An Introduction to Course Design

Introduction

For many academics, planning a course or module involves selecting a body of content and then deciding how to distribute it over a set time period. However, this approach has many shortcomings. It tends to place the focus on transmission of information which is often presented and received as discrete packages, and it is difficult for both teachers and students to foreground underlying organizing principles or themes and develop process skills. Additionally, the content-first approach to course design tends to focus on delivery by the teacher and not student learning. An alternative approach to course design is to focus on learning outcomes and, in particular, to ensure the congruence of learning outcomes, assessment, teaching content and teaching strategies. It is this approach to course design, based on the cyclical relationship of these key elements, which is outlined in this booklet and associated workshop. Some key terms in this process will be defined so as to establish the framework for the ensuing guidelines:

Course aims: Aims are the broad intentions of the teacher for a particular course.

Course Learning Outcomes: Learning outcomes indicate the learning that students will be expected to attain at the end of a course. They are written at the threshold level, that is, they indicate
Learning outcomes should be aligned with assessment tasks and assessment criteria. Learning outcomes should also help the teacher to select appropriate content and teaching approaches.

**Example**

In a second year course on contemporary English literature my aims may be:

- To introduce students to different treatments of the theme of loss in contemporary literature.
- To look at chronological disjunction in the contemporary novel.
- To demonstrate the way in which different kinds of narrators can influence our reading of the text.
- To develop students’ ability to read a literary text.
- To develop students’ ability to use critical works.
Example
In the same second year English literature paper, the learning outcomes could be:

♦ Students will be expected to be able to compare and contrast the treatment of the theme of loss in three of the course texts with reference to the role of the narrator, the use of symbol and the significance of setting.
♦ Students will be expected to demonstrate the effect of different types of narrators on the reader’s response to the novel by analysing key passages from selected course texts.
♦ Students will be expected to be able to explain the significance of chronological shifts for our experience of the novel in three course texts.
♦ Students will be expected to begin to read critical discussions of literary text and use them appropriately in their own writing.

Learning outcomes for course design workshop
By the end of this workshop participants will be expected to be able to:

♦ Identify the different elements in the course design process and recognise their inter-relationship.
♦ Discuss the importance of aligning outcomes, assessments and teaching methods.
♦ Write a learning outcome that describes the topic area, the nature of the learning expected and the context or conditions or level of performance anticipated.
♦ Identify and take account of other significant factors that have a bearing on the course design process.
♦ Begin to plan or modify a paper in keeping with the principles of alignment.
Models of the course design process

The following diagrams illustrate the outcomes-based course design process:

*The Bigger Picture*

Butcher et al, Figure 2.1, p.22
**Table 2.1 Course design and review questions**

<table>
<thead>
<tr>
<th>Design cycle</th>
<th>Design question</th>
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<tr>
<td>Rationale</td>
<td>Why are we doing this?</td>
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<tr>
<td>Aims and learning outcomes</td>
<td>What should the learners be able to do?</td>
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<tr>
<td>Content</td>
<td>What content will be needed to achieve it?</td>
</tr>
<tr>
<td>Teaching/learning methods</td>
<td>How are we planning to enable it?</td>
</tr>
<tr>
<td>Assessment</td>
<td>How will we know that the learners have achieved the goals?</td>
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<tr>
<td>Environment</td>
<td>What support will the learners need?</td>
</tr>
<tr>
<td>Management</td>
<td>How will we make it happen?</td>
</tr>
<tr>
<td>Evaluation and review</td>
<td>How might it be improved?</td>
</tr>
<tr>
<td>Rationale</td>
<td>Is this still valid?</td>
</tr>
</tbody>
</table>

* Additionally assessment needs to be designed to be develop and support student learning. The question that needs to be added to this table is: How can I design assessment tasks to help students develop the required skills, attitudes and knowledge.*
The Course Design Process

1. **Aim of module**
   - Write learning outcomes
   - Translate level descriptors into subject descriptors
   - Develop a teaching strategy to enable learners to reach the learning outcomes/assessment criteria
   - Development of assessment method to test achievement of assessment criteria

