Designing for Learning: Curriculum Redesign Manual

Faculty of Business, Economics and Law

2012
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Preface

La Trobe University is responding to an increasingly competitive higher education market, limited resources, and a standards driven funding environment as envisaged in the Bradley Review of Higher Education. The University’s response to the challenges it perceives in the higher education environment are outlined in Design for Learning: Curriculum Review and Renewal at La Trobe, which calls for a ‘systemic and University-wide approach to the design of undergraduate programs’.

Designing for Learning: Curriculum Redesign Manual gives educators in the Faculty of Business, Economics and Law the support and assistance to approach the curriculum redesign of their undergraduate programs with added confidence and assurance. Much of what lies within is based on the curriculum redesign documents and processes that have been used with subject co-ordinators over two years of the curriculum redesign process in the Faculty of Business, Economics and Law. The manual will assist subject co-ordinators to navigate the redesign of their subjects in a more reflective and independent fashion.

A University-wide Initiative
Under Design for Learning and the University’s Undergraduate Curriculum Design Policy, all undergraduate degree programs will explicitly incorporate the six identified La Trobe University graduate capabilities, and any additional capabilities* identified by individual Faculties. The following are the Faculty and Law and Management’s graduate capabilities:

- Writing
- Speaking
- Inquiry/research
- Critical thinking
- Creative problem-solving
- Teamwork
- Information Literacy*
- Ethical Awareness*

Student engagement with the graduate capabilities will be in the context of the disciplines in which they undertake their study, and will therefore be defined for a disciplinary field. Their achievement of the capabilities will be facilitated by a curriculum design that aligns their learning experience to the successful achievement of an agreed Faculty standard for each of the capabilities at the undergraduate year levels.
The Faculty Approach
The Faculty Curriculum Renewal Team has the responsibility of leading the curriculum review and renewal in the Faculty, in consultation with the Schools and the discipline leaders. Discipline leaders in the Faculty were given the task of describing student achievement for each of the graduate capabilities for their discipline at each year level – first year (cornerstone), second year (midpoint) and capstone (third year). These Graduate Capability Descriptors guide the mapping and redesign of the Faculty’s programs, appropriately ensuring that student achievement is in the context of the disciplinary field in which they are studying.

Curriculum Mapping
Prior to their redesign, each core subject in a degree program is reviewed to establish the extent to which the graduate capabilities are already taught and assessed within a degree program. Subject coordinators are asked to respond to an online survey in which they describe the way in which they might already provide students with the opportunity to experience the teaching and learning of the graduate capabilities as described for their respective disciplines. Their evidence is used to create curriculum maps which provide the baseline data for the redesign process.

Curriculum Redesign
The curriculum map of a degree program demonstrates to subject co-ordinators the extent to which students are already exposed to the graduate capabilities, as well as the opportunities for the possible inclusion of additional graduate capabilities. Through the curriculum redesign process subject co-ordinators are encouraged to make firmer links between the teaching and learning activities and their assessment of the graduate capabilities, enabling them to be confidently explicit about the graduate capabilities they accommodate in their subjects.

Faculty Standards
Assessing student achievement of the graduate capabilities against agreed standards is integral to the implementation of Design for Learning. Faculty standards, based on the discipline graduate capability descriptors, have been developed for all graduate capabilities at the three undergraduate year levels, in consultation with the Faculty’s Schools and discipline leaders. Subject co-ordinators will be asked to apply the Faculty Standards for the graduate capabilities in their assessment of student work, and to make an overall judgment as to whether a student has met the standard, not met the standard or exceeded the standard for a graduate capability at a given year level.
**Curriculum Renewal Timeline**

The following grid provides a summary of the curriculum renewal scheduled in the Faculty. It is anticipated that the redesigned curriculum will be fully implemented in all year levels by 2013.

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mapping of First Year Curriculum</td>
<td>✓</td>
<td></td>
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<td></td>
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<tr>
<td>Redesign of First Year Curriculum</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation of Redesigned First Year Curriculum</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>Mapping of Second Year Curriculum</td>
<td></td>
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<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>Redesign of Second Year Curriculum</td>
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<td></td>
<td>✓</td>
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<tr>
<td>Implementation of Redesigned Second Year Curriculum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mapping of Third Year Curriculum</td>
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<tr>
<td>Redesign of Third Year Curriculum</td>
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<td>✓</td>
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<tr>
<td>Implementation of Redesigned Third Year Curriculum</td>
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<td>✓</td>
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</tbody>
</table>
Purpose
Under the Design for Learning initiative, University subjects and courses must accommodate identified graduate capabilities in a constructively aligned curriculum. Designing for Learning: Curriculum Redesign Manual has been specifically produced to assist subject co-ordinators in the Faculty of Business, Economics and Law at La Trobe University with the redesign of their subjects using the principle of constructive alignment.

Designing for Learning
The curriculum design process created for the redesign of subjects in the Faculty of Business, Economics and Law employs the principles of backwards design and constructive alignment.

Backwards design begins with educators setting the learning outcomes and then designing the educational experience for their attainment.

Constructive alignment ensures that what the learner needs to demonstrate to achieve an intended learning outcome is accommodated in the teaching and learning experience, and evaluated in the assessment. It can be represented as follows:

Intended Learning Outcomes

Teaching and Learning Activities

Assessment

The curriculum design principles of backwards design and constructive alignment inform the structure and sequence of Designing for Learning.

