The purposes of assessment are:

- to promote learning and inform students of how well they are learning (assessment for and as learning); and
- to provide evidence of the achievement of learning (certification) as well as assuring standards (quality assurance).

Assessment is an integral part of the learning process. Assessment for and as learning refers to a range of activities that involve academic staff making a judgement of the quality of student work against a standard (Boud & Associates, 2010) and awarding a mark/grade to represent the (level of) achievement of specified learning outcomes. It also involves students learning about criteria, standards and professional judgement and developing their capacity to evaluate their own and other’s work against agreed standards to prepare them to function as independent, life-long learners (Boud & Associates, 2010). Assessments can also inform teachers about their teaching effectiveness.

Assessment for certification and quality assurance leads to students being awarded qualifications and can ensure a licence to practice; therefore, quality of assessment is critical (Australian Government Tertiary Education Quality and Standards Agency, 2012).

A course-wide approach to assessment design involves the team of unit coordinators who contribute to a course (or major) deciding What kinds and How much assessment is needed across a course in order to support student learning, as well as provide adequate evidence of learning for the needs of diverse stakeholders, including the University, graduates, employers, and accrediting bodies.

The benefits of a course-wide approach to assessment for students and staff include:

- helping students to understand the purpose and relevance of assessments
- allowing for consistent messages about assessment requirements (e.g., key terminology, assessment criteria) and standards to be communicated across units in the course
- providing opportunities to scaffold assessment tasks developmentally across the course
- facilitating development of key graduate capabilities by allowing students to demonstrate their competencies via a coherent set of core assessment tasks that are directly related to competencies required in the discipline/profession
- allowing application of learning and feedback across the course, providing improved motivation for students to seek and engage with feedback
- allowing for tailoring and balancing different types of assessment across the course to increase efficiency for staff and students.

Drivers of Assessment at Curtin

Learning, quality and sustainability are key features of assessment at Curtin and correspond to the principles of assessment that guide Curtin Assessment policy and practice (see Assessment and Student Progression Consolidated Policies and Procedures http://policies.curtin.edu.au/findapolicy/). The elements contained within each feature are described in this section. Further information and resources for each feature are available at http://ctl.curtin.edu.au/teaching_learning_practice/assessment/index.cfm.
The key assessment features are:

**Learning**
- Assessment aligns to intended learning outcomes (Principle 2).
- Assessment addresses Curtin graduate attributes (Principle 3).
- Assessment practices have a substantial impact on student learning (Principle 4).
- Assessment provides high quality and timely feedback to students (Principle 5).
- Courses and units include a variety of assessment types (Principle 6).

**Quality**
- Assessment will be subject to quality processes (Principle 1).
- Assessment is inclusive and equitable (Principle 7).
- Assessment is valid and reliable (Principle 8).
- Information about assessment is readily available (Principle 9).

**Sustainability**
- The amount of assessed work is manageable (Principle 10).

**Designing Effective Assessments**

**Assessment and learning outcomes**

One of the keys to successful learning and teaching is the aligned curriculum (Biggs, 1999): this means that carefully designed assessment tasks allow students to demonstrate achievement of clearly communicated learning outcomes. Examples of assessment tasks that may be suitable for assessing different kinds of learning outcomes are shown in Figure 4 and in Table 4.
Clarifying Assessment Conventions and Terminology

Assessment is often associated with a lot of anxiety for students. You can help alleviate that anxiety by providing explicit information and guidance about assessment requirements. This is likely to be most effective if done more than once and in a variety of modes, for example, in the unit outline, in Blackboard, and discussed during teaching time, especially with first year students.

Examples of assessment strategies include:

- Provide information and education on scholarly skills such as researching information from appropriate sources and academic writing and referencing (academic integrity).
- Explain the meaning of different assessment verbs (e.g., “Discuss”, “Critically evaluate”).
- Provide clear guidance on the requirements for different assessment types (e.g. essays, lab reports, project proposals, oral presentations) by discussing requirements and, where possible, showing students exemplars of work.
- Spend time reviewing rubrics or marking guides so that students understand the requirements and how marks will be allocated to their work.
### Table 4: Matching assessment types to unit learning outcomes (ULO)