2. **Level descriptors**
   - Write threshold assessment criteria (criteria implied by learning outcomes)
   - Develop the module and rethink it including the initial learning outcomes

Moon, Figure, 5.1, p.23
The outcomes-based approach to course design grew out of the work of behavioural psychologists in the early twentieth century. Many educationalists felt uncomfortable with the earliest versions of learning objectives because they were seen as mechanistic and unable to capture the complexity of higher order thinking. The notion of outcomes has been considerably refined since these early days to incorporate much more abstract forms of learning and it is generally acknowledged that there are many aspects of learning that cannot be anticipated or planned for and which are impossible to articulate exactly. Bearing these reservations in mind there are a number of benefits of using learning outcomes.

**Benefits of learning outcomes**

- The use of learning outcomes shifts the focus to the potential learning of the student as opposed to the behaviours of the lecturer.
- Learning outcomes provide a systematic framework for focusing and structuring teaching and assessment.
- Learning outcomes provide a statement of course goals that can be shared by lecturer and students.
- Learning outcomes provide a basis for developing assessment tasks and criteria.

...The use of learning outcomes shifts the focus to the potential learning of the student as opposed to the behaviours of the lecturer...
Cautions

- Much learning is unpredictable and unplanned for and cannot be controlled by outcomes.
- Outcomes should not be too rigid so that teachers can still be critically responsive to the dynamics of the classroom and the needs of students.
- It is difficult to capture all forms of learning in precise language.
- Outcomes indicate desired learning, but there are no guarantees that it will take place.

Writing learning outcomes

The simplest way to begin writing course learning outcomes is to try and identify the key learning that you want students to have by the end of the course. This will usually be a combination of particular skills or ways of thinking and a specific body of content. The basic components of a learning outcome are:

1. A verb to indicate as precisely as possible the nature of the learning that is expected.
2. A word to indicate the topic or skill level required.
3. Words to indicate the context or standard of performance that is expected.

(Adapted from Moon, J. (2002). The Module and Programme Design Handbook)
Understanding Learning Outcomes
On successful completion of this course, a student will be able to:

<table>
<thead>
<tr>
<th>Active Verb/Phrase</th>
<th>Object (Topic, Skill)</th>
<th>Context/ Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge</td>
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<tr>
<td>2. Skills</td>
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<tr>
<td>3. Attitudes</td>
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Examples: Learning Outcomes
On successful completion of this course, a student will be able to:

<table>
<thead>
<tr>
<th>Active Verb/Phrase</th>
<th>Object</th>
<th>Context/ Condition</th>
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<tbody>
<tr>
<td>Analyze an argument into its components</td>
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<tr>
<td>Anticipate and identify possible implications of a design.</td>
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<tr>
<td>Evaluate argument in the light of relevant policy.</td>
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University of Windsor (2009)
Moon suggests that it is preferable to use the phrase “students will be expected to be able to…..” as the outcome is only an aspiration and there is no guarantee that the learning will occur. Your choice of verb will also demonstrate the quality and complexity of the learning anticipated. Starting with Bloom’s famous taxonomy in the 1950s, many attempts have been made to develop taxonomies to represent different types and complexity of learning. For example, Biggs (2003) developed the SOLO framework which goes from the unistructural level to the extended abstract. Basically, most taxonomies try to represent a range of learning levels such as recognition and identification of knowledge, relating, connecting, analysing and applying, and critiquing, reformulating or creating. Your choice of verb suggests the way in which you want your students to engage with the subject content. The following table provides a useful hierarchy of “intellectual demand” and of the vocabulary that is appropriate to each level.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 2  New Zealand History Paper</strong></td>
</tr>
<tr>
<td>♦ Students will be expected to know how to access a range of primary source materials in relation to the period of the Depression.</td>
</tr>
<tr>
<td>♦ Students will be expected to be able to begin to argue a position about an historical event based on their use of primary sources.</td>
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<tr>
<td>Level</td>
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</table>

