# Writing and using good learning outcomes

Written by David Baume

leeds
metropolitan
university

# Preface

Our Assessment, Learning and Teaching strategy reinforces the University's commitment to put students at the heart of everything we do and to be inclusive, appropriate, effective, reflective and transformative.

Programmes of learning at Leeds Met have for years used learning outcomes. To reinforce this, Teacher Fellows and others had been asking for some time for scholarly and practical advice on developing or refreshing learning outcomes, advice appropriate for the Leeds Met context.

Additionally, staff of our Registrar & Secretary's Office asked that we consider a paper at Academic Committee on learning outcomes. It was clearly the time to develop a guide. It's easy to write learning outcomes of a sort. It's a complex collaborative task to write really good ones.

We wanted to use internal expertise, acknowledged below. We also wanted external expertise. I invited Dr David Baume, who at the Open University wrote about drafting and using learning outcomes, to lead on this guide.

Good learning outcomes aren't just administrative devices. They support and guide good learning and teaching. They:

- Help clarify the course or module team's thinking about what they are aiming to achieve, thus providing a basis for a dialogue about what is taught and how

- Give clear indications to home and international students about what different programmes of study entail, what they can be expected to do while studying on them, and how their learning will be assessed

- Provide a good basis for reviewing the effectiveness of our programmes, and the teaching and learning support we offer to promote student engagement

- Guide employees and other stakeholders about the nature of our programmes, showing the Quality Assurance Agency, Regional Health Authorities, professional and subject bodies and others that our programmes are vibrant, sound and fit for purpose

- Offer staff new to teaching in higher education guidance on how to construct, teach, assess and evaluate programmes of study.

We strive to enhance quality at Leeds Met, not just to assure it. By refreshing our learning outcomes, we can overhaul our programmes of study and make clear to students, staff and others our ambitions for the curriculum.

I thank David Baume for his scholarly and co-operative approach to working with our Teacher Fellows, Registrar & Secretary's Office and others to produce this guide. I thank Lesley Earle, Sunita Morris, Justin Thomas, Mandy Asghar, Alison Caswell, Zoë McClelland, Sally Hayes, Nick Waters, Jayne Mothersdale, June Dennis, Elaine Payne and Phil Race for input, feedback, examples and advice.

Professor Sally Brown

Pro-Vice-Chancellor, Provost and Director:
Assessment, Learning & Teaching,
Leeds Metropolitan University

# Introduction to learning outcomes

I hope that, by reading this booklet, you will be persuaded (or further persuaded) of the value of learning outcomes for:

• Planning excellent programmes and modules

• Teaching and supporting learning in appropriate ways

• Enabling students to receive useful feedback

• Assessing students validly, and

• Usefully reviewing programmes, modules and teaching.

Also, I hope that, by the time you have worked through this booklet, you will have written, reviewed and/or improved some learning outcomes for your programme, module or other piece of teaching. I further hope that you will have used these improved learning outcomes, for example to:

• Review and maybe revise the overall shape and structure of the programme, module or other piece of teaching

• Plan teaching and learning methods to achieve them

• If possible, use some of these methods

• GIve students feedback that uses these outcomes

• At least plan how to assess against these outcomes

• Review your teaching and student learning by asking, "Have students attained the outcomes?" "How?" "Why?".

I might have said that I wanted you to 'appreciate'or 'understand' learning outcomes. Such words and phrases are sometimes seen in learning outcomes. But I don't recommend such words.

Why not? I'm not against 'appreciating' or 'understanding'! But these terms can be interpreted in many ways. Multiple meanings can cause problems, confusion. Ambiguous terms make it hard for students to see what they are trying to achieve in their studies, and see what they have to do to pass. Outcomes with such multiple meanings also make it hard to plan courses; to teach; to give useful feedback; to assess; and even to review how, and how well, and why, a programme or module has worked.

You may see, in the previous column, another advantage of using more direct verbs. My hoped-for learning outcome from simply reading the book is that you "...would have been persuaded..." of the value of learning outcomes. Useful. But, if this booklet were a course, would I be happy if were just 'persuaded'? No. The second set of hoped-for outcomes – achieved through using rather than just reading the book – describes things done, improvements made. If this booklet were a course, such outcomes would be assessable. And, hopefully, they would also be useful, and hence valued.

Outcomes describe student activities, attainments. They help us to design courses that will help students to attain these outcomes. Outcomes also guide students' work.

# Contents and Summary

# Good learning outcomes

**What are learning outcomes?**

The classic learning outcome describes what a student should be able to do in order successfully to complete a course of study. 'Course of study' might mean a whole degree; a year of study; a module; or a discrete unit of study, say a week or two. So, typically, from a course handbook:

"By the end of the course you should be able to….."

1. For a BSc in Computer Security: "By the end of the degree you should be able to analyse risks to computers and computer systems, and recommend, develop, implement and review effectiveness of appropriate safeguards in a variety of contexts. You should be able to justify your methods and conclusions by selective and critical use of relevant theories, models and procedures."

2. From a BA Art, Event, Performance 'critical contexts' module: "You should be able to structure and communicate ideas effectively through both written and verbal, critical and creative outcomes."

Both of these programme outcomes help a student to decide if the programme was what they were looking for. Both help those designing, teaching and studying the course to select appropriate content, although retaining considerable freedom over detail. Both help in the design of productive coursework assignments. Both strongly suggest appropriate assessment tasks, first for feedback and then for final assessment.

A module learning outcome would be more specific:

3. "…you should be able to advise parties to a case involving the sale of land of their rights and obligations, and justify your advice by reference to relevant statutes and cases."

4. "…you should be able to plan, undertake, write up and then present and defend to a client a small-scale survey to establish likely market demand for a new consumer product or service."

These module learning outcomes will be comprehensible to students joining the module. They offer a useful short guide for students on where the module will take them.

What about an outcome for a shorter unit of study?

5. By the end of next week you should be able to draft, obtain and use feedback on, and complete a review of a short novel or play (from a list provided). In this 1,000-word review you will make explicit use of at least four distinct critical approaches, and justify the considered view that you reach.

6. One (from 3) outcomes for module in the use of computers in music: "…you should be able to review the suitability of a variety of tools for use within a performance environment."

Each of these outcomes for two or so weeks of student work is also an assignment. And a learning activity!

*Good* learning outcomes?

