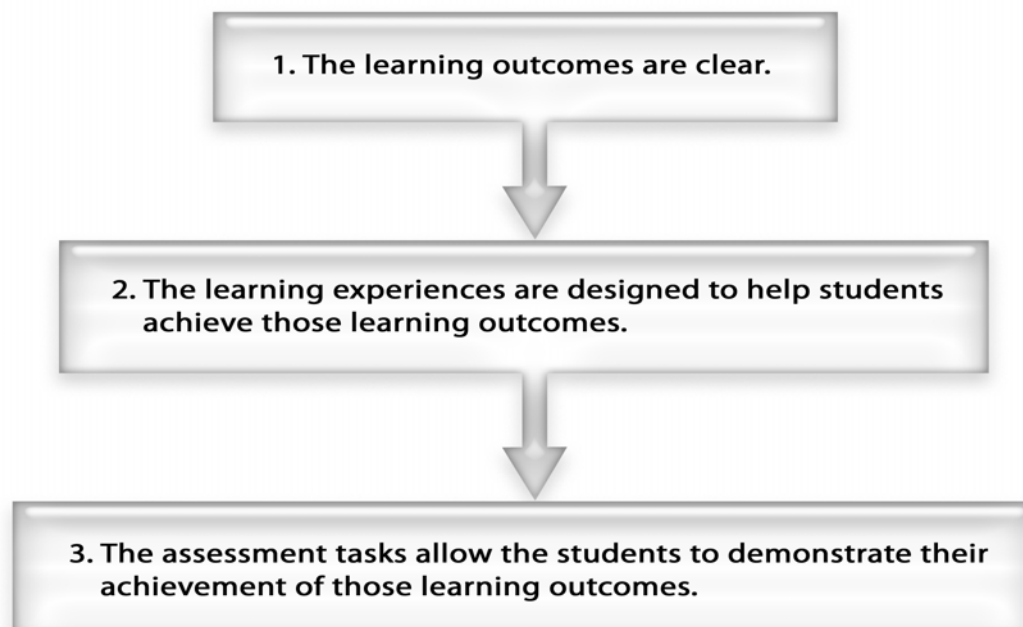


5. DEVELOPING APPROPRIATE ASSESSMENT TASKS

One of the keys to successful learning and teaching is the aligned curriculum⁷: this means that carefully designed assessment tasks allow students to demonstrate achievement of clearly communicated learning outcomes.



Inclusive assessment

In 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 more information see www.disability.curtin.edu.au/local/docs/disability_plan.pdf



Students need indicators of progress: ideally, set one assessment task early, and make sure students have feedback within the first four weeks of semester. Remember that feedback can take many forms in addition to written feedback.

Assessment tasks should be spaced throughout the semester, and include formative tasks (tasks which focus on improving performance) as well as summative tasks (tasks which focus on measuring performance).

Assessment load/overload

For most disciplines or units, three or four pieces of summative 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. In some disciplines or foundational units, students may be asked to complete smaller more frequent pieces of assessment, especially where productive learning is

⁷ Biggs, J. (1999). *Teaching for quality learning at university*. Oxford: Society for Research into Higher Education and Open University Press.

dependent on sequential skills development. In planning the assessment tasks for a unit consider the following:

- How long will it take a student to complete and submit each assessment task?
- How much time per week will most students have available for assessment?
- 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, including 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 assessment may resort to surface level approaches to learning and even plagiarism.

Student work may be assessed quantitatively, usually through the accumulation of marks, or qualitatively or holistically, by making an overall judgment about the quality of different aspects of the work. Whichever method is used, students must be provided with clear marking criteria for each assessment task well before the due date. For more information on how to design marking criteria, see the section on Marking Guides on page 35. Students may also submit work for formative feedback; this does not necessarily require the allocation of marks and other avenues of providing feedback should be investigated i.e. peer assessment and self-assessment.

Ensuring fair assessment through moderation

Assessment must be fair and equitable i.e. 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 level;
- Marks and grades are accurate and reflect the assessment criteria; and
- Every student in a unit receives the same opportunity for a fair assessment regardless of who is marking their assignment or examination.



At Curtin, moderation is defined as a quality assurance process directed at ensuring that assessments are marked with accuracy, consistency and fairness. Unit coordinators are responsible for moderation processes within the unit.

Moderation

Moderation is required for every assessment which involves a degree of subjectivity⁸. It includes the entire assessment event, including the design and post-event analysis of the fitness of the assessment of student learning. The process of moderation can include the adjustment of student marks, but always based on the re-assessment of student work. As part of the moderation process, adjustments to student marks must occur before the script or the marks have been communicated to the student.

⁸ Note that objective testing (such as multiple choice assessment) also needs moderation, but this is done in a slightly different way. This usually involves a review of the questions prior to their use, combined with a post-hoc analysis of student results.



At Curtin, scaling refers to the adjustment of student scores based on statistical analysis alone, and without reference to the quality of student scripts, and after work has already been returned to students. Scaling in this sense is unacceptable at Curtin.