**Table 3.2 Hierarchy of Intellectual demand**

<table>
<thead>
<tr>
<th>Level</th>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recalls from prior experience</td>
<td>Ability to recall specific information, to describe known ways of dealing with the information, or to enunciate previously learned general principles or theories</td>
<td>Ability to demonstrate one’s understanding by translating or paraphrasing, interpreting information or extrapolating from given data in order to determine likely implications or effects</td>
<td>Ability to apply abstract principles to particular and concrete situations</td>
<td>Clarification of a complex situation by breaking it down into its constituent parts, identifying any relationships between the parts and identifying any organisational structure inherent in the original situation or set of information</td>
<td>Judgements about the value of material or methods for a given purpose</td>
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<td></td>
<td>Defines, describes, identifies, lists, matches, names, outlines, recalls, recognises</td>
<td>Classifies, converts, distinguishes between, explains, extends, generalizes, paraphrases, predicts, summarises, transforms, translates</td>
<td>Arranges, classifies, computes, demonstrates, employs, extrapolates, modifies, operates, predicts, relates, solves, transfers, uses</td>
<td>Deduces, differentiates, discriminates, distinguishes, estimates, experiments, identifies, infers, orders, separates, subdivides</td>
<td>Combines, complies, composes, constructs, creates, designs, formulates, generates, hypothesizes, manages, rearranges, relates, revises, summarises</td>
<td>Appraises, assesses, compares, concludes, contrasts, criticizes, discriminates, evaluates, judges, justifies, revises, supports</td>
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**Table 3.2 Butcher, et al p.47**
Write down some initial learning outcomes for a paper that you teach and then refine them in the context of all the other factors that need to be taken into account. The following questions should be considered:

What is the level of the class?
In the United Kingdom an attempt has been made to identify the nature of the learning that is commensurate with different academic levels. We do not have national guidelines in New Zealand although there are some basic University of Waikato guidelines available (see appendix). It is necessary to think carefully about what is appropriate for the level of learning and to think about how a particular course fits into a programme of learning. Finding the right level can be difficult when students take a wide range of electives and the teacher cannot assume any common prior learning. Generally, it is helpful to look at the Graduate Profile for a subject or Programme and to have an overview of what is done at other levels of the same paper. Also look at what is done in the subjects most commonly taken in tandem with your own subject. Talk with people in your subject about their expectations of students coming in at postgraduate level. If, for example, critiquing academic articles is an important skill in your discipline, try to
make sure your paper offers some contribution to the development of this skill. Usually, first year courses provide an opportunity to introduce students to the conceptual terrain of the discipline and enable them to practice discipline specific ways of thinking. It is also a good time to introduce students to the skills associated with tertiary or discipline specific study. It is useful to remember that students take a long time to move away from thinking in terms of absolutes and authoritative knowledge and students will only very gradually develop the capacity to think critically. First year is the opportunity to set up the framework for further study, so it is important not to overload the content.

☞ How much time do I have and what can be done within the limits of the given time period?

The most common error made by academics across all disciplines is to try to cover too much material. If you want to promote genuine engagement with course learning, limit the volume and instead extend the opportunities for and the ways in which students can interact with the material. This can include examples such as looking at core concepts from a range of perspectives, using case studies, problem solving, applications or different theoretical lenses.

Allow for in-class opportunities to get feedback from students so that you can ascertain their understanding and modify your teaching accordingly. Remember too that you need to build in time to allow for processing of the ideas and recognize that understanding will occur at different times and to varying degrees for
individuals. A less tightly packed programme enables you to be responsive to students’ needs.

☞ Can I provide teaching and learning approaches that are consistent with my outcomes?

Your teaching needs to be geared to the kinds of learning that you want to engender in students. If, for example, you want your students to develop critical thinking skills, you need to model a questioning approach and provide students with explicit opportunities to practice these skills. If you want students to be able to write using the language of the discipline, your teaching approach should incorporate occasions when students can practise doing this. If application to a scenario is a goal, this approach needs to be consistently integrated into your teaching.