Working with Designing for Learning
While Designing for Learning is aimed at educators in the Faculty of Business, Economics and Law at La Trobe University, it has general applicability to educators in tertiary settings who are intending to implement an outcomes-based curriculum redesign of their courses or subjects.

Educators using the manual will find that it readily complements the facilitated redesign process conducted in the Faculty of Business, Economics and Law, by encouraging more independence in fulfilling the aims of that process. It may also be used by facilitators in workshops and seminars to reinforce a particular aspect of the curriculum design process, or in one-to-one coaching sessions centred on curriculum design.
The Aim
Designing for Learning has been created for use in a variety of contexts, but with the singular aim that educators using the manual will have accomplished the redesign of their subject after working through the three curriculum design phases.

The Structure
Designing for Learning is organised into three sections, each dealing with a phase of the curriculum design process:

- Section A – Setting Intended Learning Outcomes
- Section B – Creating an Assessment Regime
- Section C – Creating Teaching and Learning Activities

Each section follows a learning sequence, and contains learning activities and accompanying worksheets and fact sheets.

The Contents
The learning sequence used in Designing for Learning allows educators to become familiar with the conceptual basis of a design phase, before they are required to apply the concepts to the redesign of their curriculum. Each section, corresponding to a design phase, contains learning activities, worksheets and fact sheets.

Learning activities embedded in the three sections assist educators through the learning sequence, enabling them to understand each part of a design phase, and to apply or reflect on that understanding before integrating it into the redesign of their subject. Learning activities are coded as follows:

Learning activities that facilitate progress through a design phase

Learning activities that require the creation of a product for integration into the redesign process

Worksheets accompanying each section allow educators to demonstrate their understanding, and to collect the product of their learning for integration into their subject learning guides, for communication to students and their colleagues assisting with the delivery of their subjects.

Fact sheets contain information that will assist educators to fulfill a learning activity or to accomplish a design phase at a more informed or sophisticated level.
## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backwards design</td>
<td>Designing an educational experience for the achievement of a predetermined learning outcome.</td>
</tr>
<tr>
<td>Constructive alignment</td>
<td>A curriculum design principle that is honoured when the assessment task evaluates the achievement of a predetermined learning outcome which a learner has had the opportunity to demonstrate in the teaching and learning experience.</td>
</tr>
<tr>
<td>Criteria referenced assessment</td>
<td>Assessment of a task that is linked to specified criteria and described levels of achievement known to both the learner and the assessor.</td>
</tr>
<tr>
<td>Assessment criteria</td>
<td>Characteristics of an assessment item or task against which judgments can be made</td>
</tr>
<tr>
<td>High stakes assessment</td>
<td>Usually a one-off assessment task that comprises all or a large proportion of marks for a subject, and determines whether a learner graduates to a higher level of formal study.</td>
</tr>
<tr>
<td>Intended learning outcome</td>
<td>Curriculum statements that communicate what educators intend students to be able to <em>do (or achieve)</em> at the end of a teaching and learning experience.</td>
</tr>
<tr>
<td>Scaffolding</td>
<td>Scaffolding is providing a learner with assistance to understand the learning content or perform a relevant skill. It is the basis of a learning activity.</td>
</tr>
<tr>
<td>Standards</td>
<td>Denote the achievement level against assessment criteria. They might take the form of a grade range or a developmental progression.</td>
</tr>
<tr>
<td>Taxonomy</td>
<td>A basis for classifying or distinguishing between items or phenomena of a similar class or order.</td>
</tr>
</tbody>
</table>
Useful Sources


Acknowledgements

*Designing for Learning: Curriculum Redesign Manual* is based on a curriculum redesign workshop series created by the Faculty of Business, Economics and Law Curriculum Renewal Team for the Faculty of Business, Economics and Law at La Trobe University. The Curriculum Renewal Team is responsible for the creation and implementation of the redesign process in the Faculty.

**Attribution**


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Section A
Setting Intended Learning Outcomes

What is an Intended Learning Outcome?
Intended learning outcomes (ILOs) are curriculum statements that communicate what educators intend students to be able to do (or achieve) at the end of a teaching and learning experience. These statements are framed as intentions, and provide the direction towards which teaching and learning in a subject will progress. They also allow for clearer communication between all involved in the learning context.

![Figure 1. Purpose of Intended Learning Outcomes - communicating between the subject designer, the tutors and students.](image)

Clearly stating the purpose or outcome of a teaching and learning experience, and then designing an educational experience to achieve it, is known as backwards design, an approach used in the construction of outcomes based curricula. ‘Backwards design’ focuses attention on what students should achieve. Some examples of intended learning outcomes are below.

