

Enhancing Student Learning through Assessment



A Toolkit Approach

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What is the purpose of this booklet?

The purpose of this booklet is to help you ensure that your assessment practices will add significant value to your students' learning in DIT. However, while perhaps the most important principle of assessment is that it should enhance student learning, this guide is not just about the student point of view. It recognises that staff-student ratios are continually declining in third level institutions, and that assessment practices can correspondingly become reduced, or less rigorous. It thus guides you to efficiently review and improve your assessment practices, showing you approaches and methods of assessment that are not only educationally successful, but efficient and workable.

This booklet will introduce you to the purposes of assessment, define the characteristics of good assessment, differentiate between the different methods of assessment used in third level education, and help to think about how assessment can benefit your courses. It will help you to review and revive your approaches to assessment, thus enabling you to construct a more fertile learning environment and a more rewarding learning experience for both you and your students.

Why do we assess?

If questioned lecturers would say that we assess for the following reasons:

- To determine that the intended learning outcomes of the course are being achieved
- To provide feedback to students on their learning, enabling them to improve their performance
- To motivate students to undertake appropriate work
- To support and guide learning
- To describe student attainment, informing decisions on progression and awards
- To demonstrate that appropriate standards are being maintained
- To evaluate the effectiveness of teaching

Why do we need to try new approaches?

Take a few moments to think about a typical course you lecture on. Jot down the various types of assessment you use during the course, and when you use them. For example:

1	Essay for continuous assessment	Term One
2	Essay for continuous assessment	Term Two
3	Practical exams	Continuous
4	Case study analysis	End of Year
5	Examination	End of Year
6		
7		
8		
9		
10		
11		
12		

How many more methods of assessment do you use? Don't be surprised if you don't add too many more to this list; you're not alone - higher education is too often dominated by the same few methods of assessment, most likely unseen time-constrained written examinations, and

lecturer/tutor-marked essays/reports. The problem is, however, using the same assessment process can disadvantage the same candidates time after time, because individual students have individual strengths and weaknesses. And student success in higher education can often become dependent on mastering those same old assessment formats. So, while exams and essays should and will continue to play their part in third level education, by using a variety of assessment methods you can assess a range of skills, get more reliable and balanced results, and hopefully produce more rounded and more employable graduates.

How to get the best use from this booklet

We suggest you use this guide along with the new DIT database on assessment, where you can read about or contribute brief case studies on new or existing methods or types of assessment that are tried and tested within DIT.

http://intranet.dit.ie/ltc/html/assess_currentprojs.htm

Dip into the booklet where and when you want. It is only an introduction but should give you some ideas or guide you to other resources. A valuable resource in this concern is DIT's Learning and Teaching Centre whose staff will consult with you and/or provide tailored workshops on whatever aspects of assessment you would like to find out more about.

http://intranet.dit.ie/ltc/html/about_workshop.htm

Section one: Getting started with assessment – what I should be thinking about and what should I know

This section introduces you to the fundamentals of successful assessment, helps you understand the difference between formative, summative and continuous assessment, and provides an introduction to the importance of feedback.

Section two: Planning and designing assessments – the basics, when to do it and how?

Here you'll see how assessment is linked to learning, and how important it is to constructively align your assessment to learning outcomes. We'll also consider the fundamentals of combining formative and summative assessment.

Section three: Making assessment more effective, efficient and interesting for you and your students

In this section you'll be introduced to a variety of different assessment methods, and we'll consider ways and means of making the assessment process more efficient and valuable for both the lecturer and the student.

Section four: Reflecting upon assessment

Here we look at issues of appropriateness of level, and of transparency. And you'll see how analysing assessment results can improve your teaching.

Section One: Getting started with assessment – what should I be thinking about and what should I know?

Assessment determines student approaches to learning.

One of the most common questions a lecturer hears from students is, “Will this be in the exams?” It is well recognised by educationalists that students are preoccupied with what constitutes the assessment in their chosen field, so like it or not, we need to accept that assessment usually drives student learning.

If students allow assessment define and prioritise what is important to learn, and ultimately how they spend their time learning it, then it is up to us as lecturers and assessors have to deal with this fact, and react accordingly. The methods and timing of our assessment sends messages to students. So when creating assessment plans, we need to think about these messages: We need to take care to prioritise the most important areas we want our students to learn from, create clear and upfront learning outcomes (see section two), and assess appropriately. We should also be aware of the differences between ‘deep’ and ‘surface’ learning, and use assessment to produce students who are deep rather than surface learners.

What kind of skills do I want students to develop?

When devising your assessment plan, think about different skills you would like your students to achieve based on your learning outcomes. Assessment should help equip students with a wide range of transferable skills and competencies. For example, a well-devised essay question is a good way to measure and assess your students’ analytic skills. However, while it might be a wholly appropriate assessment method when testing for knowledge and evaluation of, say, “the theme of Irish tradition in contemporary reviews of 1930’s art exhibitions”, it would be less appropriate to set an essay to assess whether a student had mastered a particular brushstroke.