A good learning outcome is, among other things:

**Active** – it describes what students can do

**Attractive** – students want to achieve it

**Comprehensible** – students know what it means

**Appropriate** – to the student's current goals and career plans

**Attainable** – most students will mostly meet it, with due effort

**Assessable** – we can see if it has been achieved

**Visible** – in the course booklet and on the VLE

Your own discipline may require your programme or module learning outcomes to have additional qualities. And you may want to interpret some of these qualities for your subject. But some such list of the qualities of a good learning outcome in your subject is helpful to those designing courses, teaching and of course studying the subject.

**Who writes learning outcomes?**

Those writing the course or programme, obviously. But….

There are advantages if students have some say in learning outcomes. This works especially well in later stages of a course, and in courses for those already in employment. Students know something about what they want and need from their studies.

Alongside the published course outcomes, students can write some of their own, or make their own interpretation of the course outcomes. This will increase student ownership of the course, and hence student engagement in the course. Also, learning outcomes in course documents are sometimes called 'intended' or 'expected' learning outcomes. This is fine. But learning isn't the tidy process that the use of learning outcomes may sometimes lead us to think. Unexpected, serendipitous, learning happens. Such learning is also worth making space for, recording, and valuing.

**Learning outcomes and assessment criteria**

Learning outcomes 1, 3 and 5 on the previous page didn't just say what students should be able to do. They also said a little about how, or how well, students should be able to do them. For example: "You should be able to justify your methods and conclusions by selective and critical use of relevant theories, models and procedures". This assessment criterion requires a student's work to go beyond technical competence - a scholarly, theoretical and critical approach is also needed. Such guidance and assessment criteria fit well alongside learning outcomes. This booklet concentrates on learning outcomes rather than assessment criteria.

**Qualities**

We may additionally want our students to be autonomous, curious, or collaborative. Such qualities also fit in learning outcomes. They too can be taught, learned and assessed.

# Good programme-level learning outcomes

**Introduction – learning outcomes for a new programme**

Programme-level learning outcomes describe what students should be able to do by the end of the programme. They answer the student's question "What do I have to do to pass?" Later I'll suggest how you can, within learning outcomes and assessment criteria, also start to answer the question "What do I have to do to get a first? a third? etc."

It's rare that we get to design a whole new programme. More often we're revising or extending an existing programme. But let's start with a new programme.

Alongside my (as far as I know hypothetical) Masters in Professional Judgement, why not work on your own (hypothetical, potential or actual) new programme. I developed my example below as truthfully as I could. I added new ideas on a new line as I thought of them. Some are extra outcomes, some are further elucidations of the previous version. For me this was a voyage of discovery and invention. You might find it useful to take a similar voyage, using a format such as this.

| By the end of this programme, students will be able to: | |
|---|---|
| MA Professional Judgement | Your new programme |
| Make sound professional judgements | |
| Make *and justify* sound professional judgements | |
| Variously make, critique and defend professional judgements in a variety of professional settings | |
| Make explicit, selective / appropriate, critical use of a variety of methodologies and perspectives | |
| Communicate their findings and recommendations to a variety of interested parties. | |
| **Pulling this together into a first draft overall learning outcome for a new MA in Professional Judgement:** | |
| By the end of the course, the student will be able to: | |
| Make, defend and critique professional judgements | |
| In a variety of settings | |
| Making explicit, appropriate and critical use of a variety of approaches; and also | |
| Communicate their findings and recommendations to a variety of interested parties. | |

# Reviewing programme learning outcomes

Let's test these programme outcomes against the criteria on page 7. You may find it useful to do the same for yours:

| MA Professional Judgement | Your new programme |
|---|---|
| ...active? | |
| It describes students doing a variety of things. So, yes. | |
| ...attractive to potential students? | |
| It should be attractive to students interested in developing their skills in professional judgement! Which is what we want. | |
| ...comprehensible to potential & current students? | |
| We need a paragraph or two, with examples, describing what we mean by professional judgement. Given this, it is fairly clear. | |
| ...appropriate to the subject & to students' goals? | |
| This is a matter of professional judgement! What do you think? Is this what you would expect someone passing an MA in Professional Judgement to be able to do? | |
| ...attainable by most students who do the work? | |
| Surely yes, given a good programme design involving much appropriate student work. | |
| ...assessable, validly and reliably? | |
| With further clarification through more detailed outcomes, it should be assessable. | |

## Re-developing an existing programme

If your current programme already has learning outcomes, it's still worth testing them against these six criteria – and against any other criteria which you think are important.

If your current programme doesn't have overall learning outcomes, look at the learning outcomes for modules that count for final assessment. You can work out what overall programme learning outcomes these 'add up to'. Then, test these implied overall programme learning outcomes. Most programmes are assessed wholly via modules, not at programme level.

# Using good programme-level learning outcomes

You have written – maybe alone, but much preferably with colleagues – one or more overall learning outcomes for your new or revised programmes. You have checked them, against the six criteria suggested earlier. You have asked some students how the outcomes read, and made any necessary clarifications to the outcomes.

You have also checked the outcomes against any other appropriate sources – for example, the University's course handbook template, QAA benchmarks and descriptors, and statements by any relevant professional body. By this stage you believe, with evidence, that the programme learning outcomes are really rather good.

What do you do with them?

The suggestions in this section apply both to writing a new programme and to substantially revising an existing programme. You could:

### Plan for a final project module

This final project can be the place where students bring all or most of their studies together. This can be where they develop, practise, demonstrate, review and present a piece of work which shows how they have attained the overall programme outcomes.

As you draft the specification for this final module:

- Make sure that it will enable students to show how they have attained the overall programme outcomes.

- Allow students some scope to interpret the outcome,

explicitly, to meet their particular needs and enthusiasms.

- As part of the project planning process, review, approve and give feedback on each student's plans, including their own versions of the outcomes. This frees them up to do, safely, a more individually-tailored project.

### Identify learning outcomes for the final-year modules. Do they match the overall programme outcome?

Whether or not you use a final project module, the attainments of students in the assessed years of the programme need to add up to attainment of the overall programme outcomes.

"Add up to" may sound a bit mathematical. A better approach may be to ask: "If the students had attained the overall outcome(s) from each of the assessed modules, could they achieve the overall outcome of the programme?" Answering this needs analysis and judgement.

In any discipline, this will mean ensuring that the assessed modules together enable the students to develop and demonstrate the necessary knowledge, techniques, approaches, sensibilities and other disciplinary / professional and personal skills and qualities that together comprise the programme's account of a capable graduate.

### Identify outcomes for earlier years

In designing final-year modules, assumptions will be made about the abilities, knowledge and other qualities that students will bring to their study of the final year. These requirements are sometimes expressed

as prerequisites, modules which the students must have passed.

