A Guide to Writing Learning Outcomes for Modules and Programmes
Guidance for developing Learning Outcomes

This paper is intended to provide guidance for writing learning outcomes for programmes and modules.

Definition

“Learning outcomes are descriptions of what the learner is expected to learn in the period of learning defined and alongside this imply the standard of learning expected” (Gosling & Moon 2001:19).

The learning outcome should therefore address what the student is expected to be able to do by the end of that period of study, how they should be able to do this and the level at which they must achieve this.

Purpose

The purpose of learning outcomes is that the student and the lecturer can use these as guidance for the module in terms of content, learning and teaching activities and assessment. The student can see what is expected of them by the end of the module and will know how this will be assessed. Learning outcomes must therefore be student focused and written in language a student can understand.

The lecturer should use the learning outcomes to help devise the assessment and then plan the content and learning and teaching activities that will assist the student achieving their outcomes.

The key to writing learning outcomes is to ensure they are:

- Specific
- Measurable
- At the correct level
- Achievable

In addition to writing learning outcomes that are achievable for all students and are set at the required minimum standard it may be of value to identify some that may be desirable for students who may wish to strive for excellence, or who are able to demonstrate achievement above the minimum required. Lecturers need to consider whether this would provide some added value to the programme and perhaps something that may be used as unique when marketing the programme to both potential students and future employers.

The lecturer also needs to consider a realistic number of learning outcomes for each module. If there are too many these will not be able to be assessed and will not be achievable in the learning time specified. Gosling and Moon (2001) suggest that 5 – 8 learning outcomes are appropriate for a module although they do not specify the length of the module or time involved. At City University London the standard 15 credit module accounts for 150 hours learning. It would seem reasonable that 5-8 learning outcomes are sufficient given that this is one per 16 – 30 hours of study.

Categories of Learning Outcomes

Learning Outcomes are usually focused under headings. This used to vary across programmes but following the QAA (2006) guidance on programme specifications it was suggested that using standard headings across programmes would enhance lecturer and student understanding. At City University London the programme and module specifications have pre-set headings which should be used for learning outcomes. These are:

- Knowledge and Understanding
- Values and Attitudes
- Skills which includes cognitive, subject specific skills and transferable skills

Sometimes it is possible that an intended outcome may be compatible with more than one category so there needs to be some thought given to where it might be most appropriate.
**Knowledge and Understanding**
The sorts of issues that are appropriate to this category are those related to students gaining and developing their knowledge of a discipline and how they might use this or even search for this information.

**Values and Attitudes**
The issues that arise in this category tend to be both personal and discipline specific. There should be some related to the values and attitudes that are sought in the employment market, some related to inclusive behaviour and acknowledging diversity and some focused on individual personal development and lifelong learning.

**Skills**
For this category the areas that are included focus on what the student should be able to do in terms of demonstrating their actions both physical and cognitive but should also include the types of skills that can be transferred to future employment and further study.

The lecturer needs to consider what the student must learn by the end of a programme in terms of these categories and then develop learning outcomes related to these headings but using the correct academic level.

**Levels**
The QAA’s framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008) does provide guidance about overall expectations for programmes at different levels. Some brief guidance from that is in the table below.

<table>
<thead>
<tr>
<th>Qualification Level</th>
<th>Guidance</th>
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<tbody>
<tr>
<td>4 Certificate of Higher Education (Undergraduate)</td>
<td>Students will be able to demonstrate knowledge of underlying concepts and principles, present and interpret data, problem solve, communicate their work accurately</td>
</tr>
<tr>
<td>5 Diploma of Higher Education (undergraduate)</td>
<td>Students will be able to demonstrate the above and in addition will be able to show critical understanding of principles, apply concepts and principles, have knowledge of methods of enquiry, understand limits of their knowledge, undertake critical analysis of information and effectively communicate information and arguments to a range of people</td>
</tr>
<tr>
<td>6 Bachelor’s degree with honours</td>
<td>Students will be able to demonstrate the above and in addition they will devise and sustain arguments, appreciate uncertainty and limits of knowledge initiate and carry out their own projects and critically evaluate arguments, assumptions and concepts</td>
</tr>
<tr>
<td>7 Masters degree</td>
<td>Students will be able to demonstrate all the above and be original in their application of knowledge, where appropriate propose new hypotheses, deal with complex issues systematically and act autonomously in planning and implementing tasks requiring synthesis of knowledge</td>
</tr>
<tr>
<td>8 Doctoral degree</td>
<td>Students will be able to demonstrate all of the above and in addition create and interpret new knowledge through original research and/or scholarship extending the forefront of their discipline this also requires an ability to synthesis knowledge</td>
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Using the information in the above table key words can be taken for each level to guide lecturers about the focus of the outcomes and the language that could be used. The key words match those from Bloom’s taxonomy (1956) although in this taxonomy synthesis and evaluation are in a different order. It is however generally accepted that synthesis is a higher level skill. Using Bloom’s taxonomy there is some advice about the verbs that can be used for each level.