**Examples of Intended Learning Outcomes**

1. By the end of this subject students will be able to describe the difference between two management theories
2. By the end of this subject students will be able to evaluate the appropriateness of different theories to a specific problem

**Characteristics of an Intended Learning Outcome**
Intended learning outcomes focus on what students can do (almost always contain verbs) and what they can demonstrate as an outcome of their learning. As such, they are observable, achievable and measurable, that is visible and tangible (action or product), within expectations of student capabilities given the learning experience and able to be evaluated or assessed.
Activity 1
1. Examine the Examples of Intended Learning Outcomes above. Consider
   • how students might demonstrate the intended learning outcome
   • how students might be assessed

Elements of an Intended Learning Outcome
The statement of an intended learning outcome can refer to the action expected of the learner, establish the knowledge to be used or applied, and set the limits in which the learning will take place. We can conceive of these three elements of an intended learning outcome as:

   • Context/constraints (Within what context/timeframe)
   • Action element (How/to what extent)
   • Conceptual/Discipline element (What)

Activity 2
1. Look again at the Examples of Intended Learning Outcomes above. Identify the elements in each.
2. Using the Intended Learning Outcome Template, design an intended learning outcome for your subject. Refer to the ‘Ladder of Verbs’ in Fact Sheet No.1 for assistance with the kind of action you might want students to demonstrate.

Subject Aims and Intended Learning Outcomes
Subject Aims communicate the content of the subject, its key concerns and define its parameters – they declare the focus. For example, the aim of a subject might be to introduce an area of knowledge, consider the application of disciplinary theory to problems, or develop a set of skills or competencies. Connecting intended learning outcomes to the subject aims ensures that the student learning experience fulfils the subject’s aims.
Activity 3

1. Examine the aims of your subject and the intended learning outcome you designed. In what way(s) does the intended learning outcome match your subject aims? (Reconsider either or both to ensure their alignment.)
2. Using the template in Worksheet No1, design additional (about 5 and no more than 7) intended learning outcomes which ensure that student achievement is in line with the aims of your subject. As you design your intended learning outcomes, use verbs located further up the ‘Ladder of Verbs’ in Fact Sheet No.1. Which level did your subject aims allow you to reach?

Graduate Capabilities and Intended Learning Outcomes
As outlined in the introduction to this manual, the graduate capabilities are the skills that students should be able to develop in their learning experience in a subject or course. It might be of assistance to consider the graduate capabilities in the following way:

<table>
<thead>
<tr>
<th>How we are thinking (cognitive)</th>
<th>How we are communicating (communicative)</th>
<th>How we are doing (procedural)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking</td>
<td>Writing</td>
<td>Teamwork</td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>Speaking</td>
<td>Inquiry/research</td>
</tr>
<tr>
<td>Ethical Awareness</td>
<td>Information Literacy (multi-mediated)</td>
<td>Information Literacy (information management and retrieval)</td>
</tr>
</tbody>
</table>

It is neither practical nor desirable to focus on all of the graduate capabilities in one subject; but all subjects should be able to assimilate some graduate capabilities into their anticipated student learning experience.

The Disciplines have described the graduate capabilities according to their knowledge frameworks, and expectations of professional and academic skills in their respective fields. For example, the way in which an historian or economist conceives of a problem and its solution might rely on different conceptual approaches, analytical tools and even different professional and academic languages. The graduate capabilities described for your Discipline, at the appropriate year level, are contained in the Graduate Capability Grid for a respective Discipline and in your Alignment Grid.
Activity 4

1. Locate and examine the graduate capability descriptors in the Alignment Grid for your discipline and year level. Highlight the graduate capabilities that you think your subject could readily accommodate.
2. Match the intended learning outcomes you have created to the highlighted graduate capabilities in your Alignment Grid. Were you able to match the intended learning outcomes to all the highlighted graduate capabilities?

Integrating the graduate capability with the disciplinary content of a subject is not only efficient, it is also effective, as it ensures that students are acquiring the graduate capability in a purposeful and relevant way. The examples below demonstrate how intended learning outcomes are used to reflect this integration.

Intended Learning Outcomes with Graduate Capabilities

1. By the end of this subject students should be able to interpret authorial intention, and link it to audience values and textual features to literary and persuasive texts.
2. By the end of this subject students should be able to write effective analyses of short literary and persuasive texts, linking authorial intention, audience values and textual features.
3. By the end of this subject students should be able to work in teams to effectively analyse short literary and persuasive texts, linking authorial intention, audience values and textual features.
4. By the end of this subject students should be able to design and deliver formal presentations to a professional standard.

Key: Discipline Knowledge and Graduate Capabilities

Activity 5

1. Examine the intended learning outcomes you matched to the graduate capability descriptors in the Alignment Grid. Consider whether they could be more explicit about the graduate capability to which they refer, and modify accordingly, using the above examples as a guide.
2. Place these revised intended learning outcomes in your Alignment Grid.
Fact Sheet No.1 – Intended Learning Outcomes Information Sheet

Elements of an Intended Learning Outcome

By the end of this subject/semester (time period), students will be able to identify/classify (action/capability) the theoretical principles of management (discipline) as they apply to sport organisations (constraint).

The ‘Ladder of Verbs’ and Higher Order Thinking

American educationist Benjamin Bloom lent his name to a taxonomy of knowledge domains created in the 1950s that has been employed and modified by educators since its inception. Bloom’s taxonomy allows for the conception of cognitive abilities in a hierarchy, moving from the rudimentary (knowledge acquisition) to the complex (knowledge creation). For the purposes of setting intended learning outcomes, it is useful to represent these cognitive abilities as a ladder, along with their corresponding verbs, illustrating how the learner might be required to step from the lower order skills to more demanding demonstrations of understanding.