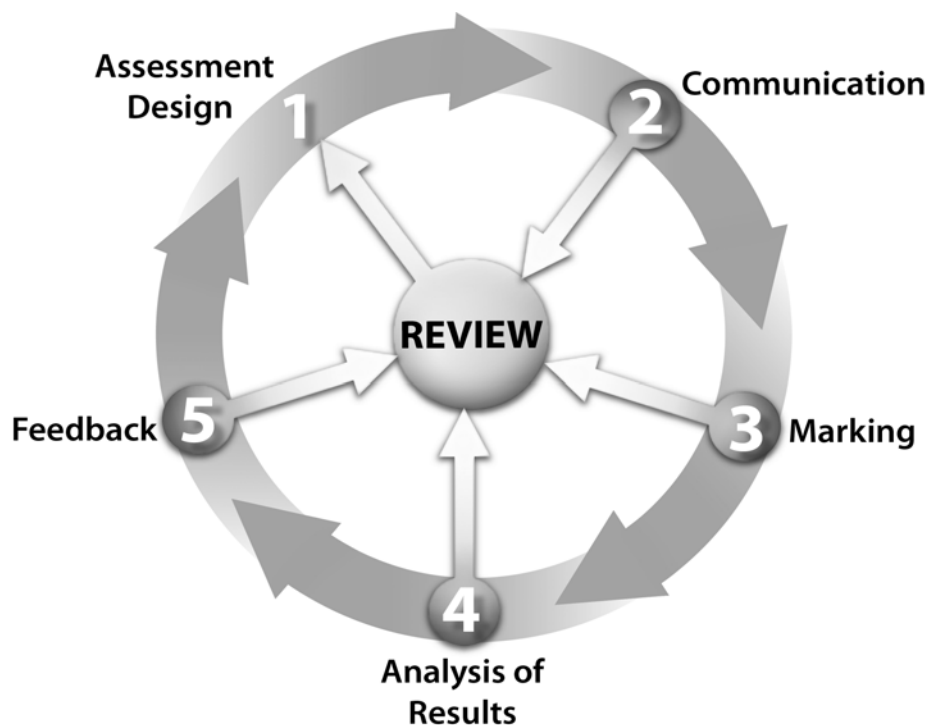
Guiding principles for successful moderation

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

- Assessments are designed so that they are clearly linked to the intended learning outcomes;
- Pre-marking meetings or other activities are undertaken to ensure that assessors are able to clarify their understanding of the assessment criteria;
- Assessment criteria are clearly communicated to students, both in the pre-assessment phase and also when providing feedback; and
- Assessments are subject to regular review: their frequency, style and the relative success rate of students are appraised as a regular part of the improvement cycle.

These principles are articulated and amplified through, Figure 8, The Five Phases of Moderation. These phases should be seen as part of an ongoing improvement and evaluation cycle.

Figure 8 The Five Phases of Moderation



1. Assessment Design: Before the unit commences, the unit coordinator designs an appropriate balance of formative and summative assessment tasks. Note that the assessment policy requires that new assessments are subject to review prior to their use. Formative assessment tasks focus on providing supportive feedback *for* learning, whereas summative tasks are used to make an assessment *of* learning. Good summative assessment tasks will also provide formative feedback, thereby serving a dual purpose. Well-designed assessments should:

- reflect authentic tasks appropriate to the academic level of study;
- be aligned to the intended learning outcomes and be appropriately weighted;
- be appropriately spaced throughout the study period and achievable by students within the allocated time frame;
- include a small formative or modestly weighted summative assessment task within the first four weeks of semester to give early feedback to learners;
- be supported by clear marking criteria which are clearly communicated to all students and markers well before assessments are due; and
- not inadvertently encourage plagiarism.

In the unit outline, students must be provided with details of all assessments, their marking criteria, and how moderation will be undertaken (include specific methods and timelines) to ensure fairness and transparency to students.

2. Communication: This is a key phase: good communication with markers at this stage will significantly reduce the number of issues that can arise post-assessment. Clear communication of the task and associated assessment criteria to the students is also vital. At this stage the unit coordinator meets with all markers (or communicates with remote colleagues) to ensure clarity of the expectations of assessment, and the application of the marking criteria. There are a range of approaches that can be used to maximise consistency between markers such as:

- Ask colleagues to comment on (or better still, help design) assessment criteria. This is relatively easy to do, and it is one way of ensuring that new assessments are subjected to a review. Significantly, the engagement of markers at this early stage is likely to lead to a much deeper understanding of what the criteria really mean.
- Convene a meeting (online or face-to-face) with all markers to discuss marking criteria and their application. This approach can be enhanced if actual student work (either past or present) is used to 'road-test' the marking criteria.
- Invite external comment on assessment criteria – either from colleagues also working in the field or from those experienced in assessment design.