Both deep and surface learning have a place in assessment. Assessment can test memorising, acquiring facts or skills, or methods that can be reproduced when and if required. However, it can also test making sense of, or abstracting meaning, or of interpreting or re-interpreting knowledge. The trick is to know what level of learning you are trying to achieve with your students and to assess accordingly. The level and type of skills and competencies imparted through assessment will depend on the level and type of course; the National Qualifications Authority of Ireland’s (NQAI) guidelines will help direct you to this.

<http://www.nfq.ie/>

What is the difference between Summative, Formative and Continuous assessment?

Summative assessment is assessment that is used to signify competence or that contributes to a student’s grade in a course, module, level or degree. Formative assessment, on the other hand, is assessment strictly used to provide feedback to the student on their learning. It provides the student with advice on how to maintain and improve their progress, but should not form part of their summative grade or mark.

Continuous assessment usually involves a series of tasks that are individually assessed, though sometimes it is appropriate to add a final assessment to continuous assessment.

It is best used when there are several distinct module learning outcomes which are achieved at definable stages during the module.

Whereas unseen examinations can help eliminate plagiarism, they only give the student one chance to show their capabilities, tend to measure particular types of knowledge, and can

favour those who can withstand stress and have good recall skills. Continuous assessment can provide a more reliable estimate of a student's capabilities and indirectly measure a student's capacity to manage time and handle stress (Brown, 2001). With continuous assessment, the total assessment workload on both staff and students may seem greater than that experienced with one-off final assessment, but it is more evenly distributed. Timely feedback is an important part of continuous assessment as it informs the learner on how well students are progressing and how they can improve. If students are given feedback on each piece of continuously assessed work, then they can direct their future learning in relation to this feedback.

The most important principle of summative assessment is that it should determine whether, and to what extent, the student has attained the learning outcomes specified for that module, and should lead to a grade or mark that will affect the student's progression, result, or both. What students learn, how much effort they put into it, and the nature of their learning is often determined by the extent and nature of the summative assessment they expect to receive. However, formative assessment is essential to learning, and ideally curricula should be designed to maximize the amount of formative feedback students can receive on their work.

Why is feedback so important?

Good quality, comprehensive, timely feedback is a very important factor in driving student learning. Assessment should provide feedback to students on their progress towards the achievement of learning outcomes. Feedback will enable students to realise where they have done well and indicate what they could improve on, as well as justifying the grade/mark of summative assessments.

It is important that feedback is timely. If you provide feedback too soon, it may disrupt the student's reflective process. However, it is far more common that feedback is provided too late when it is no longer salient to the student. Feedback should not be held off until the end of a year/semester, as the student is unlikely to benefit from it once the task is complete and they have moved on to a new one. We'll explain more about the importance of formative feedback later in this guide.

The benefits of successful feedback set in the context of learning outcomes are many. For example, successful feedback will:

- build confidence in the students,
- motivate students to improve their learning;
- provide students with performance improvement information,
- correct errors,
- identify strengths and weaknesses

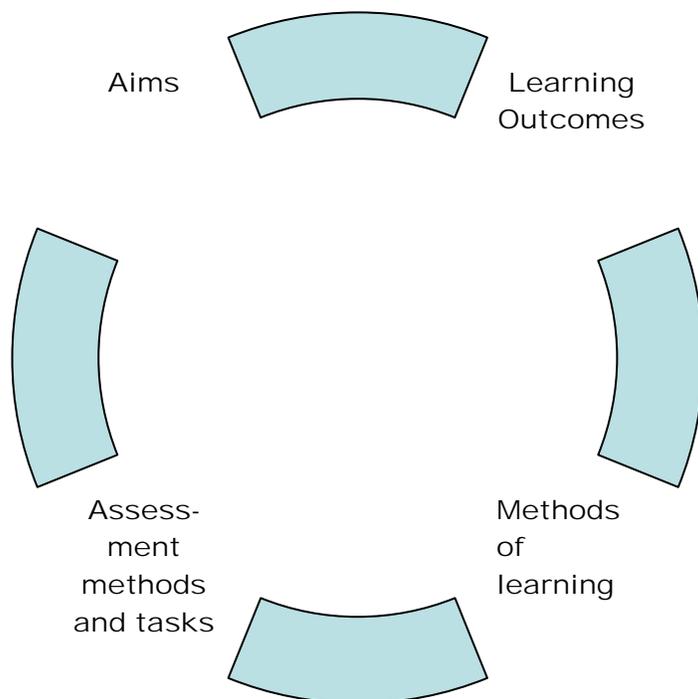
Section 2: Planning and designing assessments: The basics – when to do it and how.

Often assessment is viewed as being somehow separate from the learning process, something that is done to students at the end of a module/course/semester to test what they know and what they don't know. However, assessment is an integral part of the learning process and, ultimately, should aim to improve the quality of student learning.

When designing, running and assessing a module or course, it is vital to know and be able to clearly communicate to the student what that course or module is intended to achieve, what the student should be able to do upon completing it, and what they will have to demonstrate in order to pass it

What has alignment to do with assessment?