<table>
<thead>
<tr>
<th>Types of learning: Learning outcomes</th>
<th>What is required from students?</th>
<th>Examples of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking critically and making judgments</td>
<td>Development of arguments, reflection, judgment, evaluation</td>
<td>Essay, Report, Book review, Debate, Oral critique, Blog posting,</td>
</tr>
<tr>
<td>Solving problems / developing plans</td>
<td>Identify problems, define problems, analyse data, review, design experiments, plan, apply information</td>
<td>Problem scenario, Group work, Work-based problem, Analyse a case, Research paper</td>
</tr>
<tr>
<td>Performing procedures and demonstrating techniques, skills, and competences</td>
<td>Computation, take readings, use equipment, follow laboratory procedures, follow protocols, carry out instructions</td>
<td>Demonstration, Role play, Make a video (write script and produce/make a video), Produce a poster, Lab report</td>
</tr>
<tr>
<td>Demonstrating knowledge and understanding (can be assessed in conjunction with the above types of learning)</td>
<td>Recall, describe, report, identify, recognise, recount, relate, etc.</td>
<td>Written examination, Oral examination, MCQs, Mini tests, Essays, Reports, Short answer questions</td>
</tr>
<tr>
<td>Managing/developing yourself, Learning how to learn</td>
<td>Work co-operatively and, independently, be self-directed, manage time, manage tasks, take responsibility</td>
<td>Learning journal, Portfolio, Learning contracts, Self-evaluation, Group projects, Peer assessment, Reflections</td>
</tr>
<tr>
<td>Designing, creating, performing</td>
<td>Design, create, perform, produce, etc.</td>
<td>Design project, Portfolio, Presentation, Prototyping, Creative performance</td>
</tr>
<tr>
<td>Assessing and managing information</td>
<td>Information search and retrieval, investigate, interpret, review information</td>
<td>Annotated bibliographies, Project, Dissertation, Applied task, Data-based project</td>
</tr>
<tr>
<td>Communicating</td>
<td>Written, oral, visual and technical skills</td>
<td>Written presentation, Oral presentation, Discussions/debates/role plays, Concept map, Group work</td>
</tr>
</tbody>
</table>

(Adapted from Nightingale et al., 1996)

Orientation to assessment standards

The capacity to monitor, critically assess, and correct one’s own work is an important part of lifelong learning. Being able to make judgements about the work of others against a standard is a precursor to effective self-evaluation.

Some strategies to support an understanding of assessment standards include:

- As a preliminary step to discussing assessment standards, provide students with two samples of work and ask them to identify which is better. Discussion of the different ways in which students reached the decision starts the conversation about assessment criteria.
- Provide annotated exemplars to illustrate how previous student work of different standards has been assessed.
- Design opportunities for students to engage with assessment criteria by applying the criteria to exemplars, then to (partial) drafts of peers’ work and/or their own draft work.
- Require students to submit a self-assessment using the criteria with their assessment.
Encouraging independent learning

Authentic and challenging assessment tasks, with appropriate scaffolding for the level of the students, are likely to be motivating for students by allowing them to develop and demonstrate capabilities that are relevant to their future discipline or profession and will promote the development of independent learning skills.

Examples of assessment strategies to encourage independent learning:

- Design assessments that encourage a range of responses rather than one ‘right answer’.
- Provide students with a choice of assessment topics to allow them to focus on an area of interest.
- Design a series of scaffolded tasks, some of which may be formative (as a source of feedback, not a mark), which lead to a final assessment task.
- Design tasks that require students to integrate previous learning or personal experience and new information or experience.
- Design group-based tasks that require members to work together to solve a problem and reflect on the process of their teamwork.
- Include a reflective component to an assessment where students are required to evaluate their own learning achievements and identify future learning needs.

Authentic assessment

Consistent with Curtin’s focus on producing industry-ready graduates, authentic assessment is one way in which students can be engaged with assessments that are meaningful and relevant to their current learning as well as to their future roles in the workplace.

Gulikers, Bastiaens, and Kirschner, (2004, p. 69) define authentic assessment as:

An assessment requiring students to use the same competencies, or combinations of knowledge, skills, and attitudes that they need to apply in the criterion situation in professional life.

The level of authenticity of a particular assessment task varies according to the discipline area. The following questions can be used to guide the design of authentic assessments (Gulikers et al., 2004):

- What is the task and what do you have to do?
- In what setting is the task carried out? What are the social processes involved in the task? With whom do you have to do it?
- What is the product or performance that is produced?
- What are the standards or criteria against which the product or performance will be evaluated?

The authenticity of any assessment can be increased by considering one or more of these variables within the context of a discipline or professional area.