We can usefully see the learning outcomes of earlier, prerequisite modules as the 'learning incomes' of the next year's module – what students are assumed to be able to do at the start of a new module.

This linkage, this alignment, between modules and between years is again not a simple and arithmetical business. It needs academic judgement, imagination, and an ability to get inside the students' heads and see the programme from their perspective.

The more explicit the intended learning outcomes and the required 'learning incomes' for a module, the more scope there is for students to make successful transitions between modules and years – and thus to pass.

### Write module handbooks

With clear learning outcomes for programmes and modules, the structure of the programme can be made clearer to students. Each module handbook can show, with a sentence or two, and maybe a simple diagram, how success in this module contributes to success on the programme.

Students sometimes get lost on programmes. When this happens they may keep on going, but without a clear sense of direction. Handbooks that describe and explain outcomes and the relations between them provide students with a map and a compass.

### Provide and label learning resources

Learning resources, especially within the VLE, can be linked explicitly to the programme outcomes. This explicit linkage can help students to select and use resources in ways that lead them towards attainment of the programme learning outcomes.

### Ensure alignment

The next section offers suggestions on writing good outcomes for modules. Writing, using and aligning outcomes at programme and at module level may require some iterations. Here are some productive questions:

- Given an overall programme outcome, can we find a group of assessed modules with outcomes that in some sense 'add up' to the overall programme outcome? If not, then we need to change either the mix of assessed modules or the overall programme outcome, until they are in alignment with each other.

- Given the overall programme and the module outcomes, can we find good and productive ways to (a) help students attain these and (b) assess their attainment? If at any point the answer is 'no', then we need to change the outcomes until the answer is 'yes'. 'Outcomes' which we cannot teach and help students to attain are unfair on students. 'Outcomes' which we cannot assess may be aspirations, and worthy aspirations at that. But they are not outcomes.

# Good module-level learning outcomes

**Introduction – integrating learning**

However much we try to make our programmes coherent, we know that most or all of the action – planning, teaching, learning, feedback, assessment – happens within modules.

As discussed above, some programmes have a final project module. Here students integrate what they have learned. They show how they have achieved programme learning outcomes. Here, students often produce work that they value the most.

Without programme-level integration, a degree can feel fragmented, however the good individual modules are.

**How big?**

A ten-credit module should involve a total of around 100 hours of student work, and so on – ten student learning hours work for one credit. These hours include both class time and student work outside class. Different students will spend very different amounts of time, depending on how rapidly they learn the particular topic, how strategically they apply their effort, and the other demands on their time

How much is it reasonable to expect a student to attain in, say, a 20-credit module, in 200 or so hours of study, in a sixth of a full-time academic year? Here is the learning outcome from a 20-credit level one computing module:

"...students will be able to research, specify, implement, test and document software solutions to meets users' needs."

Within this, contributory learning outcomes are then defined– identifying user needs, writing algorithms, defining data structures, coding, testing, and writing documentation.

This module learning outcome does not automatically have any particular size, or indeed academic level. It can be achieved in 100 or 1,200 hours, at first, second, third or Masters level. Size and level here depend, among other things, on the sophistication and complexity of the problems students tackle and of the software solutions they produce. This can be provided through syllabus content and examples. And through clearer learning outcomes!

**The problems with a syllabus alone**

A conventional syllabus often takes the form of a list, often a list of nouns, of content. This can suggest that the point of teaching and studying the module is to 'get through' the syllabus, to 'cover the ground'. This in turn can lead to teaching becoming delivering content, and learning becoming receiving content. On a bad day, learning can become mainly 'memorising content' for the assessment.

None of this is inevitable. But it happens.

### How many module learning outcomes?

Good learning outcomes show the module as a coherent whole. It's worth effort to find or write the one overall module learning outcome. You have succeeded when you can say "Students on this module who achieve this outcome, and only this outcome, will, deservedly, pass." We saw this above with the computing module.

A module may come in distinct sections, as explored further below. Several learning outcomes may be needed. But, I suggest, keep them as few as possible. Why? A good learning outcome acts as a beacon, for teachers and students. It provides a constant direction and destination through what may be complex and choppy waters.

### What kinds of outcomes for different years?

The QAA qualifications framework (pp 25 & 26) offers useful, though necessarily generic, guidance. For example, CertHE needs the ability to make sound judgements in accordance with basic theories and concepts of the subject(s). Masters needs originality in the application of knowledge.

### What kinds of outcomes for different subjects?

Some subjects need concepts to be learned in a particular sequence, e.g. maths and sciences. Others involve learning a series of more or less self-contained concepts, albeit with many common themes, e.g. law. Other subjects have other structures of outcomes. It's important to find an outcomes structure that works in your subject. The relevant QAA Subject Benchmark may help.

### Good module learning outcomes?

Draft a module learning outcome, then review it here:

| |
|---|
| Your draft module learning outcome:<br><br>How and why is it? |
| Active? Clearly describing things that students will do? |
| Attractive to students on the programme? |
| Comprehensible to students on the programme? |
| Appropriate to the subject and level, and to students' goals? |
| Attainable in module hours by most students who do the work? |
| Assessable; validly, reliably & economically of your time? |

# Using good module-level learning outcomes

**Introduction – modules – where most of it happens**

Some of the suggestions on pages 10 and 11 about using good programme-level learning outcomes also work for using module-level learning outcomes. But, as we have suggested, most programmes are experienced, by students and probably by many staff, primarily as modules.

**Talking with students**

The module learning outcomes should describe the essence of the module. It is good when students can explain:

• What the module learning outcomes mean, and how they fit into the larger programme

• The way their attainment of the module learning outcomes will be assessed

• The learning activities they will undertake to help them to attain the outcomes

• The support and teaching they will receive towards attainment of the outcomes and

• The learning resources to which they will have access.

Such students are more likely to engage, in an informed way, with the module. All of these things should be explained in the module handbook. But it is also important to have conversations with groups of students, for example in seminars, about these topics, related to module outcomes.

**Chunking and sequencing the module**

The module may only have one outcome – generically, for example, "students will be able, critically and selectively, to apply this range of approaches and techniques to these kinds of problems". You need to identify the more detailed outcomes that contribute to attainment of this overall outcome.

You can see immediately that there are at least three main ways to do this. You could chunk, organise, the module around the different approaches and techniques to be learned. You could organise the module around the main classes of problems to be solved. Or – a potentially very productive approach which uses insights from learning theory – a spiral approach, applying a steadily increasing range of approaches and techniques to steadily more complex problems.