Based on Benjamin Bloom’s Taxonomy

Figure 2. ‘Ladder of Verbs’ - moving from the rudimentary (knowledge acquisition) to the complex (knowledge creation). For an enlarged version of The ‘Ladder of Verbs’, see overleaf.

‘The Ladder of Verbs’

Based on Benjamin Bloom’s Taxonomy
### Worksheet No.1 – Intended Learning Outcome Templates

#### Intended Learning Outcome 1
By the end of this __________________________ (time period), students will be able to

______________ (action/capability) ________________ (discipline) as they apply to _________________ (constraint).

#### Intended Learning Outcome 2
By the end of this __________________________ (time period), students will be able to

______________ (action/capability) ________________ (discipline) as they apply to _________________ (constraint).

#### Intended Learning Outcome 3
By the end of this __________________________ (time period), students will be able to

______________ (action/capability) ________________ (discipline) as they apply to _________________ (constraint).

#### Intended Learning Outcome 4
By the end of this __________________________ (time period), students will be able to

______________ (action/capability) ________________ (discipline) as they apply to _________________ (constraint).
### Intended Learning Outcome 5
By the end of this ________________ (time period), students will be able to

_________________________ (action/capability) ______________________ (discipline) as they apply to ______________________ (constraint).

### Intended Learning Outcome 6
By the end of this ________________ (time period), students will be able to

_________________________ (action/capability) ______________________ (discipline) as they apply to ______________________ (constraint).

### Intended Learning Outcome 7
By the end of this ________________ (time period), students will be able to

_________________________ (action/capability) ______________________ (discipline) as they apply to ______________________ (constraint).
Section B
Creating an Assessment Regime

Why Assessment?
Assessment provides students with the opportunity to demonstrate what they have understood or obtained from a learning experience, and enables educators to gauge the level of understanding and skill development attained by the student. It is also the first point of reflection for improving and refining the teaching and learning experience.

Assessment can come at the end of a learning experience or it can be integrated into the teaching and learning experience. Where assessment is integrated with learning, students can take the opportunity to monitor their own learning, through tasks that encourage self-assessment and reflection. Assessment then is performed as part of learning.

<table>
<thead>
<tr>
<th>Examples of Assessment Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Action research project</td>
</tr>
<tr>
<td>• Case study</td>
</tr>
<tr>
<td>• Class participation</td>
</tr>
<tr>
<td>• Essay</td>
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<tr>
<td>• Examination</td>
</tr>
<tr>
<td>• Lab report</td>
</tr>
<tr>
<td>• Mini test</td>
</tr>
<tr>
<td>• Multiple-choice test</td>
</tr>
<tr>
<td>• Presentation</td>
</tr>
<tr>
<td>• Research assignment</td>
</tr>
<tr>
<td>• Short answer test</td>
</tr>
<tr>
<td>• Written Summary</td>
</tr>
</tbody>
</table>

Types of Assessment
Where assessment takes place in the teaching and learning experience depends on the purpose for assessing, and has implications for the kind of assessment tasks and instruments employed.

**Formative assessment** or assessment *for* learning occurs during a teaching and learning experience, and has as its goal the intention to provide feedback to the learner for reflection on the attainment of knowledge content or skill development. The purpose of formative assessment is to assist and inform learning, allowing learners to demonstrate an improvement on a further, greater or more important assessment task. Formative assessment can range from checking for understanding in a classroom discussion, to providing extensive feedback on a draft or ‘low stakes’ assignment.

**Summative assessment** or assessment *of* learning usually occurs at the end of a teaching and learning experience and has the goal of judging educational performance for achievement. Its purpose is to differentiate between student performance, and usually involves a minimum threshold such as a passing grade to judge competence. Summative assessment does not facilitate feedback. Assessment usually occurs too late to be used meaningfully to improve learning, or its ‘high stakes’ nature makes improvement superfluous. Summative assessment tasks usually take the form of ‘high stakes’ assignments or examinations at the end of a teaching and learning experience.
Activity 6
1. Consider some of the assessment tasks which you have set in your courses. Which category of assessment do they most fit into?
2. Peruse the examples of assessment tasks above. Which would make better formative, and which would make better summative assessment tasks?
3. Thinking about your course, design an assessment timeline with formative tasks leading to a summative assessment task using the ‘Assessment Timeline’ in Worksheet 2. Annotate your ‘Assessment Timeline’ with descriptions for each task of the kind of knowledge and skills students would be expected to demonstrate.

Principles of Assessment
*Fairness* for all learners is the imperative in Assessment. Assessment tasks should reflect the learning experience, be within the range of expectations of learner achievement, and assess capabilities that learners could reasonably have expected to develop during the learning experience. Fairness in assessment is underpinned by the following principles:

*Alignment* – The assessment and the learning experience should be aligned. That is the requirements of learners in the assessment task should be similar to their experiences in the learning tasks. Content knowledge, skills and conceptual understandings required to successfully complete the assessment task should be familiar to learners from their learning experience, and at a level of expectation at which they have had previous opportunities to perform.

*Validity* – The criteria used to evaluate learner performance should be closely related to the assessment task, and the task must represent a reasonable opportunity for their fulfilment at the expected levels of achievement.