Examples of authentic assessments include, but are not limited to:

- fieldwork, practicums, internships, community service, industry visits
- objective structured clinical/practical examinations (OSPE and OSCE’s), simulations, role plays
- investigations, research projects, laboratory experiments, case studies, concept maps, posters, scientific papers, conference presentations, reports, articles
- art and design concepts, modelling and simulations, creative artefacts.
Assessment portfolios

A portfolio is a purposeful collection of student work showing progress and achievements over time. Portfolios can be a useful way to encourage students to take responsibility for demonstrating their learning and for them to reflect on their achievements and future learning needs. This can be particularly helpful when linked to professional competencies. Portfolios are sometimes associated with those developed by visual arts students to support their applications for employment, but the benefits of portfolio development apply to students from all areas of study.

A portfolio can:

- contain hard or electronic copies of marked assignments and work-placement reports that show a student's ability to complete a task according to instructions
- include evidence of community or other extra-curricular activities that demonstrate community involvement
- hold testamurs, certificates and awards achieved as a student
- be electronic – students can store evidence of their academic and professional achievements in digital form, together with videos and images related to their studies and student life.

Marking Guides and Rubrics Criteria

Marking guides and rubrics are tools that help to make explicit to the student the criteria against which their work will be assessed. They can also be a comprehensive and efficient source of feedback. A marking guide provides a list of assessment criteria and corresponding marks.

For example:

<table>
<thead>
<tr>
<th></th>
<th>Unsatisfactory</th>
<th>Satisfactory</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth and breadth of content</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Use of terms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Clarity of explanation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Critical analysis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Overall structure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

A rubric is a matrix showing assessment criteria on the vertical axis (dimensions of performance) and descriptions of the quality of the work on the horizontal axis, as shown in Figure 5. Key advantages of rubrics are that they assist with clarifying expectations and standards, assist with moderation (comparability of marking between and within markers if the criteria are well understood), and provide feedback to students about how they could improve their work.
Figure 5: Rubric showing quality and dimensions of performance

How to develop a rubric

- Decide the dimensions of performance (vertical axis) or the essential elements that must be evident in high quality work. Note that if a student can score highly on all dimensions but not score well overall, you have the wrong ones.
- Decide the levels of achievement: number and type (horizontal axis). Examples of mastery are: exemplary, competent, proficient, marginal, unacceptable.
- Avoid having too many dimensions of performance or levels of achievement. Overly complex marking guides reduce the effectiveness and efficiency of the approach (see Sadler, 2009).
- For each dimension of performance, first distinguish between acceptable and unacceptable (failing) performance: write the criteria for unacceptable performance clearly and unambiguously.
- For each dimension of performance, write clear performance descriptors (criteria) at each achievement level. Try to determine qualitative or quantitative differences that characterise achievement at the different levels. Avoid different grades of the same character (e.g. good, better, best), undefined terms (e.g. trivial work, good use of, significant work), and value-laden terms (e.g. excellent or poor work). State (if possible) the consequences of performing at each level: for example, whether the standard of the work would (or would not) be accepted by the profession or a business or a professional journal.
- Add the marking scheme you will use and apply any weighting. Decide if marks will be awarded for work below the minimum standard. Include the criteria for “failure”.
- Evaluate and revise accordingly. Few marking guides will be constructed perfectly the first time. They are developmental tools and need to be critically evaluated after use.

Holistic versus analytic rubrics

Holistic rubrics allocate a grade or performance level to a student on the basis of performance against explicit standards (without summing marks for individual components). Analytic rubrics allocate a specific number of marks for each criterion or performance level. One issue is whether or not to award any marks for unsatisfactory performance. It might be possible to accumulate enough marks on unsatisfactory performance to allow a student to pass an assessment. An alternative is to set a criterion for passing that states there must be no element for which performance is unsatisfactory (regardless of the overall mark). Another way to limit this is to allocate an “overall performance” as one of the dimensions of performance.
Evaluating marking guides and rubrics

A marking guide or rubric should be reviewed each time it is used, and then revised:

- Does it measure the learning outcome(s) that you want measured?
- Does it measure ALL the important outcomes?
- Does it measure unimportant/extraneous outcomes?
- Does it cover the important dimensions of performance?
- Are the performance levels and scales well defined?
- Is there a clear basis for assigning scores at each scale point?
- Do the “excellent” descriptors describe a high enough performance standard?
- Is there sufficient distinction between each dimension?
- Can different scorers apply the marking guide/rubric consistently?
- Is it fair and free from bias?
- Is it useful, feasible, manageable and practical?
- Can students understand the descriptors?

