

# The Mechanics of Assessment

*UTDC Guidelines*



Improving Teaching and Learning

# **The Mechanics of Assessment**

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## Table of Contents

1.	Designing out-of-class assignments	1
2.	Preparing a marking guide	4
3.	Informing students of the assessment criteria	6
4.	Marking and moderating student work	7
5.	Peer and self assessment	10
6.	Giving and encouraging students to use feedback	13
7.	Identifying/Preventing Cheating	18



# The Mechanics of Assessment

These guidelines focus on the mechanics of assessment: how to write good questions, developing marking guides, marking and moderation, providing students with useful feedback and techniques for reducing cheating.

Although the critical phase of student assessment takes place following submission, it is important to view assessment as a process that begins during the initial development of a paper. For example, the assessment tasks should assess student achievement in the key learning objectives. Further attention needs to be paid to ensuring that a clear question or task is set and that teachers and students are familiar with the assessment criteria.

The following material is presented in six sections.

- Designing out-of-class assignments
- Preparing a marking guide
- Informing students of the assessment criteria
- Marking and moderating student work
- Providing feedback and encouraging students to use it
- Identifying/preventing cheating

## 1. Designing out-of-class assignments

The information given here is generalised to cover most types of out-of-class assignments. Explanations are kept to a minimum because the guidelines are self-explanatory.

- a) Select tasks (essays, projects etc.) that suit the content and objectives that you want to assess. Make sure the question is non-trivial in respect of its sampling and weighting of the paper's content and objectives.

- b) Ensure that the wording of questions, including all instructions, is clear and unambiguous. Provide information on the weight that the assignment carries towards the students' final grade.
- c) To avoid confusion instructions and questions should be separate from background information.
- d) Begin each instruction on a new line so that students do not overlook or miss an important part of the task.
- e) Emphasise key words (e.g., use bold or capital letters). The use of a negative word should be emphasised because it may be missed. Never use double negatives in the wording of your questions: these are confusing.
- f) Identify the scope of the task. Where appropriate:
  - Specify the role to be adopted by students.
  - Identify the audience (who the students are writing for).
  - Itemise what students are to do.
  - Specify the approach or point of view expected.
  - Identify the medium for the students' answers (e.g., a feature article in weekly newspaper).
- g) Specify in writing the ground rules to students (penalties, word limits, late work, etc.).
- h) Always have a colleague check your questions for ambiguities and other flaws.
- i) Discuss the details of the assignment with students in class. This will help to ensure that they have understood what is expected of them.
- j) If any adjustments are made to the question or criteria, ensure that all students receive these in writing.

**Figure 1 – Example of the layout for an assignment**

You are a consultant for the Ministry of Education. You have been asked to advise the Ministry on policy development in special education.

Prepare a report identifying three key areas in special education for which new or substantially changed policy is needed. For each area:

1. Recommend policy;
2. Give the rationale and evidence for the need for policy development or change;
3. Indicate the organisational implications for schools of the recommended changes or development in policy.

You are **not** expected to provide costings for the changes/developments that you recommend, but the changes must be realistic in this respect.

Your report should be no longer than 1500 words. Keep in mind your audience.

## **2. Preparing a marking guide**

To further ensure that assessment is both a *reliable* and *valid* measure of student learning, a marking guide should be prepared. Ideally this should be made available to students before they begin work on their assessment task. Although a marking guide is particularly valuable for situations where the marking is shared between markers, it should also be standard practice where the responsibility for this task rests with one person.

The marking guide should set out the principal points you are expecting along with mark allocation. It may be helpful to prepare an abbreviated model answer. For example, what are the main points students should cover, expectations regarding style and structure along with any other considerations such as originality. The notes you make will help you decide which form of marking guide will be most appropriate.

Make clear which learning objectives are being assessed. If several objectives are being assessed, make sure that the guide addresses them. Alternatively, if students are being assessed on how well they are integrating several objectives, make sure the qualities listed in the guide (e.g. 'coherence of arguments') reflect the objectives you want to integrate.

Identify the qualities students are expected to demonstrate in their answer or performance. These qualities may cover knowledge, skills, personal attributes, values, and attitudes.

Check that the qualities you are testing are derivable from the goals (objectives or learning outcomes) of the paper.