These are:

<table>
<thead>
<tr>
<th>Qualification level</th>
<th>Key Word</th>
<th>Helpful language for learning outcomes</th>
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</table>
| 4 Certificate of Higher Education (Undergraduate) | Knowledge, Comprehension, Imitation & Manipulation | Knowledge: arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state 
Comprehension: classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate 
Imitation: Copy, follow, adhere 
Manipulation: Re-create, perform, implement |
| 5 Diploma of Higher Education (undergraduate) | Application, Analysis & Develop | Application: apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write. 
Analysis: analyse, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test 
Develop: Demonstrate, complete, control |
| 6 Bachelor’s degree with honours | Evaluation & Articulate | Evaluation: appraise, argue, assess, attach, compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate. 
Articulate: Construct, co-ordinate, develop, modify |
| 7 Masters degree | Synthesis & Naturalisation | Synthesis: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write. 
Naturalisation: Design, manage, invent |
| 8 Doctoral degree | Synthesis & Naturalisation | Synthesis: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organise, plan, prepare, propose, set up, write. 
Naturalisation: Design, manage, invent |

Using this table it is possible to write a learning outcome about an aspect of learning that could be applied at different levels. All learning outcomes should be written using the stem from the programme specifications “on successful completion of this programme, you will be expected to be able to...” For example if one of the aims of a programme is that students can learn about the support services available at the university for students then learning outcomes may be:

“on successful completion of this programme, you will be expected to be able to...”

Certificate level 4
list the range of support services available at the university.

Diploma level 5
analyse the role of each of the support services.
Degree level 6
compare the support services and evaluate which is the most appropriate to use for different problems and issues.

Masters level 7
propose a list of which support service to use for different problems/issues synthesising the knowledge of their roles.

These learning outcomes are likely to be placed under the heading of knowledge and understanding but also be under skills.

Assessing Learning Outcomes
Programme and route learning outcomes do not all need to be directly assessed. It may be that these learning outcomes are assessed across several modules or are of a more generic nature. For each programme a map of the learning outcomes for all core modules and where these are achieved should be provided so that students can identify their progression through the programme and towards achieving the programme outcomes. This mapping requires some thought about the appropriate point for achievement of the overall programme learning outcomes and some of these may be revisited in several modules.

Once the learning outcomes for a module specification are written the lecturer needs to consider how these can be assessed. It is possible in a module to have more than one form of assessment but often modules may only have one assessment. Therefore the number of learning outcomes and the assessment need to be carefully considered.

The headings under which the learning outcomes are written also need considering at this point because if knowledge and skills are to be assessed the task must enable this. Consider carefully what the student must be able to do at the end of the module and design the assessment to test this. A range of assessments are now in use across the University and these range from examinations both theoretical and practical to coursework, posters, seminar presentations, practice or work based assessments and projects to portfolios and many of these are available in on line formats now.

Summary
This paper provides an overview of the many areas to consider when writing a learning outcome. Further guidance can be gained from your Learning Development School Liaison team. In addition the reference list has some useful sources.

References

Gosling D & Moon J (2001) How to use learning outcomes and assessment criteria SEEC

http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/guidelines06.pdf (accessed 3rdAugust 2011)