For examples of rubrics see VALUE: Valid Assessment of Learning in Undergraduate Education:
http://www.aacu.org/value/rubrics/index_p.cfm

Additional recommended readings:


Assessing Group Work

Group work can help develop students’ generic skills such as:

- teamwork skills (working with team dynamics, leadership)
- analytical and cognitive skills (analysing task requirements, questioning, critically interpreting material, evaluating the work of others)
- collaborative skills (conflict management and resolution, accepting intellectual criticism, flexibility, negotiation and compromise)
- organisational and time management skills.

There are three main dimensions to the assessment of group work:

- demonstrated ability to work effectively as a team member (process)
- demonstrated application of knowledge for successful task completion (process)
- the quality of the group’s output (product).

Groups can be asked to produce tangible products such as posters, models or artefacts, formal reports and electronic or other forms of media. They can also be asked to submit records of meetings, planning sheets or other monitoring documents as evidence of their progress. The output can also include a performance or seminar presentation. Group assessment can be conducted by external experts in the field, colleagues, groups of peers, or through self-assessment. This allows multiple perspectives of student work and reduces the chance of bias.

Assessment tasks must be designed to assess students’ achievement of the unit learning outcomes. If teamwork skills are stated explicitly in the learning outcomes, they must be learned, demonstrated and assessed using predetermined criteria. It is important that students understand why group-based assessment is appropriate for that task, and teaching staff should take time to explain this.

Students need to be taught how groups function, and given the opportunity to practice group work skills before they are assessed. Students need to know what will happen should one or more group members withdraw or if one or more contributes so little that it jeopardises the likelihood the group can complete its task. Students must be informed of the appeal process should the group not be able to negotiate among themselves about distribution of marks if this is required.

Students must know how incidents of academic misconduct, such as plagiarism or collusion, can occur in group work and how they can be avoided. Students must be given explicit guidelines on what is acceptable and what is not acceptable in terms of collaborative versus individual work, particularly when they are assessed in groups.
Group assessment criteria

Key considerations are:

- What exactly will be assessed: the product of the group, the process of the group work, or both (and what proportion of the total mark will be allocated to each)?
- What assessment criteria will be used and who will determine them: teaching staff, students or both?
- Who will apply the assessment criteria and determine marks: teaching staff, an external assessor or a combination?
- If groups are to be given a total mark to “share” according to individual contributions, how will the shared mark be determined, distributed and justified?

Students in groups need assessment criteria before they start work. They should know what outcomes they will be expected to demonstrate and how the evidence of their work needs to be documented. Where students are to be involved in developing the criteria, this process should occur at the beginning and all students must receive a written copy of the agreed criteria.

Allocating marks in group assessment

There are many different ways of allocating marks to individual students. Four alternatives models are described below.

| Model 1: All students receive the same mark or grade regardless of individual contribution |
| Example: A group of students prepares a business plan for a company. The business plan is awarded a mark of 16/20. Each student thus gets 16 marks. |
| If professionals in a discipline area customarily succeed or fail on the basis of team performance alone, and the contribution of individuals is of little importance, assessing students this way may be fair. This group assessment model is used frequently and students often complain about it because they know that some students receive marks without making a fair contribution. |

| Model 2: Students receive an individual mark from a limited pool of marks |
| Example: A group of four students prepares an environmental impact report. They are awarded 24/30 marks for the report. They allocate the marks among themselves according to their individual contribution. Some students receive higher marks than others. |
| This model is difficult to justify except in industries where group project earnings are divided according to contribution (and this is usually done by contract before the work begins): students compete for a limited number of marks (and students have to negotiate their mark with the group); moreover, students from different groups who make the same effort probably will not receive the same reward. |

| Model 3: Students are allocated marks according to the role they played in the group |
| Example: A group of three students prepare an educational website. One student has the role of website designer/manager, another is the instructional designer and the third researches the content for the site. Each student has criteria for the quality of their aspect of the completed website, and is required to explain or justify their contribution. The website is awarded 18/20 for web design, 15/20 for instructional design and 17/20 for content. The students receive 18, 15 and 17 marks respectively. |
| This model is fair if all the criteria are made clear beforehand, and if all students have an equal chance of playing the role in which they feel most competent: this is unlikely to be the case. |

| Model 4: Students receive a group project mark and a separate mark for an individual product |
| Example: A group of six students undertakes a six-week research project. They will produce a final group report, for which they will receive a group mark. In addition students will be assessed individually; they are required to submit a research diary recording their progress, relevant diagrams and printouts and findings at weekly intervals throughout the six weeks. |
| This model is fairer in the sense that a separate mark is allocated for evidence of individual effort. If the individual work shows that the student clearly made no, or too little, contribution to the group project, then the group mark for that student can be reconsidered. In this case, students must be warned well in advance. |
Involving Peers in Assessment