3. Marking: In the marking phase the main concern is to ensure reliability (consistency) between different markers. Marking reliability can be improved in a number of ways:

- Ensure that all assignments (or one particular section of an assignment) are marked by the same marker. The marker should review papers marked earlier (e.g. from marking undertaken the day before) to ensure that their marking standard has not changed.
- Second marking of some or all assessments may be undertaken. In larger units this might involve a random sample being subjected to second (double) marking. Double-blind marking can also be employed – this is where markers do not see each others comments or grades until after marking is completed. Where markers agree closely, small differences can be resolved by averaging. Larger differences should be handled through discussion involving the unit coordinator and a third marker (ideally the unit coordinator) should be used to help resolve any contentious cases.
- After this stage, marking is completed and lists of assigned marks and grades are returned to the unit coordinator. The unit coordinator may decide to give interim and general feedback to the students as a whole group.

- It is extremely helpful if the unit coordinator is able to record issues as they arise during marking. This will significantly support the review process.

4. Analysis of results: The unit coordinator conducts post-marking analysis using one or more of the following methods:

- A sample of papers in each grade range are selected at random and checked for consistent application of standards and criteria.
- All papers that are marked as a 'fail' are subjected to second marking (if not already done so previously). Those assessments that are close to grade boundaries (especially those that are on the borderline between pass and fail) could also be second marked.
- Statistical analysis of results between markers (i.e. the distribution of grades and marks) can be analysed to see if there are potential differences between assessors. If this approach is used, marks should only be adjusted subsequently by a second marking process, not by adjusting marks without reference to the work.

Where anomalies are detected, student work needs to be re-read and re-marked and marks adjusted accordingly before work and marks are released to students. Contracts already in place with offshore campuses and partners will determine how moderation will be conducted: all contractual obligations must be observed.

5. Feedback: Students should receive all marks and assignments and feedback as soon as possible, and in time to improve performance in the next assignment. Student appeals with regard to marks can be dealt with more efficiently because the moderation process above has been detailed and recorded and communicated to the student group. Once student work is returned, it is essential that markers also have feedback on the effectiveness and efficiency of the marking and moderation process. This includes an analysis of:

- the assessment task (was it appropriate? was it too difficult or too easy?);
- the assessment criteria (could students and markers follow? do they need refining?);
- the timing of the assessment, the marking and moderation; and
- the feedback to students (you might like to ask students whether they felt they got sufficient feedback).

Review

At any stage of the moderation cycle, information should be used to review the assessment event, and improve it for next time. To maintain currency (and reduce the potential for plagiarism) you might also consider how the assessment can be varied over time.



Recommended further reading:

Bloxham, S. & Boyd, P. (2007) *Developing Effective Assessment in Higher Education: A Practical Guide*. London: Open University Press.

Boud, D. & Falchikov, N. (Eds.) (2007). *Rethinking Assessment for Higher Education: Learning for the Longer Term*. London: Routledge.

Mentkowski, M. (2000). *Learning that lasts: Integrating learning, development, and performance in college and beyond*. San Francisco: Jossey-Bass.

Quantitative Assessment Standards

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).

Qualitative Assessment Standards

This section draws on the work of Guba and Lincoln (1989)⁹, who argue 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.

1. 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.

2. 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.

3. Confirmability: Assessment is confirmable when an audit trail is maintained to enable back-tracking 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.



For policies relating to assessment see the *Assessment and Student Progression Manual* at www.policies.curtin.edu.au/policies/viewpolicy.cfm

⁹ Guba, E., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage Publications

Types of assessment tasks

There are many different types of assessment task. The following will help you choose the most appropriate one. Remember that whatever assessment task you decide to use, it should be clearly aligned with the learning outcomes and teaching and learning activities in your course.

1. Short form and multiple choice tests - do not usually test higher order thinking skills

Short form tests are also known as objective tests. They include multiple choice, completion (or close), true-false and matching types, of which multiple choice is the most commonly used. A multiple choice test item usually consists of a statement, called the stem, and several alternative statements one of which is the correct answer and the others are known as distracters. Few short-form tests assess higher order thinking skills; although not impossible, constructing items to test higher order thinking (e.g. levels of thinking 3 – 6) takes some skill. Objective tests should be critically reviewed to ensure their quality.

Advantages	Disadvantages
<ul style="list-style-type: none">▪ Measure wide sample of content▪ Easy and quick to score▪ Good for reviewing content▪ Provide formative feedback▪ Provide fast feedback▪ Reusable items in different tests and settings▪ Marker reliability is high	<ul style="list-style-type: none">▪ Difficult to set items which assess more than memory▪ Time consuming to produce▪ Limited range of plausible answer options▪ Encourage guessing▪ Restrict creative students and may favour male students▪ Difficult to interpret wrong answers▪ Do not develop writing skills▪ Poorly constructed questions give clues to students

Tips for good practice:

- The stem should consist of a single, clear idea. It should make sense independent of the rest of the question.
- Avoid stems stated in negative terms as these are more difficult to understand and may cause confusion.
- Make sure that all the alternatives are grammatically consistent with the stem and similar in form and length to one another.
- Make the distracters plausible by using common misconceptions and typical student errors.
- If you use the alternatives 'none of the above' and 'all of the above' include them as the incorrect answer about 75% of the time (if you have four answer options).
- The correct answer should appear without pattern and equally often in each of the alternative positions.

