).

It will normally include an indication of the evidence required to show that the learning has been achieved and how that evidence is to be obtained.

FOR A COURSE

The overall learning outcomes for any particular course of study should identify the learning to be achieved by an **average** student. The learning outcomes for a scheme should therefore reflect how this level is defined in the appropriate subject benchmark statements. Typically, this has been defined as representing "the level of attainment reached by the typical student whose results fall into the main cluster".

FOR A BROADER COURSE OF STUDY

Learning outcomes for an individual should be written to identify the learning to be achieved by an **average** student. They should be written in the context of the assigned level of the course/unit of study, and should demonstrate that there is general progression within the course of study. Taken together, the learning outcomes for all of the courses should reflect the outcomes for that course as a whole.

It should be clear how the outcomes for both individual courses and methods of study match with relevant teaching, learning and assessment strategies, as well as the course aims, content and criteria used for assessment.

LEARNING OUTCOMES AND THEIR RELATIONSHIP WITH AIMS AND OBJECTIVES

Courses should contain an aim and learning outcomes. The aim is a statement of general intention, or broad purpose, of the course. Learning outcomes are formulated in the context of the stated aim and are descriptions of what a learner should know, understand and / or be able to do at the end of a defined unit of learning. Learning outcomes should therefore be written in relation to knowledge, understanding and skills.

For example, a **main aim** of this is to explain the nature of, and the relationship between, aims and learning outcomes, and to help you to develop, or clarify, appropriate aims and learning outcomes for

your courses. The main **learning outcome** of this is that, after working through it, you should be able, as necessary, to write or clarify learning outcomes for your courses, and relate the learning outcomes to the programme aims and to the assessment of the courses.

ESSENTIAL POINTS ABOUT LEARNING OUTCOMES

Learning outcomes should include an indication of the evidence that will show that the learning has been attained.

While learning outcomes do not need to explicitly refer to particular methods of assessment, they should include an indication of the standard of the performance that will demonstrate that the defined learning has been achieved. It should therefore be clear what a student needs to learn/do to attain that learning outcome.

Learning outcomes are statements of essential learning in relation to specified levels of achievement

The learning described in learning outcomes is the learning that must be attained for the student on a course to attain the average level of award concerned.

Learning outcomes must relate to the criteria used for assessment

Learning outcomes define the learning that should be achieved by the typical average student. It therefore follows that they should equate with the assessment criteria that apply to this level. If for example the benchmark statements describe the typical level equivalent to the 50-60% band, then the assessment criteria for the 50-60% band should reflect the general attainment of learning outcomes. The assessment criteria either side of the 40% mark should also be used to differentiate between work that represents a 'minimum pass', and that which falls short of this mark.

WRITING LEARNING OUTCOMES

First, decide the **behaviour** you wish the student to show. It must be something you can observe rather than something inside his/her head like "knowing about xxx". Note: this is not to disparage invisible activity but only observable actions can be assessed.

Some verbs describe fairly straightforward behaviour - for example, "to describe". Others can be more complex - for example, "to compare". A learner can only "compare" if s/he first "describes" both things that s/he is comparing. It follows, then, that *comparing* is more complex than *describing*.

Over the years, academics have developed a hierarchy of cognitive learning outcomes based on their complexity and derived from ideas in a device called Bloom's taxonomy. Bloom's taxonomy (1956) is named after its creator and describes how students build upon former learning to make more complex levels of understanding. Bloom lists six ways students can demonstrate their cognitive learning - through

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

Each of Bloom's levels has a range of verbs that describe action at that level of complexity.

LEARNING OUTCOMES VOCABULARY - CHOOSING A SUITABLE VERB

Knowledge: showing s/he remembers material by showing s/he **knows** terms used in his/her field, facts, rules and conventions, methods, principles or theories. The student would show knowledge if s/he were able to:

Define, describe, identify, label, list, match, name, outline, reproduce, select, state, recall, record, recognise, repeat, draw on, recount, state.