Constructive Alignment is a theory of learning that begins with the premise that the learner *constructs* his or her own learning through relevant learning activities (Biggs, 1999). It is the teacher's responsibility to fashion a learning environment where the learning activities are wholly appropriate to achieving the desired learning outcomes. The key to achieving this goal is that all components in the teaching system (ie. teaching process from planning through assessing) are *aligned* to each other to facilitate the achievement of the intended learning outcomes. Thus, the curriculum and its intended aims and learning outcomes, the teaching methods and resources used to support learning, and the assessment tasks and criteria for evaluating it, are all aligned.



Alignment is central to effective assessment. Designing a course/module using a learning outcomes approach recognises the need to plan assessment as part of a whole curriculum

experience. That way assessment is congruent with the aims and learning outcomes and with the teaching/learning methods adopted.

Matching assessment with learning outcomes

Learning outcomes are statements that predict what learners will gain as a result of learning, so there should be a clear relationship between learning outcomes and assessment. It is possible to assess more than one learning outcome at once as long as all assessment tasks are appropriate to, and in harmony with, the learning outcomes they are meant to assess. So remember:

- Ensure the assessment method tests the stated learning outcomes
- Ensure the assessment method does not test any significant learning outcomes that are not explicitly stated as such. Assessment should never go beyond the learning outcomes. For example, if the learning outcome states that the student should be able to “select an appropriate method”, then the assessment task should not go beyond this limit by asking to “analyse the method”.
- Ensure all major course or module outcomes are assessed, as if students are not going to be assessed on something it’s unlikely that they will put time and effort into it. However, if you assess every minor learning outcome of every module, then you run the risk of over-assessing students.

A carefully thought-out learning outcome will give a solid indication to the lecturer of what kinds of assessment are appropriate, and of the skills and knowledge the learner will have to demonstrate to pass. Finally, the clearer the learner outcome, the easier it will be to devise an appropriate assessment.

The Learning and Teaching Centre at DIT has produced a document on writing effective learning outcomes. This document is available through contacting:

<http://www.dit.ie/DIT/learningteaching/contacts/index.html>

Can you combine formative and summative assessment?

You may find that you often provide feedback on a module essay to a student as well as providing a grade for it that will count towards the student’s summative profile of marks. Arguably, all summative assessment should give students feedback that has formative value. After all, if a student has to write a series of essays, each of which contributes to a final grade, then good improvement-centred feedback on each essays should help them enormously in subsequent ones.

However, setting a formative assessment task for summative purposes is not generally advised by experts in the field, who believe that these two assessment purposes are not mutually exclusive. This is because once a high stake assessment (summative) is introduced, students are slower to disclose what they do not know, and the purpose of formative assessment is to find out what students have difficulty with in order to help them. With purely formative assessment the stakes are not so high for students, so they can be more open about their knowledge gaps, or areas of difficulty.

On the other hand, it is possible to use both summative and formative assessment for the same module. For example, you may set an assignment that has a series of questions on a course

that will be assessed summatively. But you may also ask the student to provide a summary of the course as a formative assessment of learning, where the student is clear that this summary is not being graded or will not influence their final assessment in any manner. The difference here is that the student is fully aware which part of their learning is being assessed summatively and which part is being assessed formatively.

Will students take formative assessment seriously?

As we've said earlier in this guide, students are generally most motivated by what is going to contribute to their final mark. However, even though formative assessment will not contribute directly to a summative mark, it does play a vital role in helping students improve their grades. And if students apply their energies to activities that earn them grades, then it is important to impress on them how they can improve their own grades through embracing formative assessment.

Formative assessment is essential to learning in its aim is to give appropriate and timely feedback to students on their learning, and to help them to improve their future work. This should be enough to motivate your students to take formative assessment seriously, but students will also be motivated if they clearly see the point of their work; how it relates to the course, the module, and their career goals; if it is inherently rewarding or interesting; or if they can see their skills and expertise advancing. Good quality formative assessment will exude all the qualities, and more.

Section 3: Making assessment more effective, efficient and interesting for you and your students

All too often assessment is an end-product, a non-avoidable chore that is used to evaluate, measure and box students. But there is more to the process of assessment than this. This section will draw attention to the benefits, for both and your students, of adopting more innovative forms of student assessment.

