Train the Trainers' Toolkit | **Unit 6** Writing Aims and Learning Outcomes and Planning an Inter-Professional Learning Session

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Unit 6: Handout 1
Writing and Using Aims and Learning Outcomes: A Short Guide

The following is a copy (with minor adaptations) of a handout written for use within Dentistry and therefore includes references to that area of healthcare. The principles outlined can be applied to any educational setting.

Aims, objectives and learning outcomes are often used interchangeably. Depending on what paper or book you read or what course you have attended, you might come away with conflicting definitions. This short guide will help you to write aims and learning outcomes and to develop an outcomes based approach to your teaching. This will ensure that your aims and learning outcomes meet with professional requirements, are in line with all UK Higher Educational Institutions and last, but not least, are student centred.
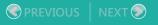
What is an aim?
An aim should give a broad purpose or general teaching intention of the course/session. For example: The aim of this course is to introduce participants to NHS rules and regulations in relation to dentistry, so that they will be able to apply these effectively within the general practice setting.

The aim can also serve as a statement of introduction to a course and help potential participants decide if the course is right for them. It might also give an indication of prior experience necessary to participate for the requirement of a professional or academic qualification. An aim can be a paragraph in length. It does not need to be written in one sentence.

What are learning outcomes?
The traditional way of designing courses or study days was to start with the content of the course. Teachers decided on the content that they intended to teach and planned how to deliver this content. This type of approach focused on the teacher's input. Course descriptions referred mainly to the content of the course which would normally be delivered in lecture format - death by PowerPoint! This approach to teaching has been referred to as "teacher-centred". A criticism of this type of approach is that it can be difficult to identify precisely what the student should be able to do as a result of attending the course or study day. International trends in education show a shift from the traditional teacher centred approach to a student centred approach. This latest model focuses on what the students are expected to be able to do at the end of the course or study day. Hence, this approach is commonly referred to as an outcome-based approach. Statements called "intended learning outcomes", commonly shortened to "learning outcomes", are used to describe what the students should be able to do at the end of the learning period. So learning outcomes can:

1. Give the course participant a clear indication of what is expected of them in terms of quantity and quality of learning.

2. Help learners plan their learning.

3. Provide information to managers, mentors, and supervisors about the anticipated learning of participants on a course. Intended learning outcomes should inform directors, advisors, trainers and participants of the minimum level of learning that is expected to be achieved by attendance on a study day.

4. Align the learning outcomes to the assessment criteria if a course is to be assessed.

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How do you write a learning outcome?

A good starting point is to establish what the student/participant will be expected to be able to do at the end of the course/session.

Here are some examples of learning outcomes:

By the end of this session participants should be able to:

1. Discuss the use of summative and formative assessment in training

2. Provide quality feedback for your dental trainee which facilitates improved performance and is motivational

3. Derive a set of learning and teaching principles which can be applied to your role as a Trainer/Facilitator

The learning outcome should start with an unambiguous action **verb**, enabling the result to be observed or measured in some way.

In learning outcome 2, "*provide*" is the verb.

The next step would be to state the **object** of the verb, for example, in learning outcome 2, "*quality feedback*" is the object of the verb "*provide*".

Lastly, there should be a phrase that indicates the **context** or provides the **condition**. In learning outcome 2, "*for your dental trainee*" indicates the context and "*that facilitates improved performance and is motivational*" would be the condition.

> Thinking up words to demonstrate learning can be difficult, so the following list of verbs should help. Adapted from Bloom, (1956) by Moon, J, (2002)
>
> 1. **Knowledge: The recall of information.**
>   *define, describe, label, list, match, arrange, name, recite, recall, relate, repeat, order, recognise, record, reproduce, state, underline.*
>
> 2. **Comprehension: The translation, interpretation or extrapolation of knowledge.**
>   *arrange, classify, describe, discuss, sort, explain, express, identify, indicate, translate, interpret, locate, report, restate, extrapolate*
>
> 3. **Application: The application of knowledge to a new situation.**
>   *apply, practice, solve, choose, prepare, use, illustrate, schedule, sketch, use, demonstrate, operate, sketch, measure*
>
> 4. **Analysis: Break down knowledge into parts and show relationships among the parts.**
>   *analyse, diagram, question, appraise, discriminate, test, calculate, distinguish, differentiate, categorise, examine, compare, contrast, experiment, inventory, criticise*
>
> 5. **Synthesis: Bring together parts (elements, components) of knowledge to form a whole and build relationships for new situations.**
>   *arrange, design, prepare, assemble, formulate, propose, collect, manage, compose, organise, synthesise, create, plan, write, construct, modify, conduct*
>
> 6. **Evaluation: Judgments about the value of material and methods for given purposes.**
>   *appraise, estimate, select, argue, evaluate, support, assess, judge, value, attack, predict, score, compare, rate, defend*

Reference: Davidson L (2008) *Start learning and teaching in dentistry* NHS Education for Scotland, Edinburgh.

Handout 1 was adapted from guidance by Lynne Davidson, NHS Education for Scotland, Dental Deanery, Edinburgh.

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Unit 6: Handout 2
Blooms Taxonomy

There are several resources on the internet and in literature about the development of Bloom's Taxonomy over many years. There are three constructs to the taxonomy addressing the following aspects: knowledge and intellect (Cognitive Domain); attitude and beliefs (Affective Domain); and the ability to put physical and bodily skills into effect - to act (Psychomotor Domain).

Bloom's Taxonomy Overview

Cognitive	Affective	Psychomotor
knowledge	attitude	skills
1. Recall data	1. Receive (awareness)	1. Imitation (copy)
2. Understand	2. Respond (react)	2. Manipulation (follow instructions)
3. Apply (use)	3. Value (understand and act)	3. Develop precision
4. Analyse (structure/elements)	4. Organise personal value system	4. Articulation (combine, integrate related skills)
5. Synthesise (create/build)	5. Internalise value system (adopt behaviour)	5. Naturalisation (automate, become expert)
6. Evaluate (assess, judge in relational terms)		

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Unit 6: Handout 3

Effective Learning Outcomes should be SMART

Specific
- Well defined learning outcomes and action plan
- Clear to anyone that is involved
- Try and express it in positive terms

Measurable
- Know if the learning outcome is obtainable and how far away completion is
- Know when it has been achieved
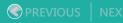- Document and track progress

Agreed upon and achievable
- Agreement with all the stakeholders what the learning outcomes should be
- Prepare thoroughly and deal with any obstacles beforehand

Realistic
- Learning outcomes should be achieveable within the availability of resources, knowledge and time
- Set with enough challenge but not out of reach

Time-based
- Enough time to achieve the learning outcome
- Not too much time, which can affect performance
- Set time targets for the steps towards the final learning outcome
- Build in time for the unexpected and monitor progress regularly

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Unit 6: Handout 4
Writing Learning Outcomes

VERB	OBJECT	CONTEXT/CONDITION