Examples of partial learning outcomes that show knowledge:

- List the criteria to be taken into account when caring for a patient with emphysema
- Define what behaviours constitute unprofessional practice
- Describe the processes used in creating a design brief for a client

Comprehension: showing s/he understands something; showing s/he has grasped the meaning. Students could show **understanding** by translating what they learned in a book into actual practice or by interpreting what is known in one context when used in another context. Students show understanding if they are able to:

Clarify, comprehend, convert, defend, discuss, distinguish, estimate, explain, extend, generalise, give examples, identify, illustrate, indicate, infer, interpret, paraphrase, perform, predict, report, rewrite, summarise, clarify, judge, justify, restate, locate, recognise, express, review, understand

Examples of partial learning outcomes showing comprehension: Students are able to:

- Give examples of good financial management
- Locate management strategies observed on placement within a continuum of good and poor management as described in the textbook
- Recognise the forces encouraging and discouraging a [named] change in a [stated] historical context

Application: showing students can **use** what they learned in new or concrete situations by being able to:

Change, compute, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, use, schedule, employ, sketch, intervene, practise, or illustrate.

Examples of partial learning outcomes showing application if a student is able to:

- Show how changes in the criminal law affected incarceration of women in Scotland in the mid 19th century
- Modify guidelines in a case study of a small manufacturing firm to enable tighter quality control of production
- Use a range of communication skills in [situation x]
- Solve problems in x

Analysis: Showing a student can break down material into its component parts so that its underlying structure can be understood. Students show analysis when they are able to:

Break down, make a diagram, differentiate, discriminate, distinguish, appraise, test, inspect, illustrate, infer, outline, relate, select, investigate, analyse, make an inventory, calculate, question, contrast, debate, compare, or criticise.

Examples of partial learning outcomes showing analysis: A student is able to:

- Outline an effective training programme for newly appointed social workers

- Relate how students perform in placement to their classroom teaching
- Compare the practice of a newly qualified restaurant manager with that of someone who has been employed for 10 years

Synthesis: Showing how to put parts together to form a new whole, perhaps to produce something which is unique, creative, or showing a new pattern of events. Students synthesise when they are able to:

Categorise, combine, compose, arrange, plan, assemble, prepare, construct, propose, start, elaborate, invent, develop, devise, design, plan, rearrange, summarise, tell, revise, rewrite, write, modify, organise, produce, or synthesise.

Examples of partial learning outcomes showing synthesis: The student is able to:

- Prepare a 10 minute presentation on topic x
- Design a new product
- Organise a patient education programme

Evaluation: Showing he or she can judge the value of something for a given purpose, usually using criteria designed either by him/herself or by others. This is usually seen as the highest domain in terms of cognitive learning because it requires students to use all the others activities already covered above. Students show they evaluate by being able to:

Appraise, compare, conclude, contrast, criticise, discriminate, judge, evaluate, choose, rate, revise, select, estimate, measure, justify, interpret, relate, value, or summarise.

Examples of partial learning outcomes showing evaluation: The student is able to:

- Justify a decision to do x
- Interpret someone else's decision to do x
- Summarise the advantages and disadvantages of doing x

LEARNING OUTCOMES - EXAMPLES

Upon completion of the course a typical student will be expected to be able to:

Knowledge:

- identify the needs and preferences
- describe the processes that contribute to recount the main principles to be
- give examples that demonstrate a wide range of

Understanding:

- demonstrate a systematic understanding of the theory and techniques
- evaluate and propose alternatives to
- illustrate how established techniques are used to create, interpret, describe
- apply current knowledge appropriately and with originality to the
- describe the principal ways in which

Skills

- collect and record relevant data
- apply appropriate appraisal techniques
- identify the complex nature of problems
- engage effectively in debate in a professional manner
- prepare and present a professional standard
- exercise initiative and personal responsibility

SUMMARY

All learning outcomes must have

- A verb to describe the behaviour which demonstrates the student's learning
- Information about the context for the demonstration

Also, learning outcomes must not all come from the lower levels of Bloom's taxonomy (i.e. knowledge and understanding). More advanced courses should include synthesis and analysis, evaluation and application of knowledge.

REFERENCES & FURTHER INFORMATION

'Taxonomy Of Educational Objectives', Bloom et al (1956)

Writing Learning Outcomes, Jude Carroll, Oxford Centre for Staff Learning & Development (2001)

http://www.brookes.ac.uk/services/ocsd/2_learnch/writing_learning_outcomes.html