Peer review and feedback can be extremely powerful ways of helping students grasp the characteristics of quality work. Often, students are well placed to offer developmental feedback to their peers. Peer review can take many forms. One way might be to ask students to provide formative feedback on other pieces of student work. Another way might be to use the audience to review and rate student presentations on a topic. Peer feedback can be used to give rapid feedback in larger group settings.

However, if the approach is to be successful, students must clearly understand why peer review is being used. Students must also engage with the marking guide or rubric so that they have an understanding of what is involved. This takes some time to set up and support.

Is it worth it? The research suggests that it is. Rust, Price & O’Donovan (2003) describe a process whereby students engaged with the assessment criteria by marking other work and giving feedback. This improved their final outcomes compared to a parallel group that did not undertake this exercise. Significantly, this beneficial effect (an improvement of approximately 5% of the final mark) was still apparent in the group a year later, suggesting that the close engagement with assessment criteria had been effective over time.

Self-review

Students’ learning (and their ability to “learn how to learn”) can be improved when they engage in deliberate thought about what they are learning and how they are learning it. Encouraging students to step back and reflect on their learning can be a powerful way of identifying strengths and areas for improvement – especially where self-reviews are set against reviews made by peers or tutors. Students may be asked to submit a self-review with their assessment and to request feedback on specific aspects of their performance. Teacher feedback can support the development of students’ capacities to evaluate their own performance by focusing on the differences between the student’s evaluation and the teacher’s evaluation of the work.

Recommended further reading on assessing group work:


Marking and Grading Assessments

The Curtin Student Charter states that every student can expect to have “fair assessment and timely and useful feedback on their performance and progress, including final results”. Assessment tasks must be marked in accordance with the assessment criteria, such that the mark or grade reflects how well a student achieved the learning outcomes. In addition to a mark, returned assignments must be accompanied by feedback that clearly indicates how the mark or grade was derived, as well as how the student can improve. Assignments and/or feedback should be returned to students in time for them to consider and utilise it to inform the next assessment task.

Wherever possible, assignments should be handled as digital artefacts submitted electronically. Students are required to keep a personal copy of all assignment submissions as well as copies of digital receipts issued during the submission process as evidence of their submission.

Unit coordinators should maintain an archive of assessment artefacts including exam scripts and submitted electronic artefacts as evidence of the marking process for appeals.

Results for all assessment tasks must be entered into the Blackboard Grade Centre column during the marking process or immediately following the determination of the mark. The Grade Centre captures the assigned mark and incorporates an auditable record of when the mark was recorded and who entered it. Any changes to marks must include a comment describing the reason that the mark was altered.

Unit Final Marks and Grades

All assessment task results are to be recorded in the Blackboard Grade Centre. The Final Mark column should be set up to tally the assessment task results to produce the final mark for the unit. Entry of the Final Grade signals the determination of the student’s result for the unit. The Final Grade must be entered manually into the Grade Centre and be checked by the co-examiner for the unit. The Final Grade must be selected from the set of accepted pre-Board-of-Examiner grades. Following the close of the study period and prior to the Board of Examiners’ meeting, the Final Grade and Final Mark are automatically extracted from Blackboard and submitted to Student One. See the CLI website (http://curtin.edu.au/cli) for scheduled workshops on Blackboard and/or Grade Centre.

For detailed information about Curtin’s grading procedures, including deferred and supplementary assessment, see relevant information in Assessment and Student Progression Manual at http://policies.curtin.edu.au/policies/viewpolicy.cfm
Curtin’s Grading System

A Board of Examiners is a formal Curtin committee to review the performance for each student and to ensure that all assessment is conducted in a fair and equitable manner each study period. The Board is made up of all unit coordinators and course coordinators within a course of study. Unit coordinators are required to attend the Board of Examiners to check grades, and to discuss the performance and status of students.