2. Short answer test - does not usually test higher order thinking skills

Short answer questions require a brief answer consisting of a phrase, sentence or short paragraph. For example, 'briefly explain the purpose of formative assessment'.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Measure relatively wide sample of content ▪ Reasonably easy and quick to score ▪ Encourage clear and concise expression ▪ Encourage literacy ▪ Good for reviewing content ▪ Items can be reused in different tests and settings 	<ul style="list-style-type: none"> ▪ Relatively difficult to set compared to short form ▪ Difficult to establish criteria ▪ Scoring may be subjective ▪ May encourage guessing ▪ Little opportunity for argument and originality

Tips for good practice:

- Be clear about what you are asking;
- Avoid using phrases straight from the text book.

3. Essay - can test higher order thinking skills

Essays require students to select, organise and integrate material on a given topic. They also test writing skills and the ability to develop an argument and use evidence to support it. Essays may vary from a single page (about 300 typed words) to major assignments of ten pages (3000 words). Essays may be written under timed exam conditions or set as research assignments. Essays which are merely factual, or for which a set model answer can be produced, are unlikely to test thinking skills, and will almost certainly encourage plagiarism.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Help students develop writing skills ▪ Can reveal errors in understanding or misconceptions ▪ Take less time to set than short form questions ▪ Can improve understanding of a topic ▪ Help develop information literacy skills 	<ul style="list-style-type: none"> ▪ May not sample a wide range of content ▪ Questions may not be well thought out ▪ Subjectivity may affect fair grading ▪ Time consuming to mark ▪ Consistency in marks (i.e. reliability) is difficult to maintain

Tips for good practice:

- Make sure the topic is complex and contextualised so students have to apply rather than regurgitate knowledge (students will be less likely to copy and plagiarise).
- Have students submit a first draft, suggest corrections, then regrade, focusing on how the essay has improved.
- Allocate specific marks for the quality of academic writing and referencing.

4. Performance test - can test higher order thinking skills

Performance tests involve either a hands-on activity, such as using a particular analytical laboratory technique or taking a patient history, or the development of products, such as a building design or computer software.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Encourage students to take ownership of the learning process ▪ Replicate real world conditions/contexts ▪ Students can demonstrate mastery of a skill ▪ Can assess a range of skills or outcomes ▪ Allow for a variety of tasks ▪ Encourage active learning 	<ul style="list-style-type: none"> ▪ Time consuming ▪ Difficult to determine clear assessment criteria ▪ Performance anxiety in students ▪ May require additional resources ▪ Comparison between students may be difficult ▪ Subjectivity may affect fair grading

Tips for good practice:

- Check that any special resources needed are available to all students.
- For laboratory tests, pre-test all equipment and have spare materials available.

5. Written report - can test higher order thinking skills

The report is a common way of presenting information and recommendations or conclusions related to a specific purpose. Reports are written based on gathering and analysing information using a discipline specific methodology and format. They can be used to assess laboratory experiments, field work or case studies.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Replicate real world activity ▪ Marking using a template is relatively fast ▪ Students practice writing to a standard format ▪ Can assess generic skills such as information and computer literacy ▪ Allow for a range of topics and foci ▪ Supports reflection and problem solving 	<ul style="list-style-type: none"> ▪ Students may fabricate data ▪ Marker consistency (reliability) can be a problem

Tips for good practice:

- Explicitly teach students effective report writing skills before using the report as an assessment task.
- State clearly the format of the report, and give examples of good and poor (unacceptable) reports.
- Tell students how language (grammar, spelling, punctuation, referencing) will be assessed.
- Match the percentage of overall marks to the time and effort needed to produce a quality report.

6. Fieldwork/practicum tests - can test higher order thinking skills

Fieldwork experiences and practicums provide opportunities for assessments to be performed on site or subsequent to the experience. Fieldwork practical tests may involve performance tests in the workplace on specific cases or tasks, or may involve the assessment of skills and abilities (particularly professional behaviours) in the workplace over the duration of the placement. The assessments may be conducted by Curtin staff or by staff in the workplace (e.g. supervisor). As it is often difficult to assign a mark to fieldwork assessments, they are often competency based and allocated a pass/fail grade.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Assesses unique, real life and authentic learning experiences ▪ Provides an opportunity for community involvement that may result in job opportunities ▪ Encourages job readiness for student 	<ul style="list-style-type: none"> ▪ Marker consistency (reliability) is a problem ▪ Lack of control of the fieldwork experiences ▪ Student may not be able to perform tasks as they are not registered practitioners ▪ Time consuming for staff to travel to placement and conduct assessment ▪ Difficult to control the assessment task in the workplace

Tips for good practice:

- Use strategies to reduce performance anxiety e.g. practice tests (self assessments), examiner training.
- Ensure the environment is controlled, where possible, to alleviate interruptions to the assessment. This will require organisation and communication with all parties.
- State clearly the format of the test, the performance criteria, and give opportunities for students to have formative assessments.

