

**How to... Give students the big picture by Phil Race *Times Higher*,
13 November 1998**

What - 'Learning outcomes' are the latest buzzwords in higher education teaching. Phil Race looks behind the jargon and explains why everyone needs to get up to speed.

Why - Learning outcomes give details of syllabus content. They describe what it is intended that students should achieve in their respective disciplines in terms of knowledge, understanding, skills and even attitudes. They are written as descriptors of ways that students will be expected to demonstrate the results of their learning. The links between learning outcomes and assessment criteria need to be strong. Learning outcomes indicate the standards of courses and modules. Well-expressed statements of intended learning outcomes help students identify their targets, and work systematically towards demonstrating their achievement. Learning outcomes are now required for subject review by the Quality Assurance Agency and will be increasingly cross-referenced by academic reviewers, the new breed of teaching quality assessors proposed in Higher Quality (QAA, October 1998) against assessment processes, instruments and standards.

Who - With the present preoccupation with benchmarking, learning outcomes can provide one of the most direct indicators of the intended level and depth of any programme of learning. Learning outcomes are needed by:

- Students: before they select a course or module so that they can make informed decisions about their choice; at the start of each lecture, laboratory class, seminar, self-study package, computer-based learning programme, field work, work placement) so that they can see how they fit the overall picture of their intended learning; and towards the end of each of the above so that they can assess their achievement related to that part of their learning
- Lecturers and programme designers when they are planning ways in which each element of the curriculum will be delivered to students, whether face-to-face, or by supported self-study, independent learning or distance learning
- Subject reviewers and external stakeholders of higher education so that they can estimate the standard, level and relevance of each element of subject provision.
- Where - Learning outcomes should not just reside in course validation documentation (though they need to be there in any case). They should also underpin everyday practice.

They should be put to good use:

- in student handbooks, so that students can see the way that the whole course or module is broken down into manageable elements of intended achievement, and set their own targets accordingly
- at the start of each lecture, for example on a slide or transparency, so that students are informed of the purpose of the occasion
- at the end of each lecture, so that students can estimate the extent to which they have travelled towards being able to achieve the intended outcomes associated with the lecture
- at a suitable point when briefing students for longer tasks, including projects, group tasks, practical work and fieldwork
- on handouts issued before, during or after lectures to reinforce the links between their content and students' intended learning
- on handouts containing tasks and exercises, and/or briefings to further reading, so that students can see the purpose of the work they are to do
- on the first few screens of each computer-based learning programme that students study independently (or in groups)
- near the beginning of self-study or flexible learning packages, so that students can estimate their own achievement as they work through the materials.

Don'ts - Do not use words such as "understand" or "know". While it is easy to write, or say, "when students have completed this module successfully, they will understand the Third Law of Thermodynamics", it is much more helpful to step back and address the questions: "How will we know that they have understood it?"; "How will they themselves know they have understood it?"; and "What will they be able to do to show that they have understood it?" Replies to the last of these questions lead to much more useful ways of expressing the relevant learning outcomes. Avoid using the word "students" - except in dry course

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documentation. It is much better to use the word "you" when addressing students.

"When we've completed this lecture, you should be able to compare and contrast particle and wave models of radiation" is better than stating "the expected learning outcome of this lecture is that students will..."

Similarly, use the word "you" when expressing learning outcomes in student handbooks, handouts, laboratory briefing sheets, and so on. Students need to feel that learning outcomes belong to them, not just to other people.

- Try not to get hung up on performance, standards and conditions. For example, phrases such as "on your own", "without recourse to a calculator or computer", "under exam conditions", or "with the aid of a list of standard integrals" need not be included in every well-expressed learning outcome.
- Such clarifications are extremely valuable elsewhere, in published assessment criteria.
- Avoid trivia. Trivial learning outcomes support criticisms of reductionism. One of the main objections to the use of learning outcomes is that there can be far too many of them, only some of which are really important.
- Even the most complex tasks can be described in terms of learning outcomes. "At the end of this programme, you should be better able to manage a university" could be one for vice-chancellors (assuming, of course, that you could get them on to the programme in the first place).
- Do not try to teach something if you cannot think of any intended learning outcome associated with it. It is surprising how often a teaching agenda can be streamlined and focused if you check this.
- Learning outcomes should not be confused with assessment criteria. It is best not to cloud the learning outcomes with the detail of performance criteria and standards until students know enough about the subject to understand the language of such criteria. In other words, the assessment criteria are best read by students after they have started to learn the topic, rather than at the outset (but make sure that the links will be clear in due course).
- Do not write any learning outcomes that cannot, or will not, be assessed. If it is important enough, it should be worthy of being measured in some way, and it should be possible to measure.
- Avoid designing any assessment task or question that is not related to one or more stated learning outcome. If it is important enough to measure, it is only fair to tell students it is on their agenda.
- If you state learning outcomes at the beginning, make sure you return to them. It is important to come back by the end of a lecture (or self-study package, or element of practical work, and so on). Turn them into student checklists, for example along the lines: "Check now that you feel able to...", or "now you should be in a position to..."

Do's - Do give everyone a clear view of the big picture of a course or module, and show how this is built from the various individual elements contained in it. (Do you now feel better able to put learning outcomes to good use? Can you show you can use them well, rather than just know how to do it?) Phil Race is director of Durham University's certificate of teaching in higher education.

Five Positive Results Of Good Practice

When you have worked through these ideas and applied them to teaching, you may be better able to:

- accept that learning outcomes can be really useful to both lecturers and students and are not a new idea or just a fad of the Quality Assurance Agency
- move on from some of the problems that have been experienced with competence frameworks and behavioural objectives
- help colleagues and students to make the most of learning outcomes
- describe a range of times and places where learning outcomes can be useful to students
- make useful, strong links between learning outcomes and assessment criteria
- avoid many of the things that often go wrong with learning outcomes.