*Reliability* – The criteria used for evaluation should be capable of objective interpretation, to the extent that two different assessors could reasonably be expected to arrive at similar rating levels of a completed assessment task.

*Transparency* – The learner and the assessor should be aware of the criteria for the assessment task, and the described levels of achievement, before the assessment task is attempted. There should be no ‘surprises’.
**Activity 7**

1. Drawing on your own educational experiences or your imagination, describe an example of assessment that would *violate* each of the Assessment Principles.

2. Considering the Assessment Principles, which of the four would seem the most problematic to observe? Devise a strategy to ensure that you could fulfil that principle(s).

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**Criteria Referenced Assessment**

Criteria Referenced Assessment (CRA) judges an assessment task against the fulfilment of explicit criteria, at specified levels of achievement. The criteria against which students are to be assessed are derived from the intended learning outcomes (see Section A), or learning statements, which describe what students should be able to do to demonstrate their learning in a particular course or subject.

There are three components that make up the design of Criteria Referenced Assessment – assessment criteria, standards of achievement and descriptions of the standard - and it is usual for these components to sit within a marking rubric or grid.

- **Criterion** - the component of an assessment task (knowledge, skill, function, concept, disposition) being assessed. It is usually derived from a stated learning outcome that students have had an opportunity to experience in the teaching and learning process. Criteria are situated along the vertical axis of the marking rubric.

- **Standards** – denote the achievement level against a particular criterion. They might take the form of a grade range or a developmental progression. Standards are situated along the horizontal axis of the marking rubric.

- **Description of the Standard** – describes the evidence in the assessment task that satisfies the standard for a particular criterion, and in so doing elaborates the criterion and describes the achievement level. Descriptions of the Standard are situated at the intersection of a criterion and the standard.

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**Fig. 3 Example of Criteria Referenced Assessment Rubric**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Undeveloped (0-49%)</th>
<th>Developing (50-64%)</th>
<th>Developed (65-79%)</th>
<th>Sophisticated (80-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write grammatically correct, well structured arguments for disciplinary contexts</td>
<td>Sentence structure, punctuation and overall coherence poor.</td>
<td>Overall, grammatically sound and coherent, if a little fragmented in response to question.</td>
<td>Grammatically sound, well structured response to question, competent use of discipline terminology.</td>
<td>Grammatically sound, well structured response to question, sophisticated use of discipline terminology.</td>
</tr>
</tbody>
</table>

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*Design for Learning: Curriculum Redesign Manual*
Activity 8
1. Examine Fig. 3, ‘Example of Criteria Referenced Assessment Rubric’. In which ways would Criteria Referenced Assessment fulfil the assessment principles? How could the agreement between Criteria Referenced Assessment and the assessment principles be strengthened?
2. Explain a way(s) in which Criteria Referenced Assessment might assist you to combine the two forms of assessment – formative and summative.

Designing Criteria Referenced Assessment
Criteria referenced assessment emphasises transparency in assessment. A well designed Criteria Referenced Assessment Rubric communicates to learners what they need to account for when attempting an assessment task, and describes for them the expected levels of achievement. Learners will be aware of what (criteria) they should do and how well (standards) they should do it. Because it represents an ‘agreement’ about the assessment of a task, the rubric is also the ideal instrument for providing feedback to the learner about their performance.

It is usual to design separate assessment rubrics for each assessment item, and that is the approach taken in this manual, for purposes of clarity. It is possible to design one rubric for multiple assessment items in a course or subject, as long as the criteria remain valid and aligned for all of the items being assessed. It would be unacceptable, for instance, to assess a speaking presentation against a marking rubric designed for a written assessment item.

Step One - Aligning Assessment with Intended Learning Outcomes
Aligning an assessment item with a subject’s intended learning outcomes ensures that students have the opportunity to demonstrate the learning requirements of the subject, and for any assumptions implicit in the intended learning outcomes to become explicit to the student and the assessor. For example, an intended learning outcome that requires students to explain a theoretical concept might be fulfilled through an assessment item involving writing or speaking. Nominating the assessment item brings to the fore any additional skills or knowledge students might require to successfully complete the task.

Activity 9
1. Proceed to Worksheet No. 3 “Designing Criteria Referenced Assessment” (Pages 20-21), and complete Step One, “Aligning Assessment with Intended Learning Outcomes”
2. Were there any intended learning outcomes that you could not accommodate in your nominated assessment items? What could you do to ensure that all of your intended learning outcomes are assessed?
3. Which of the assessment principles do you feel you adhered to most strongly in completing Step One?
4. Consider are the advantages and disadvantages of setting your assessment before designing the teaching and learning activities? How would you address the disadvantages?
Step 2 - Creating Assessment Criteria linked to Intended Learning Outcomes
The assessment criteria are the components of an assessment task that the assessor can reasonably expect a learner to demonstrate in an assessment. As criteria are derived from intended learning outcomes, it is useful to think of them as the performance components of an assessment task, that is, they answer the question: 'What do students need to do to successfully complete the assessment task'.

Deriving assessment criteria for a learning task from the intended learning outcomes increases the validity of the assessment, as it aligns the task with the learning experience, and assesses for the stated outcome(s) of the subject or course. Students are being assessed on aspects of their learning that they have had opportunities to practice, and on skills and knowledge they expected to attain. The second dimension to creating valid criteria is to ensure that they also match the task, that the task affords students the opportunity to demonstrate what is required by the criteria.