Looking at this another way:

Sometimes, as already noted, the module learning outcomes must be learned in a particular sequence, each outcome building on, indeed requiring, knowledge and abilities previously learned.

In other subjects, topics and outcomes are revisited once or twice, at increasing detail and sophistication. This spiral form may be seen in, among others, business and management.

In still other subjects the particular sequence of content is less important than the steady increase in, for example, analytic skills applied to a variety of content.

Other shapes are possible. Spend a few minutes working out the natural shape and sequence to study your module.

### Planning module assignments

It is valuable to translate the detailed module **outcomes** into module **assignments.** Good outcomes translate very readily into assignments. The outcome should say: "The student should be able to do (something or other)." A good assignment for this outcome would be to ask the student to do the something or other.

The module could be planned and run as, or around, a series of assignments, each linked explicitly to particular learning outcomes. These assignments should be authentic, realistic and clearly relevant to work or further study.

### A radical suggestion – the module is the outcomes!

In 1963 Mager and Clark ran an experiment. They taught a course to one group using lectures and tutorials. They told the other group of students the learning outcomes of the course, but provided no teaching, simply told the students to work together and use the resources to achieve the outcomes. The second group performed significantly better than the first. They were also better motivated.

*What elements of this experiment and result might you use in designing and running your module?*

A few thoughts:

- You might need to analyse the overall module outcomes into components, to enable students to learn from the outcomes and learning resources alone.

- Students might be startled (or delighted!) if you told them at the start of the module that they were wholly going to study it for themselves – even guided by good intended learning outcomes! Students do better if they are gently rather than abruptly introduced to new learning methods. Throughout a module, and throughout a programme, students should be invited to undertake outcomes-linked assignments of steadily growing size and complexity.

- You need to help students to collaborate effectively whilst avoiding collusion and plagiarism. How? Students could keep, perhaps online, a log of their progress, successive drafts of their work with feedback from others. This log – available for audit by staff if plagiarism or collusion is suspected – shows how they developed their work. Students will adopt good academic practice when, among other conditions, plagiarism needs more effort than doing the work themselves whilst giving due credit to collaborators.

- This more self-directed approach to learning will help students to develop valuable academic abilities.

- This approach will also generate useful materials for the students' personal development plans and portfolios.

# Writing and using good 'unit of study' / assignment learning outcomes

**On the versatility of good learning outcomes**

"Develop a reasoned business plan suitable for submission to a bank or venture capital company, following analysis of interviews with principals of a new company and analysis of their business intentions and financial projections."

What is this? At the moment, it's a task, a piece of work.

- If we put "The student should be able to" in front of it, it is a reasonable intended learning outcome, for the final year of a business management course or an MBA.

- Alternatively, it could form a useful, challenging learning activity on such a course.

- It could also make a good final project on such a course, requiring students to integrate what they have learned across many business and management subjects.

- If transcripts were provided of the interviews with the principals of the new company, it would make an appropriate– and, again, challenging– final examination question or indeed examination paper.

So, good learning outcomes can simultaneously be appropriate assignments; projects; or even examination questions. Think of the saving of staff effort. Think of the clarity of purpose which the students can bring to their studies. Think of the demonstrable coherence of the course.

Have I cheated here? Have I used an unusual example, a very

particular task, one that, like a Transformers™ toy, is designed to be switched easily into a learning outcome, a piece of coursework, a project, an examination question?

You decide. Look at the learning outcomes on page 6. Choose one of them that particularly interests you. Rewrite it as a learning activity, a coursework assignment, and an end-of-module assessment or examination:

| Original learning outcome | |
|---|---|
| Learning activity | |
| Assessed coursework assignment | |
| Final module assessment project or examination task | |

How did that go? Did you find it – possible – easy – difficult – impossible – to turn the learning outcome into a good learning activity, coursework assignment, final exam task?

Now, I suggest, try this for one of your module learning outcomes, for a module you have taught or will teach, whether or not you wrote the learning outcome. (Before you do that, you may want to review your learning outcome against the criteria for a good learning outcome suggested and illustrated on page 7, and if necessary modify it.) Then, see how you can adapt it into a learning activity, a coursework assignment, a final assessment task.

Or you could start with a learning activity, a coursework assignment, a final assessment task. It doesn't matter where you start. Consistency, alignment, is the point here.

| Learning outcome | |
|---|---|
| Learning activity | |
| Assessed coursework assignment | |
| Final module assessment task | |

Look back over the work you just did.

What changes did you need to make to convert among learning outcome, learning activity, assessed coursework assignment, final module assessment project or examination?

You might have had to change the wording slightly. You probably included "The student should be able to..." or something similar in the learning outcome. For an assignment or an assessment task, you might have needed to say something about length, duration or other specifics.

But if the core is always a task, something that students will do and achieve, the task of conversion will usually be small.

More on this in the next section. But, for now, what do I mean by a 'unit of study'?

This could be a fixed period of study within a module – a week, a month. It could a relatively discrete and self-contained chunk of content. If the module, as I suggest it should, has a small number of second-level learning outcomes, a unit of study could lead up to one of these outcomes. As we'll explore later, outcomes for different subjects take different shapes. But, for now:

Explore how your module falls into chunks.

What is the overall learning outcome for each chunk?

How do these outcomes and chunks fit together?

# Re-integrating the curriculum through the use of good learning outcomes

Reinforcing and building on previous ideas:

Programmes, and indeed individual modules within them, can be experienced by students as fragmented. Programmes and modules can be experienced as sequences of content, of stuff, to be learned, and then to be repeated back for assessment. A pile of bricks, hopefully interesting bricks; but scarcely a house, or even a wall.

Maybe I'm exaggerating.

*You may find it interesting to ask your students to give you their overview of their programme or a module within the programme. Ask them:*

*"What do you think this course is really about?"*

*"What do you feel is the big picture, the big story, of this course?"*

A good (in all the senses listed on page 7) overall learning outcome provides a big picture. Not a plan of the house – the course handbook is the plan. More likely an artist's impression. (The overall learning outcome can't be a photograph. For a student starting on a course, the course – which for them means their experience of the course – is in the future, and you can't photograph the future.)

But, whatever metaphor we use, if students see the programme, or a module within it, as in some sense fragmented, how can we and the students together use learning outcomes to pull it (back) together?

## Within a module

The overall intended learning outcome of a module describes what students should be able to do by the end of it. Below this there may be a further level of learning outcomes. This is illustrated on pages 20 and 21.

Learning outcomes, even good ones, are often presented as a list. It is important also to show the structure of the outcomes, the relations between them.