7. Projects - can test higher order thinking skills

Projects are an extended piece of work involving inquiry based activities. Projects may be small or large, undertaken by individuals or in groups and have outcomes such as a report, design, art work, wiki, a poster or working product.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Allow for greater student engagement in and responsibility for learning ▪ Assess student learning in-context ▪ Encourage initiative, independence and problem solving ▪ Can assess a wide range of outcomes including time and task management ▪ Showcases skills and achievements ▪ Are comprehensive, multidimensional and flexible ▪ Students can explore a topic in depth 	<ul style="list-style-type: none"> ▪ Time-consuming to develop and mark ▪ May make comparison between students difficult if projects are very different ▪ May require online collaborative learning spaces ▪ May require additional resources

8. Presentations - can test higher order thinking skills

Presentations are usually made orally to a class on a prepared topic and may include the use of presentation aids such as PowerPoint or handouts. This assessment may be undertaken individually or as a group. Presentations may take different forms such as role plays, facilitating group activities or seminars, conference presentations, debating, presenting a product, question and answer time, and formal speeches.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Can assess a range of outcomes including generic skills ▪ Marking with set criteria is fast and reliable ▪ Immediate feedback to students ▪ Variety of topics ▪ Allow students to display argument and originality 	<ul style="list-style-type: none"> ▪ Can be time-consuming in limited class meetings ▪ Requires audio/visual learning technologies for external students ▪ Can prompt performance anxiety in students ▪ Students will be tempted to read to the class

Tips for good practice:

- Set minimum and maximum time limits for each presentation.
- If group presentations are used, work out beforehand what is expected from each member of the group and how marks will be distributed among group members.
- Provide students with opportunities to develop and practice oral skill before their presentation.
- Make sure students know they cannot read to the audience but that they must engage them, even if they use prompting notes.

9. Case studies - can test higher order thinking skills

A case study involves a situation, information and issues that provide deep learning opportunities for students. The case could be the account of a real experience, including authentic details, or a real experience in which some elements are changed to prevent identification, or it could be completely hypothetical. The aim is to give students opportunities to explore and apply skills and theories that they have learnt in a related field of study. A case study analysis, which includes the student’s personal response to a case, is usually presented as a written or verbal report. In these analyses, assess the evidence of how the students apply skills and/or theories within the boundaries of the unit learning outcomes.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Can cover several unit learning outcomes ▪ Encourages authentic learning ▪ Helps develop critical thinking skills ▪ Can develop extended writing skills ▪ Can assess a range of skills or outcomes including generic skills ▪ Discourages plagiarism 	<ul style="list-style-type: none"> ▪ Assessment criteria can be difficult to determine ▪ Subjectivity may affect fair grading ▪ Time consuming to mark

Tips for good practice:

- Use case studies that students can relate to, given their experience and level of learning in the course.
- Make sure the account of the case is complex and yet clearly constructed so students can recognise where they can apply their knowledge of the skills and theories.
- State clearly the format for the case study analysis report and provide models of good reports.
- If you plan to assess the quality of the academic writing and referencing, state this in the marking criteria.

10. Posters - can test higher order thinking skills

A poster is a visual representation of a topic or the outcomes of a learning activity. Posters can use different media, including learning technologies, and can be created individually or in groups.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Allows for creativity and originality ▪ Can assess a range of outcomes ▪ Marking using criteria is fast and reliable ▪ Allow for a variety of topics ▪ Encourage active learning ▪ Has potential for peer assessment 	<ul style="list-style-type: none"> ▪ Can focus unduly on presentation rather than content or understanding ▪ Makes comparison between students difficult as posters may be very different ▪ May require additional resources

Tips for good practice:

- Make the purpose and marking criteria explicit to students before they begin.
- Do not set tasks for which students can find examples already available (e.g. on the web), thus prompting plagiarism.
- Provide annotated examples of both good and unacceptable examples.
- Arrange a public display of complete posters.

11. Journals and blogs - can test higher order thinking skills

Journals (also called blogs, learning logs or learning diaries) are written by students over a period of time, such as a semester, to reflect on their learning experiences. They provide an opportunity for students to express their feelings, thoughts and beliefs about the content and process of learning and themselves as learners using an informal writing style and structure.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Encourage engagement in and responsibility for learning ▪ Encourage self-assessment and reflection ▪ Provide valuable insight into student feelings, thoughts and beliefs ▪ Comprehensive and multidimensional ▪ Encourage regular and extended writing 	<ul style="list-style-type: none"> ▪ Difficult to determine assessment criteria ▪ Require time to establish the required high-trust, low risk environment ▪ Issues of privacy and confidentiality ▪ Students may fabricate or sanitise journal entries ▪ May not develop academic writing skills

Tips for good practice:

- Clarify who will be able to read the journal. Ensure confidentiality.
- Allow class time for journal writing.
- Suggest areas for students to focus on, possibly using guide questions or statements.
- Provide frequent feedback, especially in the early stages.
- Keep a journal or blog yourself and share entries with your students.
- Acknowledge the value of student comments by responding to journal items.


12. Portfolios (including Curtin’s iPortfolio)

A portfolio is a purposeful collection of student work showing efforts, progress and achievements over time.