The course results for each student are ratified by the Board of Examiners at the end of the study period, and a course status of Good Standing, Conditional, or Course Terminated is determined. Curtin’s grading system is shown in Table 5.

<table>
<thead>
<tr>
<th>Grades Awarded</th>
<th>Percentage mark range</th>
<th>Equivalent to AVCC grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Under 50%</td>
<td>Fail (F)</td>
</tr>
<tr>
<td>5</td>
<td>50–59</td>
<td>Pass (P)</td>
</tr>
<tr>
<td>6</td>
<td>60–69</td>
<td>Credit Pass (CP)</td>
</tr>
<tr>
<td>7</td>
<td>70–79</td>
<td>Distinction (D)</td>
</tr>
<tr>
<td>8</td>
<td>80–89</td>
<td>High Distinction (HD)</td>
</tr>
<tr>
<td>9</td>
<td>90–99</td>
<td>High Distinction (HD)</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>High Distinction (HD)</td>
</tr>
</tbody>
</table>

Appeals: Students can appeal assessment results. Before using the formal appeal procedure, students should discuss any disputed assessment with appropriate members of the unit teaching staff. In any such discussion, students and staff members may each be accompanied by any other person from within the University. If the issue is not resolved, it is the right of all students to appeal in writing (using the appropriate form) to the Head of School (up to 14 calendar days after official publication of final results) if they feel that an assessment mark or grade for any formal assessment is unfair or incorrect. The University Counselling Service and Guild Student Assist Service provide student advice concerning the appeals process.

Assessment – Quality

Carefully designed assessment is an integral component of a course-wide teaching and learning approach and particularly relevant to how students will approach their studies. Assessment tasks should be designed by the course team to be valid, reliable, credible, dependable and verifiable for high quality learning to take place, and considerate of inclusivity for all students. Assessments must also align with Curtin’s assessment policy, as well as with relevant external requirements, such as the Australian Qualification Framework (AQF), accreditation requirements, and appropriate benchmarks.

1. **Validity:** Assessment of a student’s knowledge and skills usually results in a mark or a grade that represents the knowledge, skills and abilities being assessed. Validity refers to the extent to which that mark (or grade) measures what it claims to measure.
   - Does it measure the student’s achievement of specific learning outcomes?
   - Is it a measure of the current state of their knowledge? For example, a mark based on a student’s recall of knowledge is not a valid measure of the student’s ability to apply that knowledge. An essay examination might be a measure of students’ essay writing skills rather than their ability to apply discipline knowledge.

2. **Reliability:** Reliability refers to both the accuracy and precision of measurement. If an assessment is reliable, different tests of a student’s particular skills, if administered independently, should give the same result. Different assessors should arrive at the same conclusion about a student’s learning. The three facets of reliability refer to the basic rationale (can the assessed knowledge and skills be translated into a measurement?), the procedures for data collection (the assessment tool, its administration and marking) and the statistical procedures following (what we subsequently do with the numbers).
   Guba and Lincoln (1989) suggest that evaluation is rarely free of political and other sources of bias. To some extent, these issues are reduced where assessment can be shown to be credible, dependable, and confirmable as detailed below:

3. **Credibility:** Assessment is credible when the form of assessment is closely aligned with learning outcomes. Authentic assessment is preferable; this is an assessment in which students carry out a task that represents a real-world situation. Assessment is credible where it is based on detailed evidence, preferably derived from different but contributing tasks.

4. **Dependability:** Assessment is dependable when subjective assessment methods are applied consistently and are stable over time. That is, the assessment method is applied in the same way and under the same conditions for the duration of the assessment period. Assessment is also dependable if those participating in it (staff and students) agree that the process is a fair and reasonable test. The use of marking guides can promote dependable assessment.

5. **Confirmability:** Assessment is confirmable or verifiable when an audit trail is maintained to enable backtracking to original criteria-based judgements. Marking guides are a primary means of doing this. Other records may include observational notes, annotated documents or other records of participation or achievement. Confirmability is enhanced where there is student agreement that the judgement about their performance is fair and accurate.
6. **Inclusivity**: When planning assessment tasks, keep in mind the principles of “universal design”: that is, consider the disabilities that students might have and, if necessary, determine a strategy for extending accommodations to such students; for example, ensure that flexible and varied approaches to assessment are provided for them and that they have equitable access to learning materials. For more information see [http://life.curtin.edu.au/health_wellbeing/disability_services.htm](http://life.curtin.edu.au/health_wellbeing/disability_services.htm).

