

## **Making sense of aims and learning outcomes**

*There is a movement in higher education towards using learning outcomes to describe and frame courses and teaching sessions. This short piece explains some of the thinking behind the use of aims learning outcomes.*

Up until about twenty years ago, if you were to look at the description of a university degree or a module – a programme or module specification – then they would usually be described as lists of the teaching content. Teachers decided on the content of the course, taught it, and then assessed how much of it the students had absorbed (or not). One of the problems with this teacher-centred approach is that it was often difficult for students to work out what they needed to do in order to pass the assessment. Therefore there has been a move to articulating course specifications and individual teaching sessions in terms of (intended) learning outcomes – what is intended to be learned, rather than the content of what is taught. This outcomes-based approach focuses on what the students *should be able to do with* the knowledge, attitudes and skills they have learned. Incidentally, the term ‘learning objective’ has gone out of fashion in favour of ‘learning outcome’ as sometimes ‘objectives’ were meant as ‘teaching objectives’ (i.e. teacher-centred) and sometimes ‘learning objectives’. Another advantage of an outcomes-based approach is that it also makes clearer the description of how the students’ knowledge, skills and attitudes develop as they move through the years of their university degrees and then into their working careers.

***Learning outcomes focus on what the student will learn and should be able to do with that learning, rather than what the teacher has taught (or intended to teach).***

Whilst such a distinction between teaching content and learning outcomes may seem pedantic, on reflection, such a re-orientation away from what the teacher is doing and towards the student is actually quite profound. It also moves us away from a ‘talk and chalk’ model of teaching to one which is potentially far more interactive and interesting for both students and teachers. It changes the notion of being a teacher to that of a facilitator and planner of students’ learning, which the students then go and actively do for themselves. This is not to say that this type of student-centred model is softer or easier from the students’ perspective. On the contrary, students often prefer to be talked at, than to have the more difficult tasks of making the material their own through learning to research, engage, talk and write about it for themselves.

## **The difference between aims and learning outcomes**

Blocks of learning, be that a single session, a module or a whole degree programme, are conventionally described in terms of both aims and learning outcomes. The aim of a session is usually an overarching, teacher-centred statement. For example:

- The aim of this session is to introduce students to the important relationship between smoking and health in terms of both pathophysiology and psychosocial issues [session 6 of MedSoc]
- The aim of this module is to introduce students to the patient’s experience of health and ill health over the course of their lives [MedSoc]
- Aims of the MBBS Medical Course:

We aim to produce caring and adaptable individuals aptly prepared for their role as doctors who are: Scientifically-based clinicians with high quality skills and professional competencies; Compassionate leaders of healthcare delivery across the full range of clinical activity; Confident and self motivated individuals capable of lifelong personal development; and to provide students with: A challenging and stimulating learning environment enhanced by the research activity within the School and College; A curriculum that is up-to-date, reviewed, and that changes in response to new developments [Barts and the London]

In contrast to the broad statement of an aim, learning outcomes should describe specifically what the student should be expected to have learned by the end of the block of learning. It can be helpful to preface learning outcomes with the statement: *By the end of this session / module, students should be able to...* This focuses our attention as teachers on how the students can demonstrate what they have learned, or in other words, on what they can do with that learning.

The temptation when writing learning outcomes is to frame them in terms of understanding, rather than behaviour. For example:

By the end of this session, the students should be able to:

- Understand the impact of chronic respiratory disease from the patients' perspective.

The problem with using the word 'understand' here is that it gives no indication of the *level* of understanding envisaged. A first year medical student might understand this, but at a different level than an experienced GP on a Continuing Professional Development course. Therefore it can help to think in terms of what the students / participants should be able to do with that understanding – should they be able to *describe* the impact of chronic respiratory disease from the patients' perspective, or *appraise* it, or *assess* it? As you can see, the choice of verb here is crucial. Bloom, writing in the 1950s, provided a hierarchical list of verbs relating to the way we learn and use our knowledge, understanding and intellectual skills.

This is known as Bloom's taxonomy:

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

## Writing learning outcomes

Often we are asked to deliver teaching that other people have designed, but other times we have the chance to think through our own learning outcomes, particularly for individual sessions. When you sit down to write learning outcomes, ask yourself:

- What level / year are my audience?
- Will they have covered this topic before?
- How does this session fit in with what came before / goes after it?
- How much time have I got and what is realistically achievable in that time?

Remember that your learning outcomes are in theory measurable, which is the starting point for designing the assessment. You may not actually want to assess all your learning outcomes, at least not for every outcome in every session, but it helps to think in terms of them being measurable. So for example, if your learning outcome is

By the end of this session, students should be able to

- Describe smoking cessation strategies

Then clearly you should be able to assess this by asking the students at the end of the session to describe the different smoking cessation strategies.

The right choice of verb in your learning outcome will often point you in the direction of the methods you will use to teach. For example, if you wanted them to be able to 'evaluate' rather than 'describe', then that suggests different teaching methods which you might use to achieve that. If you wanted them to describe, then you might start by asking them what they already know (always a good start in fact) and then building on that by describing different strategies yourself and give examples from your experience of them in clinical practice, or get the students to research different strategies or give them materials to read about them and discuss or present what they have found out. On the other hand, if you wanted the students to *evaluate* smoking cessation strategies, (assuming the group was at a higher level) then you might ask for what prior professional experience they had in that area, offer them some evidence-based papers to read. Finally, you might get them into sub-groups to develop and use evaluation criteria to establish which smoking cessation strategies were more successful.

## Conclusion

Writing good learning outcomes is worth spending time on for a number of reasons:

- As a teacher, it helps you focus on what your students are learning rather than what you are teaching them (the two are not necessarily the same thing!)
- It also helps you to be realistic about what you can achieve with the time you have, and about what background level of knowledge you can expect the students to come to you with
- It helps the students understand what it is they should be learning, and what they would need to be able to do to pass their exams

There is loads more information about Bloom on the Internet, [\[see this link for example\]](#) which does more justice to his work than I have been able to do here.

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