Provide a variety of different assessments

When referring to methods of assessment, we mean the approach used to assess learning. While there is some varied and innovative practice of assessment within higher level education, it must be said that many programmes and modules in higher education select assessment methods from a fairly narrow range. Remember, do investigate DIT's online assessment database to see what methods your colleagues are using and how they are working:

http://intranet.dit.ie/ltc/html/assess_currentprojs.htm

Here is a summary of assessment methods described in Brown's, "Assessment: A Guide for Lecturers" (2001), a useful starting point to consider the variety of assessment possible:

Cases and open problems	An intensive analysis of a specific example.
Computer-based assessment	The use of computers to support assessments.
Essays	Written work in which students try out ideas and arguments supported by evidence.
Learning logs/ diaries	Wide variety of formats ranging from an unstructured account of each day to a structured form based on tasks.
Mini-practicals	A series off short practical examinations undertaken under timed conditions. Assessment of practical skills in an authentic setting.
Modified Essay Questions (MEQs)	A sequence of questions based on a case study. After students have answered one question, further information and a question are given.
Multiple Choice Questions (MCQs)	Select the correct answers.
Orals	Verbal interaction between assessor and assessed .
Objective Structured Clinical Examinations (OSCEs)	Candidates measured under examination conditions on their reaction to a series of short, practical, real-life situations.
Portfolios	Systematic collections of educational or work products that are typically collected over time. Wide variety of types from a collection of assignments to reflections upon critical incidents.
Poster sessions	Display of results from an investigative project
Presentations	Oral reports on projects or other investigative activities.
Problems	Measures application, analysis and problem solving strategies.
Group Projects and Dissertations	Assessment by a tutor/lecturer of the products of student group work.

Questionnaires and report forms	One or more questions presented and answered together.
Reflective Practice Assignments	Measures capacity to analyse and evaluate experience in the light of theories and research evidence.
Reports on Practicals	Methodically written account of a practical investigation
Self-assessed questions based on open learning(distance learning materials and computer-based approaches)	Strictly speaking, a method of learning not of assessment. A process by which an assessment instrument is self-administered for the specific purpose of providing performance feedback, diagnosis and prescription recommendations rather than a pass/fail decision.
Short answer questions	Brief answers that can measure analysis, application of knowledge, problem-solving and evaluative skills..
Simulated interviews	Useful for assessing oral communication skills.
Single Essay Examination	Usually three hours on prepared topic.
Work based Assessment	Variety of methods possible including learning logs, portfolios, projects, structured reports from supervisors or mentors.

To see a full version of this table, please click on the following weblink:
http://www.ltsn.ac.uk/application.asp?app=resources.asp&process=full_record§ion=generic&id=3

How much time should be spent on assessment?

As lecturers and course designers we should make reasoned and conscious decisions on how much time we should spend setting and correcting assessment, and giving feedback. Obviously, with economies of time, assessment needs to be efficient as well as productive, and should achieve its various purposes (returning reliable marks, giving feedback, generating appropriate student activity, and motivating learning) in a way that makes best use of staff and student time, and other resources. Assessment can consume a large amount of staff and student resources, so it needs to yield a high return in order to be efficient.

Co-ordinate with other lecturers on your programme

All too often, assessment is something that lecturers do in a vacuum. It is thus important that we realise that our students are attending other lectures and possibly have other assessments to carry out at the same time. To avoid undue burden placed on students by having to complete numerous assessments at certain times during the year, consult with other lecturers on your programme as to the nature and scheduling details of their assessments, and co-ordinate your assessments accordingly.

Involve others in the assessment process

Traditionally, the role of the assessor usually falls to the lecturer/tutor. However, it is often worthwhile to consider involving others in the assessment process. For example, Industry experts can be a valuable resource when creating and marking assessments. Or consider involving students in their own assessment. Effective and appropriate use of involving others in the assessment practice can enhance the learning experience, enrich the teaching experience, and reduce the marking burden placed on staff.

It worth remembering that giving informed, meaningful feedback can be an effective use of class teaching time. One way of increasing the efficiency of assessment is to allow students play a role in assessing themselves or each other. This is called self assessment or peer assessment, two sources of assessment that can be used with a variety of methods of assessment.

Peer Assessment

Peer assessment may be defined as the assessment of the work of others of equal status and power. In the context of student learning, peer assessment is used to estimate worth of other students' work, and to give and receive feedback. With appropriate training and close moderation, it is possible that students can play a role in summative assessment, but generally peer assessment works best in formative assessment where students give each other feedback on each other's work.

This approach to assessment requires careful planning, agreement of criteria and use of common tools for analysing marks. Further, you may need to encourage your students to take this practice seriously, and developing the necessary skills does need time and support. But the benefits of peer assessment are many:

- Peer assessment is becoming widely used as a means of giving feedback to students, arguably more feedback than a lecturer can normally provide.
- Peer assessment should benefit both those giving the feedback as well as those receiving it. Giving constructive feedback is a valuable skill. To acquire this skill the student will learn how to study marking/grading schemes or assessment criteria, construct sentences that impart effective comments, and be able to defend their feedback.
- Critical reflection, a key skill involved in giving feedback, is an academically valuable one. Students also learn diplomacy, how to receive and act on constructive criticism, as well as the more obvious skills of making explicit and criterion-referencing judgements. In studies carried out, students have reported real benefits in retention of knowledge, enhanced creativity, greater resourcefulness and increased motivation. There are also reported gains in specific deeper knowledge in the subject area itself.
- Peer assessment can deepen the student learning experience as students can learn a great deal about their own work from assessing other students' attempts at a similar task. They will also learn about the assessment culture of the Institute, become autonomous learners, and develop skills of life long learning.