**Ensuring Fair Assessment Through Moderation**

Assessment must be fair and equitable, that is all students must be given an equal chance to have their achievement of learning outcomes recognised. Unit coordinators must ensure that:

- assessment tasks reflect unit learning outcomes and are set at the correct academic level
- marks and grades are accurate and reflect the assessment criteria
- the assessment has achieved academic integrity through fair and transparent moderation practices.

At Curtin, moderation is defined as a quality assurance process, using a range of strategies directed at ensuring that assessments are marked with accuracy, consistency, fairness and reliability. Unit coordinators are responsible for moderation processes within the unit. For a course, all unit moderation activities will be reviewed by each school’s Assessment Quality Panel (AQP).

Moderation is required for all assessment activities at Curtin and should be communicated clearly to students. Moderation incorporates the entire assessment event, as shown in Figure 6. The process of moderation should involve all markers from all locations participating in the marking process for the unit, and all activities should be recorded and retained by the unit coordinator for the Assessment Quality Panel. This contributes to the cycle of continuous improvement and also to sharing good practice among colleagues.

A series of tables with suggested strategies to support the moderation process can be found at [http://ctl.curtin.edu.au/teaching_learning_practice/assessment/moderation.cfm](http://ctl.curtin.edu.au/teaching_learning_practice/assessment/moderation.cfm)

![Figure 6: The five phases of moderation](image)
**Guiding principles for successful moderation**

Moderation is likely to work best when it is based on the following principles:

- Pre-marking review and consensus meetings are undertaken to ensure that assessors are able to clarify their understanding of the assessment criteria.
- Assessments are designed so that they are clearly linked to the intended learning outcomes and if possible include all staff involved in the unit.
- Assessment activities, including instructions, marking criteria, feedback and moderation practices, are clearly communicated to students prior to the assessment.
- Assessments are subject to regular review: their frequency, style and the relative success rate of students are appraised as a regular part of the continuous improvement cycle.

These principles are articulated and amplified through the Five Phases of Moderation (Figure 7). These phases should be seen as part of an ongoing improvement and evaluation cycle.


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**Recommended further reading:**


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For policies relating to assessment see the *Assessment and Student Progression Manual* at [http://www.policies.curtin.edu.au/policies/viewpolicy.cfm](http://www.policies.curtin.edu.au/policies/viewpolicy.cfm)
Assessment – Sustainability

Any assessment at Curtin should also be considered in terms of its sustainability. Assessment sustainability promotes long-term learning for students, and can be used to assure that learning has taken place (evidence of learning): “Sustainable assessment meets the needs of the present without compromising the ability of students to meet their own future learning needs” (Boud, 2000). More recently, Boud and Associates (2010) offered five basic premises for developing sustainable assessment:

- It builds from the current agenda in higher education: i.e. it is standards-based, it is outcomes-oriented, the course is constructively aligned, and active and appropriate feedback is consciously designed across the course.
- It focuses on the impact of assessment on learning as an essential assessment characteristic.
- It always positions students as active and productive learners.
- It develops students’ capacity to make judgments about learning, including that of others.
- It contributes to building learning and assessment skills beyond the end of the program.

A further dimension to assessment sustainability is the affordability and cost of undertaking and managing all assessment tasks in the course, notwithstanding the actual workload for both students and staff involved. Coordinators should ensure that they formulate effective cost and workload estimates, and at the same time, when organising assessments, provide an assurance of academic integrity as it relates to each task. Classifying all assessment items in this way allows cost and affordability measures of assessment to be clearly evidenced and can support the drive for minimum (threshold) quality standards in all discrete assessment items.

For most disciplines or units, three or four pieces of assessment are sufficient to make a judgment about students’ achievement of the unit learning outcomes. An early, low-stakes assessment can often alert both students and teachers to weaknesses that should be addressed, and the remaining pieces should be spaced throughout the study period. In some disciplines or foundational units, students may be asked to complete smaller more frequent pieces of assessment, especially where learning is dependent on sequential skills development.

In planning the assessment tasks for a unit, it is important to also think about how much time students should expect to commit to their preparation for formative tasks when considering the following:

- How long will it take a student to complete and submit each assessment task?
- How many assessment tasks do students have in other units? When are all the assessments due (in all the student’s units)?