☞ Can I offer assessment tasks that are appropriate for these outcomes?

It is important to design your assessment tasks in conjunction with planning the course learning outcomes so that the learning and assessment are working towards the same goals. Sometimes it may not be feasible to provide the kind of assessment that is appropriate for a particular outcome. In this instance you may need to modify or even abandon the outcome. Remember that assessment should include opportunities to learn and develop and should not simply be summative.
What resources are available?
There are numerous considerations here. These include the availability of support staff for small group teaching and administrative help in the provision of materials or other organisational help. It is also critical to see to the availability of key reading materials.

What timetabling constraints are there?
A number of questions are pertinent here. These include details about the spacing of lectures, the sequence of lectures and tutorials and the rooms that are allocated for the course.

What is the workload for me?
Be realistic here. Many ambitious outcomes flounder because the teacher is unable to provide the appropriate feedback and support. Be creative here and consider other ways in which students can get feedback, such as from their peers.

Are there people to help with the tutoring and the marking?

What is the workload for the students?
This is another place for realism! Often the same goal can be achieved through a short piece of work as a long one, and many course readings are not especially relevant. Don’t require readings just for the sake of it.

What is the likely composition of the student body?
This is difficult to know beforehand, although there are often discernible patterns for different papers.
Do my outcomes accommodate the possibility for student diversity in terms of age, experience, culture and prior learning?

Generally, consider whether your paper caters for a diverse student body and think about the inclusion of comparisons, tasks and examples that relate to a range of cultures, gender differences and diverse backgrounds and experiences. (Or provide opportunities in your planning for your students to bring in these examples.)

Are there any requirements set by professional bodies or expectations of external stakeholders?

This question is particularly relevant in areas such as Law, Education and Accounting.

Are the outcomes consistent with any vocational outcomes that the course may have?
Further Examples of Learning Outcomes

I. Level 1 English
Students will be expected to be able analyse a passage from a literary text closely and make links between the extract and the rest of the text.

II. Level 3 English
Students will be expected to be able to identify the main features of the historical context in which a text is set and demonstrate the way in which this context influences the particular text.

III. Level 1 Law
Students will be expected to demonstrate elementary skills of legal analysis in the context of an introduction to New Zealand law using simple and accessible cases.

IV. Level 1 Intro to Chemistry module
Students will be expected to be able to write a concise, clear and tidy report of a laboratory practical that must be laid out in the prescribed format.

(Moon, 2002, p.60)

V. Level 1 History
Students will be expected to be able to demonstrate that they can perform basic historical research tasks including locating appropriate resources, identifying the pertinence of a particular resource for a research question and organizing evidence to support or oppose a particular position.

VI. Introductory French
Students will be expected to be able to converse at an elementary level about everyday topics such as food, weather, clothing, directions and holidays.

VII. Level 3 Managing Conflict and Consensus
Students will be expected to be able to resolve problem scenarios using key course concepts such as conflict styles, power, climate and face.
Planning your assessment in line with your learning outcomes

The design process is cyclical rather than linear, so that as you write and refine the learning outcomes, you need to be thinking simultaneously about the implications for assessment tasks and for your teaching content and strategies. A detailed guide to the process of aligning outcomes and assessment is provided in the booklet on assessment. The following general principles need to be borne in mind:

♦ Be sure that the assessment task genuinely corresponds to the learning outcome
♦ Provide formative as well as summative assessment tasks so that students have a chance to practise the learning required
♦ Use teaching approaches that encourage the thinking and skills required for assessment
♦ You do not need to assess all learning outcomes
♦ One assessment task can incorporate a number of learning outcomes
♦ Use the learning outcomes as a baseline guide for developing your assessment criteria

Matching teaching content and processes to your learning outcomes

Your learning outcomes provide the scaffolding for building your course. If you clarify these first, you will be less obsessed by the need to cover the terrain. One technique is to draw a grid with the learning outcomes on one axis and the classes on the other. You can then identify how particular classes contribute to different learning outcomes.
This can be shared with the students - it is an effective way of helping them to get a sense of the underlying coherence of a course and see how the different elements contribute to the whole. It is also a good strategy for reminding students of certain core questions, themes and concepts that the course is addressing.