How does this help with (re-)integration? You and your students can use the overall outcome as a beacon to steer towards, and guide them safely to harbour, while they are working on smaller, lower-level outcomes.

## Across a programme

It can be harder to achieve integration and coherence across a programme. This can be particularly hard in a modular programme which allows lots of student choice.

But it can be done. Let's start with programme-level outcomes.

You might feel that the overall learning outcome for a History degree was that graduates should be able to do History. Similarly for most subjects – "the student should be able to do ... the subject".

Of course this needs elaborating. But hold onto the original, the truly overall, learning outcome.

This is harder to do for a combined studies programme – "the student should be able to do x and y and z...". But if, deep in the middle of a semester and studying subjects x and y and z, the student can see how he or she was learning to 'do the subject', some coherence might be restored, where it belongs, to their experience of learning.

*Try spelling out, in a sentence or two, what it would mean for a graduate in your subject to be able to 'do your subject'. (I know you could answer this in several pages. The challenge is to answer it in a couple of short sentences.) Your students will thank you.*

### Helping students to find coherence – via PDP

In their personal development plan and portfolio, students can be supported to see their programme as a whole. Beyond that, PDP can help them (as appropriate, and if they so wish) to define or clarify where they want to go – personally, academically, professionally – and get there, monitoring their progress along the way, as long as PDP has this purpose, and offers students tools to make it happen.

*How can you help students to use PDP and the overall programme outcomes to find coherence in their programme of studies?*

### Helping students to find coherence – via integration

Students often come closest to 'doing their subject' in a final-year project or dissertation. This may take the form of a capstone module, pulling together what has been learned.

Such integrating modules could be used in earlier years.

And the final assessed assignment in any module should invite students to integrate what they have learned and show that they have attained the overall module outcome.

*Whether at programme, year or module level, devise an assignment requiring students to integrate their learning.*

# Using good learning outcomes to plan courses

What does a course plan, a course handbook, usually contain? It might describe aims, learning outcomes, content, maybe an indicative sequence of content, how the course will be taught (lectures, seminars, reading), how assessed (x% course work, 100-x% exam), reading list.

Useful; but not enough.

Students learn above all by doing work, not simply by being taught. It's useful to think of a course as what a student does. It's useful to think of a course plan as a plan for what students will do. More specifically, what they will do in order to become able to do whatever the learning outcomes say they will be able to do.

We need to work with an example. Pick, or write, an overall learning outcome for a module you teach – preferably an outcome you hadn't worked with before during this book.

| Your module learning outcome<br><br>(Check that it's a good one! Use the criteria on page 7 to check, and, if necessary, to improve it.) | |
|---|---|

I've only left you space for one overall module learning outcome. One is the best number – one module learning outcome shows that the module is probably very coherent, very integrated. If you're having trouble getting down to one overall module learning outcome, try this. Take the module title. Put the words "The student should be able to do" in front of it. "The student will be able to do – radiological safety – textual analysis – international business strategy – graphic design...." You may need to modify the module title a little, but this generally works. (This also works for writing the overall learning outcome of programmes.) You'll obviously need to add detail to this overall learning outcome, but it's a good start. Try it:

| Raw overall module outcome (just add the module title) | By the end of this module the student should be able to do ... |
|---|---|
| Refined overall module learning outcome | By the end of this module the student should be able to ... |

Different subjects need to be learned in different ways. To plan the module you need to know what else students will need to be able to do in order to achieve the overall module learning outcome. You need the next level of learning outcomes, here called the contributory outcomes. These may form a hierarchy:

| Overall module learning outcome |
|---|

| Contributory outcome | Contributory outcome | Contributory outcome |
|---|---|---|
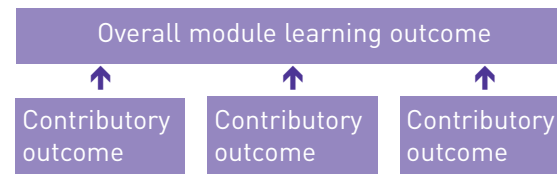
Or they may form a sequence:

| Outcome 1 | → | Outcome 2 | → | Outcome 3 | → | Overall Outcome |
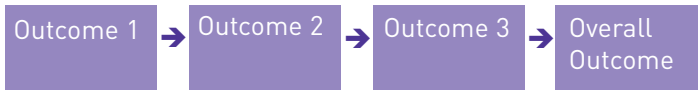
Or a perhaps a spiral or other shape that I cannot draw.

This talk of module shapes is not some arcane and irrelevant pedagogic geometry. It asks fundamental questions, about the nature and structure of the subject; from the learner's, and hence the teacher's, perspective.

*Sketch the current shape of the outcomes of a module for which you have some responsibility:*

Look at this shape from the point of view of someone new to the subject. Will they attain the contributory outcomes in a sensible sequence? Could they say "I am learning to do this now.... it builds on this that I have already learned to do... and it will help me to do this next... and I can see how the module will help me to put all this together so that I can achieve this... (the overall module learning outcome)."

Undergraduates may feel like Jack or Jill ascending the beanstalk, lost and scared, worried about possible giants, hoping for a fairy godmother to guide them. They may learn fear and confusion but too little of the subject.

A module timetable may emphasise class contact. This says: "class contact is the most important part of the course". If we take attainment of learning outcomes seriously, student work outside class is at least as important as the class itself.

Why not write module timetables for the whole of a student's study time on a module, not just class contact? Let's make the 'notional' 200 student learning hours on a 20-credit module a bit more real.

What is the role of the class, class contact, in this model? The class is the glue, the coupling, between successive periods of student work – the mortar, not the bricks:

| Student work out of class | Class | Student work out of class |
|---|---|---|

What form might such a class take? Perhaps:

| Review of work done by students in previous week | New knowledge, ideas, approaches, techniques | Planning of the next week of student work |
|---|---|---|

Try this for a week or two of your course:

• What learning outcome are they working towards?

• What would be a helpful 2-3 hour task in each week?

• How would you help them to plan this work?

• What new ideas would you need to teach?

Then, after they had done it:

• How could you help them to review their work on this?

# Teaching with good learning outcomes

**Whatever it reasonably takes**

Teaching means helping students to achieve the course learning outcomes.

In a bit more detail; teaching means helping and supporting and challenging and ensuring that learning resources are available and, in summary, doing (within timetables and budgets and learning & teaching policies and regulations) whatever it reasonably takes to maximise the opportunities for students to succeed, that is, to attain the course outcomes.