Self assessment

With self assessment, students check their work, revisit assignment drafts and texts, and research and reflect upon their past practice. Care is needed to teach the student to make judgements on what was actually achieved rather than what was 'meant'. But once mastered, in addition to judging one's own work, the concept of self-assessment develops skills in self awareness and critical reflection. Many of the benefits of peer assessment apply to self-assessment.

Self assessment has been defined as "the involvement of students in identifying standards and/or criteria to apply to their work and making judgements about the extent to which they have met these criteria and standards" (Boud, 1991). According to Boud there are two parts to this process: the development of criteria, and the application to a particular task. Assessment decisions can be made by students on their own essays, reports, presentations, projects,

dissertations and so on, but it is believed to be more valuable when students assess work that is personal in nature, like a learner log, portfolio etc (Race, 2001)

Group assessment

Group assessment occurs when individuals work collaboratively to produce a piece of work. The advantage of group work for the assessor is often that the burden of marking many individual pieces of work is significantly reduced, but there is also the educational justification that collaboration is an important generic life skill that third level education should be developing in its students.

The biggest challenge when assessing group work is that it is rare that all group members will contribute equally; therefore, how can you assess fairly? There are various strategies to help deal with this (Rust, 2001):

1. Award a group mark, but allow for a “yellow card” if all the group members feel a member of the group is not pulling their weight. If the offending member changes his behaviour before a certain date, the card will be rescinded. If not, a 5% penalty in their mark will be imposed. In a worst case scenario, a red card can be awarded where a student has to produce an individual piece of work instead.
2. Assign individual responsibilities and assess each member on the degree to which they have met their individual contracts.
3. Allow the group to divide the group mark depending on individual contributions. Thus, if the lecturer decides that the group project has received a total mark of 120, the group members decide how to allocate the figure. In practice, this is often challenging to execute, as group members have to reach agreement and be very clear in justifying their marks against the assessment criteria.
4. Peer-assess contributions. Instead of giving the group all the marks to allocate, only a certain percentage is allotted to this process. Thus the lecturer may allocate 80% of the project mark to the group her/himself, and the group may divide the remaining 20% among its individual members as they see fit.
5. Conduct a viva. A common group mark is awarded, and the remaining marks allotted by the lecturer after a group or individual viva, which should be able to throw insight on individual contributions.
6. Set a project exam. Again, a common mark is awarded to the group, but the module exam will have a compulsory question related to the project which individual students must answer. (Rust, 2001)

Making feedback more effective

As an educator, there are many ways to improve the quality of your feedback to make it more effective for the learner. Simple things like not always using ticks to indicate a good point are recommended as students will be more motivated by short words or phrases such as “good work” or “true”. Feedback should be specific – don’t just say ‘good’, explain why, in what respects. It should also be constructive, encouraging, honest, and supportive; and where possible it should be frequent and substantial. Successful feedback should clearly indicate to the student:

1. What aspects of their assessed work are successful, and why
2. What aspects of their assessed work are less successful, and why
3. How the student could improve this particular piece of work
4. How the student could do more successful work in future.

Feedback is also timely, a fact we lecturers often overlook. It should not be provided too soon, as it could prevent students reflecting on their work; neither should it be provided too late when it is no longer salient to the student. How many times have students thought they were progressing just fine at interim assessment stages only to find out at the final assessment stage that their work was not up to the level the feedback they received led them to believe? Clear and appropriate assessment criteria, that are available to students before their assessment and can be consulted afterwards, go a long way in helping to address this problem.

Feedback can be time-consuming, but there are ways to make it more efficient.

- Consider the nature of the feedback students will need to master the concepts and skills for each assignment. How detailed does it have to be? Should it be individual or can it be group feedback? Can it be oral or does it have to be written?
- Use the track and edit tool in Word to speed up feedback and comments on student essays and reports.
- Consider using or creating generic feedback forms.
- Consider audio-taping feedback for learners.
- Provide more detailed solution sets to reveal the appropriate underlying reasoning, to identify potentially misunderstood concepts or principles, and to elaborate how common student errors followed from these misunderstandings.

Using Computer-Assisted Assessment (CAA)

Computer-Assisted Assessment is a fast and efficient way to provide immediate feedback to the learner, and to save time on tutor marking. Computer Assisted Assessment is typically formative, in that it helps students to discover whether they have learned what the educator intended.

Computer Assisted assessment is a broad term for the use of computers in the assessment of student learning.¹ Various other forms exist, such as Computer-Aided Assessment, Computerised Assessment, Computer Based Assessment (CBA) and Computer-Based Testing. Online Computer Based Assessment has existed for a long time in the form of Multiple Choice Questions (MCQ's).² Computer Based Assessment is commonly directly made via a computer, whereas Computer Assisted Assessment is used to manage or support the assessment process.

There are many resources available to help you learn more about CAA. DIT's Learning Technology Team is a good starting point for guidance in this area.