#### **Qualities that an essay might test**

- Relevance to the question
- Organisation of answer
- Coherence of arguments
- Use of resource material
- Originality of thought
- Fluency in writing (expression, grammar, spelling, etc.)

#### **Qualities that a design project might test (eg. the logo for a new organisation)**

- Clarity/simplicity of design
- Functionality (meets its purpose)
- Cost effectiveness (if used commercially)
- Originality

- Evidence of research in creating the design
- Aesthetic quality
- Presentation (the way the presentation enhances the design)

Allocate marks to reflect the relative importance of the objectives and skills being assessed. To achieve validity you need to reflect the importance of the material that has been taught.

Don't penalise the same error twice. Keep the separate headings of a marking guide clearly in mind. If your schedule includes an assessment of expression, don't let poor expression influence your marking for content or structure.

### **3. Informing students of the assessment criteria**

#### **3.1 Informing students of how they will be assessed**

Give out the marking guide to students *before* they begin their work so that they can know what is expected of them and how they will be assessed. Make sure you explain or give examples of the qualities that you are testing. If you plan to award bonus marks for answers which reveal unexpected qualities, inform the students in advance. If necessary, run a tutorial on the assessment procedures. **Students have a right to be well informed.**

Provide students with a statement on the grading criteria used in your paper. This should identify in general terms what a student is required to do to get an 'A', 'B', etc. for the paper (an example is

attached). The rating criteria used for each assignment should complement the grading criteria for the whole paper

Make sure that students know the School/Departmental policy on penalties such as lateness and plagiarism.

### **3.2 Encouraging students to self-assess their work**

Encourage students to self-assess their performance using the guide before they hand in their work. Research shows that the ability to self-assess the quality of one's own work is a characteristic of top performing professionals. Consider making self-assessment a requirement: that is, have students hand in the guide containing their own self-evaluation. The spaces for comments can be used by students to justify or explain their assessment.

## **4. Marking and moderating student work**

### **4.1 Marking**

Following assignment submission, marking must be carried out with consideration of a range of factors that affect reliability. The following section suggests ways in which this can be achieved.

- Take steps to minimise or eliminate factors that can affect the reliability (consistency or accuracy) of your marking. Research has identified that handwriting, writing style, the length of an answer (quality versus quantity), the order of scripts, and halo effects (being impressed or otherwise by earlier

student performance) can all affect the reliability of marking.

- Before beginning to mark ensure that all those engaged in marking share the same assumptions about what constitutes an A, B, or C and agree on the interpretation of the qualities in the marking guide and the weighting of marks. These assumptions can be checked and clarified by independently assessing three or four assignments and discussing the outcome.
- Read a sample of answers before finalising your marking schedule. This may reveal points you have overlooked. Are there any unexpected ideas/approaches being used? Are there common misunderstandings or errors? To what extent are these problems caused by a poor question?
- Make sure that all markers know the School/Departmental policy on penalties such as lateness and plagiarism. Apply these consistently. For example the course coordinator is responsible for applying penalties.
- Mark one question/topic at a time.
- Take notes while marking. Identify what students do well/do poorly. These notes can be handed to the lecturer or used for class feedback.
- Ensure that students are not penalised twice for the same error. For example, penalising structural problems again in the style section of the marking guide.
- To ensure consistency, re-assess a few answers from the start of the pile to make sure your standards have not shifted over the period of your marking.

- When assigning a final grade, take account of both the overall impression that an answer gives you (a global judgement of the work) and the detailed ratings you have assigned. The research literature on the reliability of essay marking appears to support this approach. Global impressions can sometimes be flawed because the marker can be overly influenced by one or two qualities to the exclusion of others: On the other hand, detailed marking schemes can never take account of unexpected qualities in an answer, or by what is well summarised by the phrase “the whole is greater than the sum of the parts”.

#### **4.2 Moderation**

To ensure marking consistency across markers, time should be allowed for systematic moderation.

Details of how this can be done are given below.

- Before handing back answers to students, cross-mark a sample of scripts from each marker to check for variation in marking standards both between and within markers. If discrepancies are found, make sure that marks/grades are adjusted and that your colleagues understand why. In the case of a dispute seek a third opinion to arbitrate. To assist with this process require tutors to initially write marks in pencil.
- Reconsider the performance of students near critical grade boundaries. Remember that you are trying to be fair to students, not to punish them. Have a second look at the answers of students on your failure cut-off line to see that you have not been unjust. If time allows at the end of a course, you could set an extra piece of

work for students who narrowly fail. If they show they have learnt from their experience, they deserve a pass.

