OXFORD BROOKES UNIVERSITY

WRITING LEARNING OUTCOMES: SOME SUGGESTIONS

Oxford Centre for Staff and Learning Development

Writing learning outcomes: some suggestions

Learning outcomes have three parts

What the student will do that demonstrates learning

The context within which the student will demonstrate learning. You might state how much supervision will be required, how much information s/he will have, how slowly or quickly s/he must show the learning, and so on

How well s/he have to demonstrate his/her learning.

Here is one example of a learning outcome with each of the three parts highlighted:

The student will be able to design and draft a company report using information provided in case study materials such that the final report is suitable for discussion at Board level.

what the student will do: design and draft a company report

in which context: using information provided in case study materials

how well s/he will do it: suitable for discussion at Board level.

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 activy 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

Evaluation

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

Follow the link in this reference to more information on Bloom's taxonomy:

ATHERTON J S (2002) Learning and Teaching: Bloom's taxonomy [On-line] Available: **http://www.dmu.ac.uk/~jamesa/learning/bloomtax.htm Accessed: 25 September 2002.**

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, or recount.

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:

Convert, defend, distinguish, estimate, explain, extend, generalise, give examples, infer, paraphrase, predict, rewrite, summarise, clarify, judge, restate, locate, recognise, express, review, or discuss.

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

Completing learning outcomes

Once you, the teacher, have decided what knowledge and skills students will demonstrate, you need to add the context in which students will demonstrate their learning and how well they must do so. Here are some examples of how to complete learning outcomes, building on the statements showing synthesis above:

After the course, the student will be able to:

Prepare a 10 minute presentation on topic x suitable for a student seminar. The seminar should enable fellow students to tackle the questions relevant to the topic on the final exam.

Design a product from a brief using the materials listed in the brief and appropriate to xxx market. The product should be innovative in that it should be different from anything currently on the market.

Organise a patient education programme that will teach topic x to y number of people over z time using the stated resources.

A summary: writing learning outcomes

All learning outcomes must have

A verb to describe the behaviour which demonstrates the student's learning

Information about the context for the demonstration

And finally: Learning outcomes must not all come from the lower levels of Bloom's taxonomy (i.e. knowledge and understanding). Claims for credit in Higher Education must include synthesis and analysis, evaluation and application of knowledge.

The higher the level of credit, the more autonomy, unpredictability, novelty and decision-making a student would expect to show to the assessor. Although a five year old and a Masters level student can both critically analyse, the context, information and outcomes would be different! To some extent, learning outcomes capture that difference although assessment criteria will be needed in addition to fully differentiate the two groups' performance. but that is another story.

Jude Carroll

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