<http://www.dit.ie/DIT/ltt/index.html>

¹ For a bibliography of CAA see: <http://iinwww.ira.uka.de/bibliography/Misc/cba.html>

² For more information on designing and managing MCQs see: <http://web.uct.ac.za/projects/cbe/mcqman/mcqcont.html>

There are also some interesting web resources available. For example, Ferl's e-assessment website provides users with guidance, ideas, tips, case studies, articles and quiz links: <http://ferl.becta.org.uk/display.cfm?page=189>

An excellent starting point is the CAA centre, designed to provide information and guidance on the use of CAA in higher education. <http://www.caacentre.ac.uk/>

There is a wealth of resources to explore here including workshop PowerPoint's, and presentations and articles, but see in particular The 'Blueprint for Computer-assisted Assessment', a 'comprehensive document addressing the pedagogical, operational, technological and strategic issues faced by those adopting CAA.' The Blueprint offers a range of research based good practice, models and guidelines for the strategic implementation of CAA within departments, faculties and institutions.

Use Assessment Grids

Scoring grids are an example of timely, efficient assessment practice. They are used by markers to assess fairly and efficiently, can be used to develop and enhance student feedback, but should also be given to students to guide and inform their assessment preparation.

Margaret Price and Chris Rust, of Oxford Brookes University have developed an excellent assessment grid for staff which provides a comprehensive list of criteria that can be tailored to suit your modules. Simply select the criteria/descriptors you wish to use for an assessment relevant for your module, and create your grid. To access this grid, click on the following web link:

<http://www.ltsn.ac.uk/application.asp?app=resources.asp§ion=generic&process=search&pattern=grids&time=2004811850>

Providing learners with an **assessment criteria**, or even helping them devise their own, is another effective assessment practice. (See Section 4 for more information on this)

Section 4: Reflecting upon assessment

Now that we've covered the fundamentals of assessment, you may find it useful to reflect some more on how you can apply these suggestions to your particular programmes. Remember that the Learning and Teaching Centre staff will be delighted to help you in this area.

Is assessment designed at appropriate level for your students?

The level and type of skills and competencies imparted through assessment will depend on the level and type of course, and the NQAI guidelines will help direct you to this.

<http://www.nfq.ie/>

However, it is likely that assessment will generate some of the following achievable skills:

- Analytic skills
- Communication skills
- Contextualization
- Critical awareness
- Independent judgement
- Intellectual powers
- Interrelation of knowledge and understanding
- Intuitive powers
- Problem solving skills
- Vocational demonstration of skills

Bloom's Taxonomy of Educational Objectives (1956) is a well-known, detailed structured framework that helps identify and write appropriate learning outcomes. This taxonomy identifies three domains of educational outcomes: cognitive, skills and affective. Bloom and a team of educational psychologists formulated a classification system for the cognitive and affective domains, although they did not complete the system for the skills domain. (Other researchers have since developed such a system).

For an effective run-down of Bloom's taxonomy in all domains, cognitive, affective, and psychomotor, see this PDF from the Teaching and Educational Development Institute at the University of Queensland:

<http://www.tedi.uq.edu.au/downloads/Bloom.pdf>

Bloom's taxonomy has been under debate ever since it was published in 1956, so it is not intended as the only way to write learning outcomes; however, it should act as a source of ideas for you, especially in the collection of verbs that can help in writing concrete and effective learning outcomes

Making assessment more transparent - Constructing assessment criteria

When designing and carrying out assessment it is important that both students and staff are clear on what students are expected to do, the circumstances in which they are asked to do it and how the marks are going to be awarded. In fact, students don't always know the assessment criteria or how assessors interpret them – it is often considered the property of examiners, but there is no reason for this secrecy. Be upfront with your criteria – it will help your students enormously to know what they are aiming for, or to see where they fell short, and consequently lead to much deeper learning.

A criterion for assessment explains the relationship between how well a student answers the questions set or performs the task set, and the mark and grade which they are given. Whereas learning outcomes say what a student is expected to do, assessment criteria say how well they should be able to do it to obtain a particular grade.

One way is construct model answers or marking schemes which show how marks and grades will be awarded, though often the use of model answers and marking schemes is more appropriate in scientific or technical disciplines. Phil Race has some good examples of marking schemes in his article, 'Quality of Assessment'. See:

<http://www.city.londonmet.ac.uk/deliberations/seda-pubs/Race.html>

An assessment criteria, on the other hand describes as clearly as possible, the characteristics of what is acceptable, good, excellent etc. Of course, it is impossible to be always precise in describing what makes a piece of work 'very good', or 'excellent', but we should go as far as possible to try to write them, either individually or with other lecturers for a programme, as they make life a lot easier for both the student and the assessors.

For an example of an assessment criteria, see appendix 3. Or see the comprehensive list of assessment criteria described in section 3, and accessed at:

<http://www.ltsn.ac.uk/application.asp?app=resources.asp§ion=generic&process=search&pattern=grids&time=2004811850>

What can you do once the assessment is over?