- If an assignment is to be marked by more than one person, follow the earlier guideline and re-mark a sample of answers from all tutors. The effectiveness of this procedure depends partly on how many answers are remarked. However, if you tell students that re-marking will be done, you are likely to deter serious students from lending out their answers.
- Reconsider a student's answer if asked. Allow students the right of appeal without feeling uncomfortable about exercising this right. Be prepared to change your mark if a student presents a valid argument. If there is a chance that marks may go down as well as up, make this possibility clear to all students.
- Establish a process whereby tutors can seek assistance/clarification during marking.

## **5. Peer and self assessment**

Peer assessment involves assessment by a student of work completed by another student enrolled in the same paper. Self-assessment takes place when a student evaluates aspects of their own performance. Providing an opportunity for students to comment on another's work (e.g. oral presentations, designs, performances, written work, contribution to group work) can assist in the development of a range of learning skills including communication, decision making, analysis and evaluation.

While there appears to be general agreement in the research literature that self and peer assessment skills are useful 'lifelong' skills (e.g. Hanrahan and Isaacs, 2001) all the evidence suggests that it should be undertaken with considerable caution and used only when clearly justified by

the paper objectives. Recent research demonstrates that while students perceive that peer (and self) assessment contributes to their learning they often experience a number of difficulties with this (Hanrahan and Isaacs, 2001; Crowe and Pemberton, 2000). Crowe and Pemberton conclude by arguing that 'peer- and self-assessment...will need to be implemented on a case by case basis in varying subjects and contexts'. They call for further research that will 'identify ways of maintaining the learning benefits...while minimising the problem areas' (p65).

There also continues to be debate in the literature regarding the criteria by which students are to express judgement. Some authors argue that students may be competent to assess the extent to which they and their colleagues have participated effectively in a group, but not to assess knowledge, reasoning or expression in the final product. Similarly, teaching staff are competent to assess substantive aspects of the work, but since they are not group members, they must rely solely on second-hand evidence for assessing group process. Other authors argue that, given practice and clear assessment criteria students are able to assess all aspects of their own work and that of others.

Peer assessment can take several forms and can be applied to individual work or within groups. Please note that all the following examples are accompanied by co-ordinator/lecturer moderation.

#### *Peer assessment of individual work*

- Random distribution of completed assessment items amongst the class. Students are required to complete a marking sheet. The staff member moderates marks and the marking sheets are returned to the student.
- Completion of an assessment sheet by each student in the class. Tasks include presentations or display. Marks are

collated and moderated by the staff member to form an overall mark. The overall mark and the marking sheets are returned to the student.

### *Peer assessment of group work*

- Student marks are used to moderate the group mark. The group as a whole is given a mark and group members (using diary and/or meeting records, feedback from others etc) allocate final individual marks. A variety of methods are available to allocate marks between group members (e.g. Crowe and Pemberton, 2000).
- Students provide teachers with marks based on systematic data (e.g. diary records, notes, feedback from others, self-assessment etc). Typically these relate to individual contribution within the group. The teacher is then able to use this information to allocate marks to individuals.

NB: If there is peer assessment of the relative contribution of students to a group project, then the process for collecting the ratings should be confidential, clear and simple to use and the process should include self assessment as well as peer assessment

Where peer (or self assessment) contribute in any way to a student's final grade it is vital that:

- the assessed outcomes are a reliable and valid reflection of the quality of student work.
- Clear guidelines and criteria are available and fully understood by all students and adequate training given to ensure that criteria are applied consistently.
- Guidelines should include predetermined standards and a mechanism for dealing with disagreements or situations where individuals are unable to work as part of a group.

Some authors suggest that, if self or peer assessment is to be used, students ought to be involved in the development of the assessment method and criteria. Detailed marking schemes may be required.

## **6. Giving and encouraging students to use feedback**

In addition to careful construction and planning of the assessment task and construction of a marking guide, methods of feedback to students should be carefully planned to assist in improving the quality of learning. The feedback cycle begins when the students first see the assessment programme. If the information they receive about this is clear and accompanied by details of marking criteria, students are more likely to produce good results.

Effective feedback is *timely*, useful in that it provides information on strengths *and* weaknesses, provides clear information on *how to improve* and *encourages* rather than discourages the student.