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Encourage engagement in and responsibility for learning ▪ Assess in-context student learning ▪ Encourage self-assessment and reflection ▪ Can assess a range of skills or outcomes including generic skills ▪ Allow for showcase of skills and achievements ▪ Are comprehensive, multidimensional and flexible 	<ul style="list-style-type: none"> ▪ Time-consuming to develop and assess ▪ Can be difficult to determine assessment criteria ▪ May require additional resources ▪ Make comparison between students difficult since the portfolios may be very different ▪ Unless they are e-portfolios, a portfolio can take up significant physical space

Tips for good practice:

- Provide examples of completed portfolios.
- Include compulsory items which show learning activities, reflection and self-evaluation.
- Provide guiding questions for the reflection and self-evaluation.
- Use a continuing course portfolio for different functions in different units.



Recommended further reading:

Brown, G. (2001). *Assessment: A guide for lecturers*. York: Learning and Teaching Support Network. www.bioscience.heacademy.ac.uk/ftp/Resources/gc/assess03Lecturers.pdf

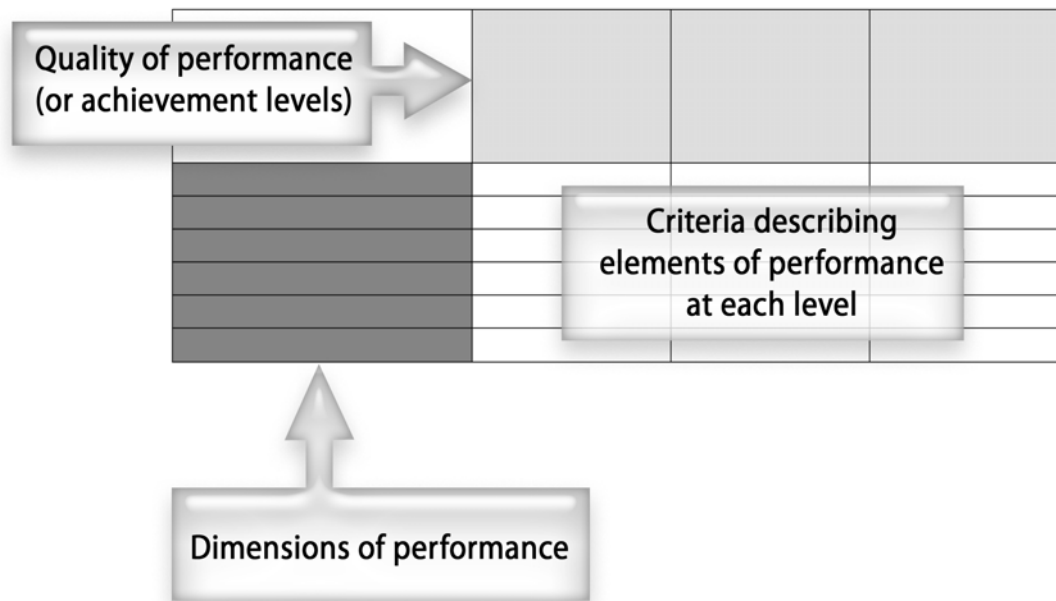
Dunn, L, Morgan C, O'Reilly M & Parry S (2004): *The student assessment handbook*. London: Routledge Falmer.

James, R., McInnis, C., & Devlin, M. (2002). *Assessing learning in Australian universities: Ideas, strategies and resources for quality in student assessment*. Melbourne: Centre for the Study of Higher Education. www.cshe.unimelb.edu.au/assessinglearning/

Using Marking Guides to define assessment criteria

Assessment is integral to student learning and not just something thought about after the unit has been planned. Marking Guides (sometimes referred to as 'rubrics') make explicit to the student the criteria against which their work will be assessed and they can be a comprehensive and efficient feedback tool. In brief, a Marking Guide is a table showing quality of performance on the horizontal axis, and dimensions of performance on the other, as shown in Figure 9:

Figure 9 Marking Guide showing quality and dimensions of performance



A Marking Guide has several advantages: it

- makes assessment processes open and accountable.
- provides diagnostic feedback to students and staff on students' learning so far.
- helps students develop, revise and produce better quality work: they do not have to guess what the assessor is looking for because the most valued outcomes of the assessment are clear.
- improves comparability when there are several assessors.
- can be re-used; the task or the content may change but the scoring Marking Guide may be the same.

One of the more sophisticated but effective uses of a scoring Marking Guide is to have the students collaboratively decide the assessment criteria. This makes them much more aware of the criteria and what they mean, as well as giving students greater 'ownership' of the process. Where this is not possible, consider other ways of getting students to engage with the criteria at an early stage. As an example, this could be achieved by asking students to use the criteria to make comment on selected samples of previous work. This approach could also be used to improve feedback through peer review.