Of course, assessment should also help to improve teaching. When assessment and exam boards are over, there is a temptation for lecturers, a bit like there is for students, to breathe a sigh of relief and not to think about it until the following semester. However, even a fairly perfunctory assessment analysis will tell the lecturer if the students have difficulty in mastering one particular area of the course. The lecturer can accordingly devise extra learning experiences to address this problem, or fine tune their course where necessary.

When analysing assessment tasks, you might ask the following:

- What types of questions did students do particularly well on? In what respects?
- What types of questions did they struggle with? In what respects?
- What kind of tasks was their a variety of responses to?
- Which assessment questions did students avoid?
- Which assessment questions were the most popular?
- What can this tell us about the teaching, learning, and assessment?

It is thus advisable to give a little time to analysing the assessment experiences in order to contribute to continuous improvement of teaching and learning, and to refine practices and policies of assessment.

Conclusion

While it was beyond the scope of this document to fully elucidate the practices of effective assessment, this brief guide has acted as introductory toolkit that will hopefully facilitate

reflection, spark some ideas and guide you to relevant assessment guides and resources to enhance your current assessment practices. 'Enhancing Student Learning through Assessment: A Toolkit Approach', has drawn attention to the benefits of reviewing your existing assessment practices, and of adopting fresh approaches to assessment. It has shown approaches to and methods of assessment that are not only educationally successful, but efficient and workable, thus benefiting both student and lecturer.³

³ I would like to thank those DIT colleagues that read this document as a work in progress and supplied much welcomed constructive feedback, specifically Dr. Jen Harvey, Dr. Thomas Duff, Lloyd Scott, and Robbie Burns.

Appendix One: Assessment Checklist

• Are the aims and learner outcomes of the module clear?	
• Would attainment of these learner outcomes mean that the aims of the module have been achieved?	
• Are the assessment criteria for this module clear and explicit?	
• Are all the appropriate learning outcomes assessed?	
• Does the assessment scheme enable students to obtain feedback on major elements of the module?	
• Is each assessment method or task appropriate?	
• Is the marking scheme likely to be reliable?	
• Is the assessment task efficient?	
• Have you performed an analysis of the assessment results?	

Appendix 2: Planning assessment for course documents – what to consider

Is the assessment aligned with the aims?	
Is the assessment aligned with the learning outcomes?	
Is the assessment aligned with the teaching methods?	
Are the methods of assessment chosen appropriate?	
Are the methods of assessment varied?	
Is formative assessment used?	
Are you clear on what exactly is being assessed?	
Do the assessments fall within the program assessment requirements?	
Are progression issues dealt with?	
Are award classifications clear? How will assessments be marked (pass/fail/grade/feedback etc)?	
Have you considered the possibility of group or peer assessment?	
Do the assessments meet the individual needs of students with disabilities?	
Have you written a clear assessment criterion, or appropriate scoring grids?	
Have you considered evaluation strategies to on reflect on assessment?	

Appendix 3: Sample assessment criteria

The following rubric will be used to assess your literature review:

Criteria and qualities	Poor	Good	Excellent	Point Value
Introducing the idea: Problem statement	Neither implicit nor explicit reference is made to the topic that is to be examined.	Readers are aware of the overall problem, challenge, or topic that is to be examined.	The topic is introduced, and groundwork is laid as to the direction of the report.	Up to 10 points
Body: Flow of the report	The report appears to have no direction, with subtopics appearing disjointed.	There is a basic flow from one section to the next, but not all sections or paragraphs follow in a natural or logical order.	The report goes from general ideas to specific conclusions. Transitions tie sections together, as well as adjacent paragraphs.	Up to 20 points
Coverage of content	Major sections of pertinent content have been omitted or greatly run-on. The topic is of little significance to the educational/training field.	All major sections of the pertinent content are included, but not covered in as much depth, or as explicit, as expected. Significance to educational/training field is evident.	The appropriate content in consideration is covered in depth without being redundant. Sources are cited when specific statements are made. Significance is unquestionable. The report is between 1,000 and 2,000 words.	Up to 20 points
Clarity of writing and writing technique	It is hard to know what the writer is trying to express. Writing is convoluted. Misspelled words, incorrect grammar, and improper punctuation are evident.	Writing is generally clear, but unnecessary words are occasionally used. Meaning is sometimes hidden. Paragraph or sentence structure is too repetitive.	Writing is crisp, clear, and succinct. The writer incorporates the active voice when appropriate. The use of pronouns, modifiers, parallel construction, and non-sexist language are appropriate.	Up to 20 points
Conclusion: A synthesis of ideas and hypothesis or research question	There is no indication the author tried to synthesize the information or make a conclusion based on the literature under review. No hypothesis or research question is provided.	The author provides concluding remarks that show an analysis and synthesis of ideas occurred. Some of the conclusions, however, were not supported in the body of the report. The hypothesis or research question is stated.	The author was able to make succinct and precise conclusions based on the review. Insights into the problem are appropriate. Conclusions and the hypothesis or research question are strongly supported in the report.	Up to 10 points
Citations/References: Proper APA format	Citations for statements included in the report were not present, or references which were included were not found in the text.	Citations within the body of the report and a corresponding reference list were presented. Some formatting problems exist, or components were missing.	All needed citations were included in the report. References matched the citations, and all were encoded in APA format.	Up to 10 points

From: <http://edweb.sdsu.edu/Courses/Ed690DR/grading/literaturereviewrubrique.html>

Appendix 4: A compulsory examination for all assessors

A compulsory examination for all assessors

Answer all questions. This examination is un-timed. Consultation with others (including students) and reference to texts and other sources is RECOMMENDED.