### TABLE 4.3  Outcomes-content matrix

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<th>Educational outcomes</th>
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Table 4.3 Butcher (p.64)
As I want to focus on the development of these process skills and their recognition of a key theme and two narrative devices, I want to limit the number of texts that we use. Over a period of 12-13 weeks I have decided to limit the course to four texts. This gives us approximately three weeks to explore each text and develop the relevant process skills as well as include some comparative discussion. I will also be deciding on teaching approaches - I will for example incorporate plenty of in class writing on text so as to help the students develop this skill and at the same time highlight central preoccupations (theme and narrative method). Small group work

Example

In the second year paper on contemporary literature, the learning outcomes make the design of the classes relatively straightforward. My learning outcomes are focused on the development of some core process skills:

♦ To compare and contrast the literary treatment of theme (in this instance, the concept of loss)

♦ To identify and learn how to write about different narrative techniques. In this course the two techniques that students will be learning to discuss will be the use of different types of narrators and to examine the effects of discontinuous chronology

♦ To begin to learn how to read literary criticism and integrate ideas from critics into their own discussions appropriately.
will involve considerable student input, such as a prepared synthesis of how a critic has discussed a particular book and a comment about where they agree or disagree with the critic. Some of these teaching and learning exercises can form part of the course assessment.

Getting the course together takes considerable time and energy and even then you often need to run a course at least once to have the raw materials to refine and develop on each subsequent occasion that you teach it.
References


Appendix

Guidelines for Determining Academic Level (Undergraduate)

General
This document is intended as a guideline. Subject diversity may result in some variation.

100 Level
100 Level papers are normally introductory, exposing students to the scope of the topic and its terminology and preparing them to proceed in the subject or in related subject areas. In broadly-based subjects, papers are often primarily descriptive. In many subjects or disciplines, they introduce the fundamental theories on which the discipline is based. More simple analytical techniques or methods employed in the discipline may be covered. Teaching and assessment is more controlled and directed by the instructor than at higher levels and is largely formal and structured.

Information sources are normally limited, for example, to course notes and one or two texts or references. Student choice of topics and assessment is usually limited.

Students are expected to recall and comprehend material and to begin analysis of simple subject matter.

200 Level
200 level papers normally develop the theory and methodology of the topic of subject as a
framework for later synthesis and evaluation of material. They generally use a wider range of information sources than at 100 level and have a greater expectation of student participation both in timetables classes and through reading of current literature and project work.

Students may be given exposure to a wider range of topics and/or assessment, but formal methods of teaching and assessment are likely to predominate.

Students are expected to demonstrate comprehension of underlying theories and basic methods within the subject or discipline. Skills in analysis are development more fully. Students may be expected to begin some synthesis of concepts and/or techniques from different aspects of the subject area and different sources.

**300 Level**

300 level papers rely less on formal teaching and assessment and require greater student participation both in timetables classes and through seminars and workshops. More self-directed learning is expected. A greater diversity of information sources is used and students are likely to be given exposure to a wider range of topics and assessment.

Students are expected to demonstrate independent thought and increasing skills in analysis, synthesis and evaluation of complex subject matter.
400 Level
Not all qualifications include 400 level papers. In qualifications for which they are included, 400 level papers usually have a greater emphasis on critical thinking regarding the theories and models of the subject areas and students are expected to be more self-directed in their learning than in 300 level papers.

400 level papers offer wide scope for students to develop an area of academic and/or professional specialisation or practical experience. In some cases, the papers may involve individual supervision and assessment arrangements rather than structure lectures and formal examinations.

Students are normally expected to participate actively in seminars and workshops, and to demonstrate and ability to analyse, synthesise and critique information, develop and express both qualitative and quantitative judgements, and apply facts and information to practical and professional situations.


Contact
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