That is a little different from the normal account of teaching as lecturing, running seminars and tutorials and labs and practicals, giving feedback... It focuses on the purposes of teaching rather than on the methods. But it has implications for the methods.

*In your experience, what is missing from these accounts of what a teacher does to help students attain the outcomes?*

**Learning outcomes and lectures**

How do lectures help students to attain learning outcomes? How do seminars? How do the various other teaching methods that you use?

*Think of a lecture you gave recently. What were students able to do at the end of it that they couldn't do at the start?*

*Think of a seminar you ran recently. What were students able to do at the end of it that they couldn't do at the start?*

(If you did neither of these things, replace 'lecture' and 'seminar' by the name of what you did.)

Following the planning model on pages 20 and 21:

*Think of a teaching session you ran recently.*

*What was it?*

*What were students able to do at the end of it and **after the subsequent work that they did outside class** that they couldn't do at the start?*

It is much more productive to plan classes as part of a week of student work.

## A worked example

Please don't worry if this is not your subject!

- By the end of this class you should be able to flowchart a procedure for specifying and capturing keyboarded data and loading it into the appropriate location in a database.

Whether or not you teach programming, you can probably at least sketch (if not necessarily teach!) a class that will enable most students to achieve this outcome. You might feel that the class should:

1. Explain and illustrate why this is an important topic and a necessary skill for the module and the programme, with a real-life illustration or two

2. Break the outcome and the activity down into the four main steps described in the outcome – specifying data, capturing data, identifying an appropriate location and loading it there

3. Give the students a simple task on data specification, and time to undertake it, alone or in pairs or threes

4. Collect back a few answers, react to them

5. Explain any significant issues in moving from data specification to data capture

6. Give the students a further task which combines data specification and capture

7. … and so on. During the class students should complete most elements of the task, of the outcome

8. It's pretty clear what the assignment for next week should be – students should do one or two more complete examples, and review how well they work. They should also log any queries or issues on the VLE for the lecturer to deal with at the start of the next class.

### Using your learning outcomes to plan your class

*Similarly, plan a class in your subject. The subject and the learning outcome will greatly affect the structure of the class and the nature of the work you ask students to do.*

### Q&A

| Q | A |
|---|---|
| Aren't such little tasks trivial? | No. Just small steps on a long road |
| Where do the tasks come from? | From the outcomes |
| Will students really do an assignment a week? | Yes, if they know how, and it's short, and they see the point and benefit |

# Feedback with good learning outcomes

Imagine this as the format for feedback to a student:

1.  This is the outcome towards which you are working....

2.  These are the ways in which and the extent to which you have shown, in this piece of work, that you have achieved this outcome and met the basic and any higher level assessment criteria

3.  These are the ways in which and the extent to which you have not shown, in this piece of work, that you have achieved this outcome and met the basic and any higher level assessment criteria

4.  These are the ways in which this work needs to be different so that you will have achieved the outcome and met the basic assessment criteria

5.  These are the additional ways in which this work needs to be different so that you will have exceeded the outcome and met further higher-level assessment criteria.

*How might a student react to receiving such feedback?*

My response: To make good use of such feedback, students would need to be very familiar and comfortable with working with learning outcomes and with basic and higher-level assessment criteria. If they were– and if the structure and operation of the course meant that they could use this feedback– then they would probably find it very helpful.

*How do you react to the prospect of students receiving such feedback? Beyond "Good grief, that would take a long time!"*

You might have thought: "Items 4 and 5 provide lots of direction for the student." "I want to give other feedback that is not so directly focused on learning outcomes and assessment criteria." "My learning outcomes and assessment criteria may not stand up to such uses."

**Learning outcomes for self and peer assessment**

"Graduates should to be able to make and to defend judgements on work in their discipline".

Students learn these two valuable additional abilities by assessing their own work and the work of peers (Race 2007, pp 196-201). Everyone wins. Students gain these skills. Students have much more feedback on their work than they would if you were their sole source of feedback. And the load on you can be lower. (You could give marks for ability in giving feedback.)

Of course, students need to learn how to give feedback, and also how to receive and use feedback.

*When would be a good time for students to learn these skills? How would you teach them?*

**Guidelines on good practice in formative assessment**

1. Help clarify what good performance is (goals, criteria, standards).

2. Encourage time and effort on challenging learning tasks.

3. Deliver high quality feedback that helps learners self-correct.

4. Provide opportunities to act on feedback (to close any gap between current and desired performance).

5. Ensure that summative assessment has a positive impact on learning.

6. Encourage interaction and dialogue around learning (peer and teacher-student).

7. Facilitate the development of self-assessment and reflection in learning.

8. Give choice in the topic, method, criteria, weighting or timing of assessments.

9. Involve students in decision-making about assessment policy and practice.

10. Support the development of learning communities.

11. Encourage positive motivational beliefs and self-esteem.

12. Provide information to teachers that can be used to help shape the teaching.

These principles from the REAP (2008) project are a good and useful summary of a large amount of research into formative assessment, and provide valuable guidance.

**Talk with students about assessment**

Learning outcomes and assessment criteria aren't just for assessors. Students also use them, to guide their studies. New students aren't always familiar with learning outcomes and assessment criteria. Telling students to read and use the outcomes and criteria isn't enough. You need to have conversations with students. These conversations are about what comprises good and excellent work in the subject; fit topics for an academic conversation.

**Learning outcomes and assessment criteria**

Learning outcomes say what students should be able to do to pass. Assessment criteria say how well students need to be able to achieve the outcomes to achieve a particular mark, grade or degree classification. Assessment criteria are difficult to write, and difficult to use. These difficulties help to explain why agreement between assessors is often poor. When assessors assess, they typically move backwards and forwards between an intuitive judgement – "This feels like a B" – and the assessment criteria – "Work attracting a B grade will typically…" This is fine. What matters is that the assessors can justify the mark or grade they award. Whether or not students receive feedback on graded work – and it's a lost learning opportunity if they don't – feedback should explicitly address both the learning outcomes owards which the work is directed and the assessment criteria for the work.

# Assessing with good learning outcomes

At heart, it's very simple. Has the student achieved the learning outcome or not? If they have, they pass. If they haven't, they have failed. End of story.

*In what respects isn't summative assessment as simple as this?*

You may have struggled with "On what possible basis do I decide how many outcomes a student has to achieve to pass the course?" You may also have found difficulty deciding what 'achieving the outcome' actually meant in practice. Let's go into this further.