1. What intended learning outcomes do you assess? How well does your approach to assessment align with these outcomes?
2. Justify and criticize your choice of assessment methods and tasks used to assess the outcomes in question 1.
3. Refer to relevant research on assessment in your answer.
4. Describe, justify and criticize your use of criteria, methods of grading and/or marking.
5. Outline and justify your approach to providing feedback to students. Refer to relevant research in your answer.
6. With reference to research findings, describe, justify and criticise your marking techniques to overcome the following:
 - a) variations in standards on a single occasion;
 - b) variations in standards on different occasions;
 - c) variations between assessors;
 - d) differences in students' handwriting.
7. How do you ensure that your standards are similar to standards adopted in comparable assessments and examinations?
8. What values underlie your approach to assessment in higher education? How are they manifest in your practice?

Evaluate your answers to questions 1–7.

Reproduced from:

George Brown, (2001), "Assessment: A Guide for Lecturers", LTSN Generic Centre, Assessment Series No.3.

Appendix 5: Glossary of assessment terms

Assessment: Assessment can be defined as the systematic and ongoing method of gathering, analyzing and using information from measured outcomes to improve student learning in terms of knowledge acquired, understanding developed, and skills and competencies gained.

Benchmark: A description or example of candidate or institutional performance that serves as a standard of comparison for evaluation or judging quality.

Course Embedded Assessment: Reviewing materials generated in the classroom. In addition to providing a basis for grading students, such materials allow lecturers to evaluate approaches to instruction and course design.

Formative evaluation: Improvement-oriented assessment which is not marked for summative purposes.

Indirect Measures of Learning: Students are asked to reflect on their learning rather than to demonstrate it. Examples include: exit surveys, student interviews (e.g. graduating seniors), and alumni surveys.

Institutional Effectiveness: The measure of what an institution actually achieves.

Learning Outcomes Observable behaviors or actions on the part of students that demonstrate that the intended learning objective has occurred. Used to express intended results in precise terms.

Measurements: Design of strategies, techniques and instruments for collecting feedback data that evidence the extent to which students demonstrate the desired behaviors.

Methods of Assessment: Techniques or instruments used in assessment.

Modifications: Recommended actions or changes for improving student learning, service delivery, etc. that respond to the respective measurement evaluation.

Performance Assessment: The process of using student activities or products, as opposed to tests or surveys, to evaluate students' knowledge, skills, and development. Methods include: essays, oral presentations, exhibitions, performances, and demonstrations. Examples include: reflective journals (daily/weekly); capstone experiences; demonstrations of student work (e.g. acting in a theatrical production, playing an instrument, observing a student teaching a lesson); products of student work (e.g. Art students produce paintings/drawings, Journalism students write newspaper articles, Geography students create maps, Computer Science students generate computer programs, etc.).

Portfolio: An accumulation of evidence about individual proficiencies, especially in relation to learning standards. Examples include but are not limited to: Samples of student work including projects, journals, exams, papers, presentations, videos of speeches and performances.

Quantitative Methods of Assessment: Methods that rely on numerical scores or ratings. Examples: Surveys, Inventories, Institutional/departmental data, departmental/course-level exams (locally constructed, standardized, etc.).

Qualitative Methods of Assessment: Methods that rely on descriptions rather than numbers. Examples: Ethnographic field studies, logs, journals, participant observation, and open-ended questions on interviews and surveys.

Reliability: Reliable measures are measures that produce consistent responses over time.

Rubrics: (Scoring Guidelines) Written and shared for judging performance that indicate the qualities by which levels of performance can be differentiated, and that anchor judgments about the degree of achievement.

Student Outcomes Assessment: The act of assembling, analyzing and using both

quantitative and qualitative evidence of teaching and learning outcomes, in order to examine their congruence with stated purposes and educational objectives and to provide meaningful feedback that will stimulate self-renewal.

Summative evaluation: Accountability-oriented assessment. The use of data assembled at the end of a particular sequence of activities, to provide a macro view of teaching, learning, and institutional effectiveness.

Teaching-Improvement Loop: Teaching, learning, outcomes assessment, and improvement may be defined as elements of a feedback loop in which teaching influences learning, and the assessment of learning outcomes is used to improve teaching and learning.

Validity: As applied to a test refers to a judgment concerning how well a test does in fact measure what it purports to measure.

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