Activity 10
1. Return to Worksheet No. 3 “Designing Criteria Referenced Assessment” (Pages 20-21), and complete Step Two, “Creating Assessment Criteria linked to Intended Learning Outcomes”.
2. Reflecting on your criteria, check that it is apparent what discipline knowledge/skills and graduate capabilities are being assessed.
3. Were there any criteria that you have identified for the accomplishment of the assessment task that would not be obvious in your intended learning outcomes or are not covered by an intended learning outcome? Modify and adjust your Intended Learning Outcomes accordingly.
4. Describe (perhaps in one word) the impression you have formed of the relationship between assessment and intended learning outcomes.

Step 3 – Setting and Describing the Standards for the Assessment Criteria

Setting and describing different levels of achievement or proficiency against a criterion indicates to the learner what their response to the assessment task needs to reflect to satisfy the criterion, or to exceed the requirement of the task. This elaboration makes the criterion more explicit to both the student and the assessor.

Adequately distinguishing the levels of achievement helps to differentiate performance for individual learners against intended learning outcomes, but it also facilitates performance judgements in a cohort of learners. It is paramount that the achievement levels are denoted in a graduated progression, and that the descriptions of the standard are incrementally differentiated from each other.
Activity 11
1. Select one of the criteria you have created for your assessment item, and describe it at each level of achievement for the following progression: *Fail, Satisfactory, Good, Very Good and Excellent.* (hint: assign a grade to each for assistance)
2. In the above progression, which levels of achievement were easier to differentiate and which were more difficult? (For assistance with differentiating achievement levels, consider the ‘SOLO Taxonomy’ in Fact Sheet No.2.)
3. Return to Worksheet No. 3 “Designing Criteria Referenced Assessment”, and complete Step Three, “Setting and Describing the Standards for the Assessment Criteria”. You may use the achievement levels already described for your nominated criterion above.
4. Now that you have described the standards for the criteria in the assessment item, devise a method to ensure their *reliability.*

Activity 12
1. List your nominated assessment items on the Alignment Grid, alongside the Intended Learning Outcomes they are assessing.
2. Identify the *relevant* assessment criteria from the Criteria Referenced Assessment Rubric for the Intended Learning Outcome, and place alongside the nominated assessment item on the Alignment Grid. Repeat for each Intended Learning Outcome.
Fact Sheet No.2 – Criteria Assessment Information Sheet

Fig. 4 Example of Criteria Referenced Assessment Rubric

<table>
<thead>
<tr>
<th>Standards</th>
<th>Undeveloped (0-49%)</th>
<th>Developing (50-64%)</th>
<th>Developed (65-79%)</th>
<th>Sophisticated (80-100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write grammaticall...</td>
<td>Sentence structure, punctuation and overall coherence poor.</td>
<td>Overall, grammaticall... sound and coherent, if a little fragmented in response to question.</td>
<td>Grammaticall...y sound, structured response to question, competent use of discipline terminology.</td>
<td>Grammaticall...y sound, well structured response to question, sophisticated use of discipline terminology.</td>
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</tbody>
</table>

Structure of the Observed Learning Outcome (SOLO) Taxonomy

Achievement standards should make meaningful distinctions between students’ levels of achievement. Educators might be able to describe accomplishment of a task on a continuum, but may be unsure if the measure indicates a developmental progression in the learner’s understanding. In their SOLO Taxonomy, John Biggs and Kevin Collis (1982) construct a typology of observed learning outcomes (what learners do) which allow for an interpretation of learner understanding in a qualitative way. The progression in the SOLO taxonomy is useful for informing distinctions between levels of achievement in an assessment rubric. Below is an adaptation of the SOLO taxonomy.

<table>
<thead>
<tr>
<th>Pre-structural</th>
<th>Uni-structural</th>
<th>Multi-structural</th>
<th>Relational</th>
<th>Extended Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student lacks basic conceptual knowledge and is unable to structure a coherent response.</td>
<td>The student is able to identify aspects of an issue, concept or parts of a task, but is unable to make connections between them.</td>
<td>The student demonstrates they have understood some of the interconnections between elements, ideas or parts of a task, but may not relate this to a larger view of the issue or an integrated whole.</td>
<td>The student demonstrates an appreciation of how the parts interact with the whole. It is a more integrated view of an issue, concept or task.</td>
<td>The student goes beyond what is learnt, and uses the ‘whole’ as a platform to create or extend knowledge through application or generalisation.</td>
</tr>
</tbody>
</table>

*The taxonomy increases in sophistication from Pre-structural to Extended Abstract

Worksheet No.2 – Creating an Assessment Timeline

### Examples of Assessment Tasks

<table>
<thead>
<tr>
<th>Examples of Assessment Tasks</th>
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<tbody>
<tr>
<td>• Action research project</td>
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<td>• Case study</td>
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<td>• Class participation</td>
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<td>• Essay</td>
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<td>• Examination</td>
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<td>• Lab report</td>
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<td>• Mini test</td>
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<td>• Multiple-choice test</td>
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<tr>
<td>• Presentation</td>
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<tr>
<td>• Research assignment</td>
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<tr>
<td>• Short answer test</td>
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<tr>
<td>• Written summary</td>
</tr>
</tbody>
</table>