One quality of a good learning outcome (page 7) is that it is assessable – that is, it is reasonably clear whether a particular piece of student work shows whether or not the outcome has been attained. Here's a way to test and improve the assessability of an outcome:

1. Choose a learning outcome.

2. Imagine a piece of student work.

3. Write notes for the student on how their work did and did not show that they had attained the outcome.

4. What difficulties did you find in writing the feedback?

5. Rewrite the outcome to reduce these difficulties.

**The learning outcomes are in the assessment tasks**

Even lecturers who don't like or believe in learning outcomes do in fact write and use learning outcomes. They do this, almost explicitly, every time they set an essay, an assignment, a project, an examination question. Examples:

*Q: "Apply three distinct critical perspectives on the attached article. Identify and explain which of them you believe provides the most interesting insights into the article."*

Implicit learning outcome: "Students should be able to apply critical perspectives to [a particular kind of article] and analyse their value." Or something similar.

*Q: "Design, conduct and report on an experiment to identify the relationships between stress and strain in a variety of material samples. Explain your results."*

Implicit learning outcome: "Students should be able to design, conduct and report on experiments to identify the relationships between stress and strain in a variety of material samples, and explain their results."

*Try it. Take an assessment task you have recently set.*

*What learning outcome does this task require students to demonstrate?*

An assessment task is typically one example from a wider set of possible tasks, any one of which could demonstrate attainment of the learning outcome. The full range of possible tasks for a particular learning outcome may be determined by the syllabus, the course content.

*Big questions, of course, are:*

*Are you happy with the learning outcome revealed by this analysis of an assessment task?*

*If so, good.*

*If not, why not – and do you want to change the assessment task, the outcome, or both?*

Even bigger questions are:

*Are you happy with the overall module learning outcome revealed when you analyse all the summative assessment tasks on this module?*

*If not, again, do you want to change the assessment tasks, the module learning outcome, or both?*

### Learning outcomes, marks and grades: a problem

A learning outcome is attained or not. What role for marks?

A mark or grade could signify how much of a learning outcome is achieved, or how well it is achieved.

Assessment criteria can signify how well a learning outcome is achieved. From "not achieved at all, mostly or wholly inaccurate" (a fail, obviously) to "original, going beyond the question, independent thinking" (a first).

It is important to use the criteria your programme specifies. It is also important to have conversations with students about what these criteria mean; to assess and give feedback using these criteria explicitly, and, over time, to find clearer and more helpful versions of these criteria.

### Assessing beyond the immediate programme outcomes

Honours graduates will have developed an understanding of a complex body of knowledge, some of it at the current boundaries of an academic discipline, and developed analytical techniques and problem-solving skills that can be applied in many types of employment in situations requiring the exercise of personal responsibility and decision-making in complex and unpredictable circumstances, They will be able to evaluate evidence, arguments and assumptions, to reach sound judgements and to communicate them effectively (QAA 2008).

*Can your graduates do these things?*

# Learning outcomes and academic level

How do outcomes and academic level relate? Example:

Bachelor's degrees with honours are awarded to students who have demonstrated: (QAA 2008)

- a systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline

- an ability to deploy accurately established techniques of analysis and enquiry within a discipline

- conceptual understanding that enables the student:

  - to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline

  - to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline

- an appreciation of the uncertainty, ambiguity and limits of knowledge

- the ability to manage their own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline).

Typically, holders of the qualification will be able to:

- apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects

- critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution – or identify a range of solutions – to a problem

- communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

And holders will have:

- the qualities and transferable skills necessary for employment requiring:

  - the exercise of initiative and personal responsibility

  - decision-making in complex and unpredictable contexts

  - the learning ability needed to undertake appropriate further training of a professional or equivalent nature.

*Can your graduates do all of these things? (Which?)*

*Have your graduates shown they can do all these things?*

## Where does academic level come from?

It feels reasonable that the academic level of a student's work involves both the difficulty of the work and the complexity of the work. This applies to the task the student is asked to do and to the work that they produce. Each of these ideas – difficulty and complexity – has been used to produce a hierarchy, a classification, of learning outcomes.

### Academic level and the nature of the outcome

|  | # | Name | Comments |
|---|---|---|---|
| ➜ | 5= | Evaluation | Making and defending judgements on worth or value |
| ➜ | 5= | Synthesis | Producing a new object, idea, explanation… |
| ↑ | 4 | Analysis | Identifying the elements in a complex system or setting |
| ↑ | 3 | Application | Relating theory and practice; using ideas to solve problems |
| ↑ | 2 | Comprehension | Expressing ideas in a different form; manipulating ideas |
| ↑ | 1 | Knowledge | Simple recall – no use of what is remembered |

This taxonomy, from Bloom (1956) and Anderson (2001), is a valuable tool for analysing and testing outcomes. Each level uses those below. Health Warning: It is often horribly misused, to plan curricula in which all the knowledge is taught before any comprehension is allowed… and so on. This is bad. A good

curriculum has students working at all levels from the start, moving up and down the taxonomy.

### Academic level and the complexity of the outcome

Complexity can refer to the number of elements – theories, data, etc – that the student needs to handle at a time. Complexity can also refer to the number and integration of relationships between and among these elements that the students needs to handle. Biggs and Collis (1982) and Biggs (2003) use these ideas to look at student attainment – specifically, at the Structure of Observed Learning Outcomes, hence the SOLO taxonomy. The higher SOLO levels can also be useful to plan and analyse learning outcomes and student assignments:

|  | # | Name | Comments |
|---|---|---|---|
| ➜ | 5 | Extended abstract | Synthesising a new and original whole – going beyond the task |
| ↑ | 4 | Relational | Integration of ideas – the wood |
| ↑ | 3 | Multistructural | 'Lots of trees, but not the wood' |
| ↑ | 2 | Unistructural | Does one part of the task only |
| ↑ | 1 | Prestructural | Unrelated elements; shallow |

**Nature + complexity in outcomes – juggling chainsaws**

We are more impressed by the skills (if not the career choice) of someone who juggles two chainsaws than two rubber balls – the nature of the skill. And we are more impressed by someone who can juggle three or four or five... than two – the complexity of the skill. The ideas work well together: for example, in teaching, raise the nature of the skill or the complexity of the skill, but not both at the same time.