- Tie in the grade with the comments (i.e. not “A satisfactory piece of work: grade D”).
- Summarise your comments and indicate the fact that it is a summary.
- Balance the positive with the negative. Negative points should be constructive.
- Indicate ways that the student can improve. Where possible give examples. If problems are numerous consider providing detailed suggestions on one page of the assignment. Make it clear to the student that this is what has been done.
- Avoid terms or jargon, which students may not understand.
- Follow up written feedback with verbal feedback.
- Aim for a dialogue with students.

- Encourage students to evaluate themselves and to seek feedback from other sources. This can be done by encouraging students to talk to each other and to begin to consider how to act on suggested improvements. Consider allowing time for this in the tutorial session when assignments are handed back.
- Ask the students what kind of feedback they want. For example, do they want you to provide specific comment on structure, the introduction etc?
- Make sure your marks and comments are consistent with the criteria and reflect the appropriate weighting.
- Distinguish between different skills (e.g. student may have lots of good ideas but may be poor at spelling).
- Give suggestions for possible extensions of the work where appropriate (e.g., further reading or extending ideas).
- If appropriate give feedback on rough drafts (NB: make sure this offer is made available to all class members).

- Consider using a feedback cover sheet or handing back a summary of the most common problems in the class as part of your feedback.
- Make sure your comments are legible.
- Keep a copy of your comments for each student. When marking the next assignment check to see that students have improved/taken account of earlier comments.
- Allow time when you hand back the assignments for students to read your comments. Ask them to identify one point that they will work on in the next assignment. Allocating time, signals to students that reflecting on feedback is an valued activity. The following feedback pro forma provides an example of how students can be encouraged to systematically consider their response to feedback. To increase the usefulness of this approach ask students to make two copies of the completed pro forma. One copy can then be handed to the tutor/lecturer for later reference.

## **RESPONSE TO FEEDBACK - PLAN OF ACTION**

*(Make two copies. Keep one for yourself and hand the other to your tutor/lecturer.)*

Name of student:

Paper:

Assignment number/topic:

I want to maintain my level of achievement/improve my achievement (*delete as appropriate*).

What did I do well?

What does the individual feedback on my assignments tell me to develop/continue/attend to?

What features described in general feedback apply to my work?

Is there anything in the feedback that I would like clarified?

Has anything been said in a lecture/workshop/tutorial/lab etc I particularly need to take note of?

What features of grammar, spelling, punctuation, expression are adversely commented upon in my work?

My action plan to improve my work during this academic year is.....

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Adapted from Swann, J. and Arthurs, J. (1999) Empowering lecturers: a problem-based approach to improve assessment practice. *Higher Education Review*, 31 (2), 51-74

## 7. Identifying/Preventing Cheating

The following section provides suggestions of ways to discourage cheating and assist in identifying cheating when it occurs. While none of these ideas are foolproof, a planned approach during the assessment process is likely to offer assessment tasks that discourage cheating while remaining vigilant.

- Use a variety of assessment modes, which could include student presentations.
  - Develop carefully worded questions that are significantly different from previous years and that are tailored to the specific paper objectives.
- a) Consider incorporating an interpretive component where assessment is largely based on calculations.
  - b) Establish clear strategies for dealing with 'suspect' work. (e.g., tutors to pass such work to the course coordinator).
  - c) Establish thorough moderation procedures (see section 1.2) and methods for spot checking student work. Ensure that students know that these practices are in operation.
  - d) If seriously worried about an outbreak of cheating, institute on-the-spot vivas covering key concepts/principles.
  - e) Require students to attach a draft when submitting the final copy of their assignment. Alternatively students could be required to make drafts available on request.
  - f) Consider allocating marks for a submitted draft which could be subsequently revised before final submission. This method has the added advantage of assisting students to take account of feedback.

- g) Make sure that students are clearly informed of the definition of plagiarism as well as the seriousness of cheating and School penalties.
- h) Ensure that markers are vigilant for signs of cheating (e.g. changes in writing style, use of terminology, concepts that are unlikely to be familiar to undergraduate students, references that are unavailable at VUW).
- i) Consider using internet resources designed specifically to identify plagiarism. For example, Stanford University now has a system available that can be readily accessed ([www.plagiarism.com](http://www.plagiarism.com))
- j) Keep a record of all suspected plagiarism.