### Assessment Timeline

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Type of Assessment</th>
<th>Skill/Knowledge</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Formative</td>
<td>Skill/Knowledge for feedback</td>
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<tr>
<td></td>
<td>Summative</td>
<td>Skills/Knowledge required</td>
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</table>
Worksheet No.3 – Designing Criteria Referenced Assessment

Step One - Aligning Assessment with Intended Learning Outcomes

Instructions for completing ILO/Assessment Sheet

1. Copy the Intended Learning Outcomes you created in Section A into the table on the ILO/Assessment Sheet.
2. Nominate an Assessment Item (essay, presentation etc) and place it in one of the text boxes labelled “Assessment Item”
3. In the circle (Task Type) above the assessment item, describe the type of task and what it will require students to do (eg. write an argument, apply concepts or theories, synthesise data)
4. Using arrows or lines, indicate which of the Intended Learning Outcomes are being assessed in the assessment item.
5. Repeat the process (from No.2) for all of your intended assessment items.

Step Two - Creating Assessment Criteria linked to Intended Learning Outcomes

Creating Assessment Criteria (Vertical Axis)

1. Select an assessment item from the completed ILO/Assessment Sheet and note the Intended Learning Outcome(s) it addresses. Note also the description of the task type. List the features (things that you expect to assess) that would make a good response to the assessment item.
2. Look for affinities between the features you have listed and group them under broader headings. For example, grammar, punctuation and structure might be grouped under ‘writing’, while analysis, data selection and decision making might be under ‘problem solving’. These groupings are the criteria for the assessment item.
3. Check that you have criteria for all the Intended Learning Outcomes associated with the assessment item.
4. Place your criteria in the vertical axis of the Criteria Referenced Assessment Rubric.
### Step Three – Setting and Describing the Standards for the Assessment Criteria

<table>
<thead>
<tr>
<th>Setting and Describing the Standards (Horizontal Axis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Examining the list of criteria for the assessment item, think of a graduated progression, incremental levels of achievement, which might apply to all of the criteria. For example, “Below Average”, “Average” and “Above Average” is a logical progression of achievement, or measurement. (Whatever you decide, ensure that it is in a language that is meaningful to you and your students, encouraging of achievement, and capable of adequate differentiation between levels)</td>
</tr>
<tr>
<td>2. Place your achievement levels, from lowest to highest level of achievement across the horizontal axis of the Criteria Referenced Assessment Rubric.</td>
</tr>
<tr>
<td>3. Describe the pass standard (this might be the median in your progression) for the first criterion in the intersection between the achievement level and that criterion. Consider what the assessment item will need to demonstrate to pass that criterion.</td>
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<tr>
<td>4. Once you have described the pass standard, you are able to describe the ‘lower than’ and ‘better than’ pass standards. Ensure that your standards are adequately differentiated from one another, and that there is a clear progression in your expectation from one to another. (You can have as many standards as you can meaningfully differentiate. Assigning each standard a grade might assist with the number you require)</td>
</tr>
<tr>
<td>5. Repeat the process for all of the criteria for the assessment item.</td>
</tr>
</tbody>
</table>
ILO/Assessment Sheet

ILOs

1.

2.

3.

4.

5.

6.

7.

Assessment Item 1

Assessment Item 2

Assessment Item 3

Assessment Item 4
## Criteria Referenced Assessment Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Standards</th>
<th>Standards</th>
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</table>
Teaching for Learning
The teaching and learning experience supports students to demonstrate their achievement of the intended learning outcomes for a course or subject, and to achieve in the assessment. Teaching and learning activities equip learners with the knowledge and skills they require to meet the intended learning outcomes.

Teaching activities facilitate student’s progress through the learning experience by designing an engaging and purposeful learning pathway, communicating relevant knowledge to students, modelling a required skill or disposition and providing timely feedback to improve student performance against the intended learning outcomes and assessment criteria. Teaching is planning and communicating for learning.

Learning activities create opportunities for students to achieve the intended learning outcomes in a supported way, by allowing them to practice a skill or demonstration of understanding, giving them time to assimilate feedback on their performance from educators and peers, and encouraging reflection on their attainment of new knowledge or skills in a low risk environment. Learning is what students do in student-centred contexts.

Aligning Teaching and Learning
Purposeful teaching and learning activities are aligned with intended learning outcomes and their assessment. The verb or action component of an intended learning outcome, and the criteria for an assessment item, contain the clues for what students are required to know and do to demonstrate learning outcomes for a subject or course. They ensure that the design of the teaching and learning experience is relevant to students’ learning requirements.

Activity 13
1. Using the ILO/Assessment Sheet, identify your assessment items and place them in the Weekly Planner (Worksheet 4) in the relevant weeks.
2. Using the ILO/Assessment Sheet and your Criteria Referenced Assessment Rubric, examine the intended learning outcomes and the criteria students would need to fulfil for a nominated assessment item. Make a list of the skills and knowledge students would require to achieve in the assessment item.