It is helpful to remember that students have only 10–12 hours per week available for a 25-credit unit: these hours include time in class, time to study, time to discuss or think about learning, seek assistance or look for resources, and time for administrative tasks and assessment. Where students are completing group-based assessments, time for student collaboration must also be considered. Students who are overloaded with assessments may resort to surface-level approaches to learning, and even plagiarism.
Providing Feedback on Assessment to Promote Learning

Quality feedback is essential to learning and to sound assessment practice.

Much has been written about the characteristics of effective feedback. It is well known that feedback that is timely, individualised, and constructive is likely to be most effective (see Race, 2010). More recently, literature has focused on the learner’s roles in relation to feedback to make it effective (e.g., Nicol and McFarlane-Dick, 2007). This section contains some key strategies for good feedback practice and some practical tips to promote student learning as well as increase efficiency for staff.

Preparing students to receive and seek feedback

- Help students to understand that feedback is available from teachers, peers, self at many different times and in many different forms (e.g., in class, in online discussions, through informal discussions, answers to their questions, model answers, exemplars), and that students can play an active role in seeking and giving feedback.
- Explain the purpose of feedback and provide specific examples of how feedback has been used by past students to improve learning.
- Describe the formal assessment mechanisms and timeframes within a unit to align student expectations.
- Tell students when you are giving them feedback in person, in class, or via electronic communication.

Recommended further reading assessment sustainability:

Specific information on sustainable learning and teaching can be found at Sustainability in Teaching (Macquarie University) [https://staff.mq.edu.au/teaching/curriculum_development/sustainability_in_teaching/](https://staff.mq.edu.au/teaching/curriculum_development/sustainability_in_teaching/)


For policies relating to assessment see the *Assessment and student progression manual* at [http://www.policies.curtin.edu.au/policies/viewpolicy.cfm](http://www.policies.curtin.edu.au/policies/viewpolicy.cfm)
Creating opportunities for students to engage with feedback

- Design assessments tasks that build upon one another so that students can use the feedback from one task to improve their performance on the next task.
- Ensure feedback is provided in time to be applied to future tasks.
- Make sure feedback provides specific information about the strengths of the work and what can be improved so that students are able to understand and apply it (e.g., avoid vague statements, single word comments, or symbols like “???”).
- Ask students when they submit their assessment to identify specific aspects of their work they would like to receive feedback on.
- Ask students to submit with their assessment a brief statement on feedback that they have received previously and how they have incorporated it in their current assessment.
- Design an activity that has students discuss in face-to-face or online groups the feedback that they received on their assessment and how they plan to use it in the future.

Using self- and peer feedback

- Design learning activities in which students share a draft/outline/plan of an assessment task for peer feedback.
- Provide students with templates to engage in self-review of their own work prior to submission.
- Have students submit a self-assessment (using the same rubric or marking key) when they submit their assessment, then you can tailor your feedback to comment on consistency/inconsistency between the self-assessment and teacher assessment.

Other strategies for efficient feedback

- Focus your time and effort on feedback that is likely to have the most impact. For example, provide extensive feedback on a draft/preliminary assessment due early in the semester and reduce the feedback provided on the final product due at the end of the semester.
- Summarise key strengths and common areas for improvement for an assessment and provide this verbally (in class), or in a brief audio-recording or text document on Blackboard.
- Use group feedback from one study period as feed forward for students in the following study period (assuming the assessment task is comparable, but not identical to the previous task).
- Use rubrics to reduce the need for extensive written comments as well as providing feed forward to students about assessment expectations/standards (especially if you use the rubrics with students for clarification prior to working on the assessment). Blackboard has a set of interactive rubrics that can be helpful for this purpose.
- Create and maintain electronic “banks” of feedback comments related to different aspects of assessment tasks which can be shared amongst markers and reused from year to year. These may be in the form of “Quickmarks” available through Turnitin.
- Experiment with voice recording (e.g., using Audacity) to provide very personalised feedback to students in an audio file that you can upload to Blackboard or email to them.
- Be selective about what you provide feedback on – feedback that is transferable to other tasks is most likely to be used by students. Invest time in feedback that supports deep learning rather than feedback on surface features of work (e.g., correcting spelling).
- Use automated feedback where possible – such as building feedback into electronic tests and quizzes that provide students with the correct response and rationale.
**Recommended further reading:**


**Chapter 9 References:**