How to develop a Marking Guide

1. 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.
2. Decide the levels of achievement: number and type (horizontal axis). Examples of mastery are: competent, exemplary, proficient, marginal, unacceptable, accomplished.
3. Avoid having too many dimensions of performance or levels of achievement. Overly Marking Guides complex reduce the effectiveness and the efficiency of the approach.
4. For each dimension of performance, first distinguish between acceptable and unacceptable (failing) performance: write the criteria for unacceptable performance clearly and unambiguously.
5. For each dimension of performance, write clear performance descriptors (criteria) at each achievement level (see below). State (if possible) the consequences of performing at each level. For example, the standard of the work would (or would not) be accepted by the profession or a business or a professional journal.
6. 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'.
7. 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.

Differentiating performance levels

The most difficult aspect of constructing a Marking Guide is formulating and clearly articulating criteria for different levels of achievement. 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 etc), undefined terms (e.g. trivial work, good use of, significant work), and value-laden terms (e.g. excellent or poor work; these terms may have meaning for the assessor but do not tell the student the standard expected nor what they can do to improve).

Performance criteria

The performance criteria, Figure 10, as cited in Huba and Freed (2000)¹⁰ is for the criterion: Team skills - Group functioning

Figure 10 Performance criteria: Team skills – Group functioning.

Excellent	The group functions well. Peer review indicates equitable distribution of effort. All members are challenged and feel their contributions are valued.
Good	The group functions fairly well. Some people in the group believe they are working harder (or less hard) than others, but everyone is contributing.
Needs improvement	The group is still functioning, but each individual is doing his/her own work and ignoring the efforts of others. There are frequent episodes where one person's design will not fit with another's due to lack of communication.
Unacceptable	The group functions poorly. All work is the product of individual effort.

¹⁰ Huba, M. E., & Freed, J. E. (2000). *Learner-centred assessment on college campuses: Shifting the focus from teaching to learning*. Boston: Allyn and Bacon.

Holistic versus analytic Marking Guides

Holistic Marking Guides allocate a grade or performance level to a student simply on the basis of performance against explicit standards (without resorting to marks). Analytic Marking Guides 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 tip a student over the magical 50%. 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. The following is a simple quantitative approach to assigning marks to each criterion.

Score all items on a 4-point scale: 0 = task or element not done; 1 = task or element done, but clearly incorrect; 2 = task or element done, but only partially correct; 3 = task or element done, and clearly correct; 0s, 1s and 3s will be clearly identifiable; anything else is a 2.

Evaluating a Marking Guide

A Marking Guide 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 the Marking Guide 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 consistently?
- Is the Marking Guide fair and free from bias?
- Is the Marking Guide useful, feasible, manageable and practical?
- Can students easily interpret each of the descriptors?



Recommended further reading:

Huba, M. E., & Freed, J. E. (2000). *Learner-centred assessment on college campuses: Shifting the focus from teaching to learning*. Boston: Allyn and Bacon.

Stevens, D. D., & Levi, A. J. (2005). *Introduction to rubrics*. Sterling VA: Stylus Publishing.

Figure 11 Example of a generic (re-useable) Marking Guide for problem-solving

Criteria	4 points	3 points	2 points	1 point
Accurately identifies constraints or obstacles.	Accurately and thoroughly describes the relevant constraints or obstacles.	Addresses obstacles or constraints that are not immediately apparent.	Accurately identifies the most important constraints or obstacles.	Identifies some constraints that are accurate along with some that are not accurate. Omits the most significant constraints or obstacles.
Identifies viable and important alternatives for overcoming the constraints or obstacles.	Identifies creative but plausible solutions to the problem under consideration. The solutions address key difficulties posed by the constraint of obstacle.	Proposes alternative solutions that appear plausible and that address the most important constraints or obstacles.	Presents alternative solutions for dealing with the obstacles or constraints, but the solutions do not all address the important difficulties.	Presents solutions that fail to address critical parts of the problem.
Selects and adequately tries out alternatives.	Engages in effective, valid and exhaustive trials of the selected alternatives. Trials go beyond those required to solve the problem and show a commitment to an in-depth understanding.	Puts the selected alternatives in trials adequate to determine their utility.	Tries out the alternatives but the trials are incomplete and important elements are omitted or ignored.	Does not satisfactorily test the selected solutions.
If other alternatives were tried, accurately articulates and supports the reasoning behind the order of their selection, and the extent to which each overcame the obstacles or constraints.	Provides a clear, comprehensive summary of the reasoning that led to the selection of secondary solutions. The description includes a review of the decisions that produced the order of selection and how each alternative fared as a solution.	Describes the process that led to the ordering of secondary solutions. The description offers a clear, defensible rationale for the ordering of the alternatives and the final selection.	Describes the process that led to the ordering of secondary solutions. The description does not provide a clear rationale for the ordering of the alternatives, or the student does not address all the alternatives that were tried.	Describes an illogical method for determining the relative value of the alternatives. The student does not present a reasonable review of the strengths and weaknesses of the alternative solutions that were tried and abandoned.

Assessing group work

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

- Teamwork (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); and
- Organisational and time management skills.

There are three 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); and
- 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 pre-determined 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 that 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.



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.

Allocating marks in group assessment

There are many different ways of allocating marks to individual students for the quality of their contribution to the group product. 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, students (peer and/or self assessment), 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?