Sequencing Teaching and Learning
Sequencing teaching and learning entails ordering a learning progression that is discernable and intelligible to the learner. Before attempting an assessment to demonstrate the achievement of a learning outcome, a learner might need the requisite discipline knowledge or some proficiency at a lower level skill. Sequencing teaching and learning allows for the learner to attain the requisite experience in a planned and meaningful progression. For example, before a learner can achieve in a problem-solving assessment, they might require familiarity with the disciplinary field,
conceptual understanding of disciplinary analytical tools, and the opportunity to identify a problem for their disciplinary context. They might acquire the requisite knowledge and skills through a learning experience that contains a combination of lectures, where the knowledge of the disciplinary field is communicated and modelled to students, tutorials where students engage with disciplinary problems in a collaborative and supportive environment, and independent work, where students apply their conceptual understandings to authentic discipline based problems.

**Activity 14**

1. Examine the list of skills and knowledge you compiled for your nominated assessment item. Order the items on the list into a logical learning progression by assigning to each item a number.
2. Once you have devised the order, check it against the assessment item to ensure a logical progression of knowledge and skills leading to the assessment item.
3. When you are satisfied with the progression, arrange the items on your list in the Weekly Planner in the weeks leading to the assessment, remembering to allow for a combination of lectures, tutorials and independent work.
4. Repeat Activities 13 and 14 for each assessment item on your ILO/Assessment Worksheet.

**Activity 15**

1. Reflecting on your Weekly Planner (Worksheet 4), consider the following:
   - What teaching activities and what learning activities did you plan into the period before the assessment?
   - Did you allow time for students to practise a key skill or demonstrate an understanding?
   - Did you allow time for student to receive and use feedback on their performance?
   - How would you allow for the issue of dealing with the same knowledge and skills for more than one assessment item?
   - How would you deal with items on your list that could not be adequately dealt with before the planned submission date of the assessment item?
2. Modify your Weekly Planner in light of your responses to the questions above.
Scaffolding Learning
Scaffolding learning is providing the learner with assistance to understand the learning content or a relevant skill, and is the basis of a learning activity. Scaffolding is an awareness of how learners learn and might involve a formally planned, sequenced progression from a lower order understanding or skill leading to more complex and sophisticated outcomes, or informal ‘teachable moments’ where learners might be given impromptu examples of a concept or skill being applied to enhance their understanding. A common form of scaffolding is to link new learning content and concepts to what learners already know, such as their own experiences or ‘real world’ events. Learners are then able to arrive at a new understanding through inference or deduction. Identifying the elements of a ‘whole’, applying concepts in analogous situations, and allowing learners opportunities to experience concepts in different ways (visual, kinaesthetic) all aid learning and are forms of scaffolding.

Activity 16
1. Using the ‘Learning Activity Template’ (Worksheet No.5), design a learning activity for a key concept or skill in your discipline. The challenge is to begin with what students might know about the concept, and to work from that to a more sophisticated, discipline-based understanding. Complete the ‘Learning Activity Template’ and deliver your learning activity in a tutorial or seminar.

Activity 17
1. Using your Weekly Planner, complete the Teaching and Learning Activity column of the Alignment Grid. Place your nominated teaching and learning activities (Lectures Topics, Tutorial Activities) alongside the relevant Intended Learning Outcomes, Assessment Item and Assessment Criteria.
2. Check the alignment of the items on the grid (by row) to ensure that they are complementing each other and achieving the respective Intended Learning Outcomes.
3. Using butcher’s paper, create a poster displaying your completed Alignment Grid, Criteria Referenced Rubric and your Weekly Planner.
4. Explain your poster to a colleague, highlighting the constructive alignment of your redesigned course.
### Worksheet No.4 - Weekly Planner

<table>
<thead>
<tr>
<th>Week</th>
<th>What Due?</th>
<th>ILO</th>
<th>Topic</th>
<th>Lecture activities (Nominated Graduate Capabilities)</th>
<th>Tutorial activities (Nominated Graduate Capabilities)</th>
<th>Assessment being addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. 5</td>
<td>Journal article summary</td>
<td>ILO 1 and 2</td>
<td><strong>Social media in the workplace</strong></td>
<td>Discussion of Facebook, Twitter, blogs etc (Critical Thinking)</td>
<td>Reading Terms of Service for Facebook, twitter etc (Critical Thinking)</td>
<td>Social media Essay (due week 9) (Critical Analysis)</td>
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</table>
Worksheet No. 5 - Learning Activity Template

Aim
[Describe the learning outcome for this activity]
By undertaking this activity, students will be able to…

Key Knowledge, Skill(s) or Concept(s)
[Indentify the focus of the learning activity]
Students will arrive at an understanding of…
Students will develop…

Method (for Developing the Key Knowledge, Skill(s) or Concept(s))
Activity
[Step out what students will do, starting with what students can do and know]
1. In groups, students will brainstorm…
2. Students will share the outcome of their brainstorm
3. 
4. 

Content
[Identify any references, source material, case studies, problems, theories, readings etc to which students will enhance their skill or conceptual understanding, or engage with the discipline’s understanding of it]

Demonstration of Learning (Application of Key Knowledge, Skill(s) or Concept(s))
[The task students will do to demonstrate their proficiency or conceptual understanding]

Resources
[List of items required to implement the activity successfully – Teaching Space; Whiteboard; Computers; Butcher’s Paper; Markers etc.]