# What do students think about learning outcomes?

Alison Caswell asked her students. Here are some of their responses, followed by some of Alison's comments:

| What do you think a learning outcome is? | What do you do with a learning outcome? | What do your tutors do with learning outcomes? |
|---|---|---|
| A stage or specific thing you should achieve by the end of a module | Learn how to do it | See if people have achieved them |
| Abilities gained after a module | To better your results/learning method etc. | To better teaching of the class/module etc. |
| What a student should know by the end of a module | Target to achieve | Assess |
| A degree or something else attained by studying | Use as a target for learning | Make them module specific & assess them |
| Where you should be at the end of a module/course | Get a job, earn money, gain knowledge | Used to assess students' progress |

| | | |
|---|---|---|
| What you are meant to have achieved at the end of learning | Use as a target | Use to gear their lectures so helping students to achieve them |
| What you should know at the end of your degree/module | Use as a target | To plan how much study |
| Set of criteria that need to be taught by the end of each lecture | Use what you have learned to show understanding | Assess students' understanding |
| An objective to understand a subject | Helps us to know what needs to be known for exams | Help plan lectures & assess students |
| What you should learn on that day/module | Apply your understanding of that subject | To assess the students' understanding |
| The things that we should have achieved during the course | Make sure you understand & have learnt them – outcomes from that lecture | Plan their lectures around the learning outcomes |
| Something you work towards achieving | Try hard to achieve it | Help you |

**Comments**

Question 1

The general idea that a learning outcome is something you achieve through study of a module was evident in everyone's answer. Within this, some focused on knowledge, some on understanding. In practice all are correct. Good learning outcomes focus on what you should be able to do as a result of the learning you have acquired, e.g. demonstrate a particular ability, apply your learning to a new situation etc.

Question 2

Common themes were the use of learning outcomes as targets, for measuring progress, and also the need to engage with learning outcomes etc. Students who do badly often either fail to engage with the learning outcomes, or are unable to understand them and unwilling to ask for help in their interpretation.

Question 3

The two key themes here were their use in teaching and their use in assessment. Assessment should be driven entirely by the learning outcomes.

# Some other issues in writing and using good learning outcomes

**Beyond learning outcomes**

To generalise: A lawyer must ensure the confidentiality of information received from clients. What would be an appropriate learning outcome to cover this? Perhaps:

- The student should be able to describe why they should ensure confidentiality of client information.

*Your lawyer has shown that they can do this. Are you confident that your secrets are safe in their hands? Why?*

My response: I wouldn't! Knowing why to do something does not ensure the ability to do it. Let's try again:

- The student should be able to describe how they ensure confidentiality of client information.

*Your lawyer has shown that they can do this. Are you confident that your secrets are safe in their hands? Why?*

My response: better. But not good enough. They may know how to do it. They may have done it. But will they do it in their dealings with me?

*What would persuade you that a lawyer would ensure the confidentiality of information obtained from you?*

My response: if they had signed up to a professional code which required this. If they had done it many times before, and described how and why they did it. If they had never not done it, certainly if they had never been caught not doing it. And if I trusted them and their processes.

We have moved here beyond what the student can do and into what they actually do. These are not learning outcomes. They are an account of professional behaviour. They may be expressed as principles or values.

*Are there similar elements in the discipline or profession for which you are preparing students? If so:*

*What are these elements?*

*How close can you get, in final assessment, to being confident that they will act in this sense professionally after graduation? What are your best indicators of this?*

## Unintended outcomes

Learning is of course not always the stately progress towards predetermined outcomes that this booklet may thus far have suggested. Learning is also a voyage of discovery, of unexpected turns, of rough and calm seas and other geographical and meteorological metaphors.

*What examples of unintended learning can you remember one or two of your students making recently?*

*If none, is this because no such learning occurred, or because the process of the course left such learning hidden from your view?*

How to encompass these unintended outcomes within a programme whose learning outcomes are defined?

You could celebrate and reward unintended learning, the attainment of unintended outcomes. Examples:

- In a personal development portfolio, students can be encouraged to note where they have gone beyond the intended learning outcomes

- Students could be invited to make part of an assignment go beyond the task set or question asked, if they wished

- In feedback on each others' work, students could be asked to identify learning beyond the intended outcomes.

## Student-planned or negotiated outcomes

Where professional body requirements do not prohibit this, a module can contain provision for students to propose, and receive approval for, additional or substitute learning outcomes or re-interpretations of one of the current outcomes. Attainment of these can then be assessed in the normal way.

*Look at the learning outcomes for a module for which you have responsibility. What additional or replacement or modified learning outcomes can you imagine that would be acceptable within the module?*

## Cage or scaffolding or...

Good learning outcomes are scaffolding on which you and your students build their studies and their learning. Outcomes should confine learning beyond ensuring the module is coherent and contributes to the programme.

Outcomes do constrain. But they are visible, and so subject to review and improvement. Without visible outcomes, students and staff guess at or build their own constraints. And these are more confining because they are invisible, implicit, secret. It's hard to improve the invisible.

## Learning outcomes and content

What is the relationship between learning outcomes and subject matter, content, syllabus?

The answer will vary from subject to subject. But it is always useful, when looking at a syllabus, to ask what students should be able to do with, to or about the content.

*Pick a line, a phrase, a word, a single piece of content from the syllabus for your module.*

*What should students be able to do with, to or about this? Don't write a learning outcome – a few good verbs will do.*

## Approval...

Do you need 'minor modifications' approval for changes to learning outcomes? Only if they mean significant changes to what you expect students to know and do.

Why do some people hate learning outcomes?

Outcomes are seen as forms of control, surveillance; restrictions on freedom; against learning and discovery.

Why do I like good learning outcomes?

Good outcomes empower students, who know where they are going, and know when they have got there.

### Leeds Met sources

Assessment, Learning and Teaching Strategy 2008-12.

Assessment, Learning and Teaching Priorities 2008-9.

Vision and Character.

Course Handbook Guidelines.

### Other sources

Anderson, L. W. and D. R. Krathwohl, Eds. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* Addison Wesley.

Bloom, B. S. (1956). *Taxonomy of educational objectives. Handbook 1: cognitive domain.* London: Longmans.

Biggs, J. (2003). *Teaching for Quality Learning at University.* Maidenhead, Berkshire: SRHE and Open University Press.

Biggs, J. B. and K. F. Collis (1982). *Evaluating the Quality of Learning; The Solo Taxonomy.* NY: Academic Press.

Mager, R. F. and C. Clark (1963). Explorations in student-controlled instruction. *Psychological Reports* 13(1): 71-76.

Moon, J. A. (2002). *The Module and Programme Development Handbook.* London: Kogan Page.

QAA (2008). The framework for higher education qualifications in England, Wales and Northern Ireland. Gloucester: QAA.

Race, P. (2007). *How to get a Good Degree.* Maidenhead: Open University Press.

REAP website (www.reap.ac.uk). (Accessed 26 November 2008).

leeds
metropolitan
university