Group assessment criteria

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 deciding the criteria, this process should occur at the beginning and all students must receive a written copy of the agreed criteria. The four marking models described below represent different ways of recognising the contribution of the individual student. In each case, it is assumed that students have written criteria that enable them to award marks and that, where relevant, they are given the distribution of marks.

Model 1: All students get 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 get marks without making a fair contribution.

Model 2: Students get an individual mark from a limited pool of marks

Example

A group of four students prepares an environmental impact report. They get 24/30 marks for the report. They distribute the marks among themselves according to their individual contribution. Some students get more than 24 marks and others less.

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), and students from different groups who make the same effort probably won't get the same reward.

Model 3: Students are allocated marks according to the role they played in the group

Example

A group of three students prepares 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 get 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 get a group project mark and a separate mark for an individual product

Example

A group of six students undertakes a six-week research project on the geomorphology of a particular region. 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 withdrawn. In this case, students must be warned well in advance.

Whichever model is chosen, careful thought is required. Other issues arise in group work: the allocation of students to groups (should groups be set by the teacher, or will students be allowed to self-select their own group?), providing support for groups to keep them on-track, and dealing with groups of unequal size, or where students drop out.

Automating group assessment

There are a number of ways that the assessment of groupwork can be supported, including paper and online methods. One way is to ask students to record grades and feedback on report sheets which can then be processed using Excel. Templates are available to support this approach. A more powerful alternative is to use an online system which automates much of the tedious collation that is present in paper based alternatives. Online tools such as SPARK and Tectra are available, although they are not always free of charge. During 2010, the OATL aim to evaluate a number of these with the aim of developing a system available for use across Curtin.

Peer and Self assessment

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

However, if the approach is to be successful, students must clearly understand why peer assessment is being used to avoid the approach being viewed as a way of reducing marking loads. Students must also engage with the assessment marking guide 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 (2003) describes 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 Assessment

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 assessments are set against assessments made by their peers or tutors.



Recommended further reading:

- Caspersz, D., Skene, J., & Wu, M. (2006). *Managing student teams*. Milperra, NSW: The Higher Educational Research and Development Society of Australasia.
- Cohen, R., Boud, D. & Sampson, J. (2001). Dealing with problems encountered in assessment of peer learning. In Falchikov, N. *Learning Together: Peer Tutoring In Higher Education*. London: Routledge. 248-253
- Grellier, J. & Goerke, V. (2006). *Communication Skills Toolkit: Unlocking the Secrets of Tertiary Success*. South Melbourne: Thompson. See Chapter 15: 'Teamwork'.
- Rust, C., Price, M. & O'Donovan, B. (2003) Improving students' learning by developing their understanding of assessment criteria and processes, *Assessment and Evaluation in Higher Education*, 28(2), 147-164.

Marking and grading assessments

The Curtin University 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 such a way that the mark or grade reflects how well a student achieved the learning outcomes and in accordance with the assessment criteria. In addition to a mark, returned assignments must be accompanied by feedback that clearly explains how the final mark was derived, as well as how the student can improve. Assignments and/or feedback must be returned to students in time for them to improve their performance on the next assessment task. Unit coordinators are responsible for organising the secure collection and return of assignments (online or hardcopy). Students are required to keep a copy of all assignments submitted for grading.



Curtin’s assessment policies are available in a single text called *Assessment and Student Progression Manual* See <http://policies.curtin.edu.au/policies/viewpolicy.cfm>

Examinations

An examination is a formal, supervised assessment of learning outcomes which normally takes place at the conclusion of a formal teaching period. Unit coordinators are responsible for preparing examinations which assess the unit learning outcomes. Centrally scheduled examinations normally take place at the conclusion of a semester or formal teaching period and must be worth at least 30% and not usually more than 50% of the final unit mark. In general, examinations should not exceed two hours in length and are preceded by a mandatory 10 minutes reading time. Students who request special consideration because of religious commitments, a disability or medical condition should be directed to University Counselling Service. If such special consideration is required, students should be advised to make alternative examination arrangements as soon as the Final Timetable is published (four weeks prior to the examination period). The absolute deadline for changes for alternative examinations is 2 weeks prior to the commencement of the examination period.

Final marks and grades

It is the teacher’s responsibility to ensure that accurate records of marks are maintained securely. Marks should be recorded and backed up on the University network. If marks are stored elsewhere they should be uploaded to the University network on a regular basis. For end-of-semester examinations, results must be uploaded by 5:00 pm on the Wednesday of the week immediately after the examination period.



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 semester. Unit coordinators must submit final marks and/or grades on time to the Board of Examiners each semester. The course results for each student are ratified by the Board of Examiners at the end of semester, and a course status of Good Standing, Conditional¹¹, or Course Terminated is determined. Unit Coordinators are required to attend the Board of Examiners to check grades, and to discuss the performance and status of students. Curtin's Grading System shown in Figure 12:

Figure 12 Curtin's Grading System

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

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.



For detailed information on Curtin's procedures for appeals see www.policies.curtin.edu.au/documents/student_appeals_policy.doc.

¹¹ In 2010 the term 'conditional' is likely to be replaced by two terms indicating that a student is at risk.