Linking Learning Outcomes to Teaching and Learning Activities and to Assessment

Presentation 3
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Erasmus+ LOAF Project,
Vilnius, Lithuania

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1. The role of assessment in Teaching and Learning.
2. Overview of areas of Assessment
3. Linking of learning outcomes to teaching and learning activities and to assessment.
“The adoption of a learning outcomes approach represents more than simply expressing learning in terms of outcomes. It entails much more due to their significant implications for all aspects of curriculum design, delivery, expression, assessment and standards”.

Adam S, 2004
Assessment of Learning Outcomes

- Having designed modules and programmes in terms of learning outcomes, we must now find out if our students have achieved these intended learning outcomes.

- *How will I know if my students have achieved the desired learning outcomes? How will I measure the extent to which they have achieved these learning outcomes?*

- Therefore, we must consider how to match the method of assessment to the different kinds of learning outcomes e.g. a Learning Outcome such as “Demonstrate good presentation skills” could be assessed by the requirement that each student makes a presentation to their peers.

- When writing learning outcomes the verb is often a good clue to the assessment technique.
Misconceptions about Assessment

“A view of teaching as the transmission of authoritative knowledge has little space to accommodate the idea that different methods of assessment may be appropriate for the evaluation of different parts of the subject matter or that assessment techniques themselves should be the subject of serious study and reflection. In such a conception, lecturers see teaching, learning and assessment as tenuously related in a simple linear sequence”.

“Assessment is something that follows learning, so there is no need to consider its function as a means of helping students to learn through diagnosing their errors and misconceptions and reinforcing their correct understanding”.

“Assessment, like teaching, is something done to students ….Assessment classifies the students on the criterion of how well they have absorbed the data thus transmitted. What could be simpler?”

(Ramsden, 2005)
Formative Assessment

- Assessment FOR learning – gives feedback to students and teachers to help modify teaching and learning activities, i.e. helps inform teachers and students on progress being made.
- Assessment is integrated into the teaching and learning process.
- Clear and rich feedback helps improve performance of students (Black and Williams, 1998).
- Usually carried out during a programme, e.g. coursework which gives feedback to students.
- Can be used as part of continuous assessment, but some argue that it should not be part of grading process (Donnelly and Fitzmaurice, 2005).
Summative Assessment

- Assessment that summarises student learning at end of module or programme – Assessment OF Learning.
- Sums up achievement – no other use.
- Generates a grade or mark but feedback not given to the students.
- Usually involves assessment using the traditional examination.
- Only a sample of the Learning Outcomes are assessed – cannot assess all the Learning Outcomes.
Continuous Assessment

- A combination of summative and formative assessment.
- Usually involves repeated summative assessments.
- Marks recorded.
- Little or no feedback given.
Assessment

“Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand and can do with their knowledge as a result of their educational experiences” (Huba and Freed, 2000)


“A way of finding out what our students know and can do”
Assessment is an integral part of teaching and learning.

It includes
- Continuous feedback,
- Documentation of learning,
- Rubrics

It should be part of our class planning

It should be to the forefront when designing Learning Outcomes

Assessment is an essential component of a successful teaching and learning process
Evaluation

Evaluation: "the systematic process of determining the merit, value, and worth of someone (the evaluatee, such as a teacher, student, or employee) or something (the evaluand, such as a product, program, policy, procedure, or process)." (Evaluation Glossary (n.d.). Retrieved December 18, 2007, from Western Michigan University, The Evaluation Center Web site, emphasis added).

Assessment and evaluation not only differ in their purposes but also in their use of collected information. While it is possible to use the same tools for the two approaches, the use of the data collected differs. For example, an instructor can use the results of a midterm exam for both assessment and evaluation purposes. The results can be used to review with the students course material related to common mistakes on the exam (i.e. to improve student learning as in assessment) or to decide what letter grade to give each student (i.e. to judge student achievement in the course as in evaluation).

http://www.purdue.edu/cie/teaching/assessment-evaluation.html
Trends in assessment

Traditional
- Examinations
- Lecturer-led
- Product assessment
- Vague criteria
- Content
- Individual

Changing approaches
- Course work
- Student-led
- Explicit criteria
- Skills
- Group
Assessment principles: summary

- Student centred: inclusive, diversity
- Linked to learning outcomes
- “Performance of understanding”
- Process matches purpose
- Range of modes, techniques, formats
- Transparent, fair and equitable to all users
- Valid, authentic and reliable
SOME INDICATORS OF EFFECTIVE ASSESSMENT IN HIGHER EDUCATION
A checklist for quality in student assessment
(Source: Centre for the Study of Higher Education, Australia)

1. Assessment is treated by staff and students as an integral component of the entire teaching and learning process.

2. The multiple roles of assessment are recognised. The powerful motivating effect of assessment requirements on students is understood and assessment tasks are designed to foster valued study habits.

3. There is a faculty/departmental policy that guides assessment practices. Subject assessment is integrated into an overall plan for course assessment.
Assessing learning outcomes: points to consider

• Learning outcomes: “statements of what a student will know, understand and be able to do at the end of a learning experience”.
• Having described your courses in terms of learning outcomes, you now want to find out whether students have achieved them.
• Specify the types of student performance that will provide evidence of learning.
Article 78.
STATE FUNDED HIGHER EDUCATION FOR “GOOD STUDENTS”

1. Having finished a module (subject), student’s achieved learning outcomes are assessed by assigning them to a particular level of learning achievements.

2. There are three levels of module (subject) learning achievements: **excellent, typical and threshold.**
<table>
<thead>
<tr>
<th>EXCELLENT</th>
<th>TYPICAL</th>
<th>THRESHOLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knows the latest sources, theory and principles of study subject (field)</td>
<td>Knows the main theories and principles of his/her study subject (field)</td>
<td>Knows the main theories and principles of his/her study subject (field);</td>
</tr>
<tr>
<td>and is able to create and develop new ideas;</td>
<td>and is able to ground the basic achievements of the study field;</td>
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<tr>
<td>Is able to apply knowledge and solve complicated and atypical problems of</td>
<td>Is able to apply knowledge in solving standard problems of his/her study</td>
<td>Is able to apply knowledge in solving simple problems of his/her study</td>
</tr>
<tr>
<td>his/her study field and associated professional activity;</td>
<td>field or associated professional activity;</td>
<td>field;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is able to collect, assess, interpret data and make decisions independently;</td>
<td>Is able to collect, assess, interpret data of his/her study field necessary for decision making;</td>
<td>Is able to participate in collecting, assessing and interpreting data of his/her study field necessary for decision making;</td>
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<td></td>
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</tr>
<tr>
<td>Is able to convey information, ideas, problems, decisions logically</td>
<td>Is able to convey common information, ideas, problems and decisions of</td>
<td>Is able to convey basic information, ideas, problems;</td>
</tr>
<tr>
<td>interacting with specialists of his/her own and other study fields;</td>
<td>his/her study field;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has learning abilities necessary for further studies and independent</td>
<td>Has learning abilities necessary for further studies and independent</td>
<td>Has independent learning abilities.</td>
</tr>
<tr>
<td>learning.</td>
<td>learning.</td>
<td></td>
</tr>
</tbody>
</table>
Assessment choices

- How best to measure the wide range of learning outcomes? Types of test items to include?
- Balance between formative and summative purposes?
- Continuous and/or terminal?
Modes of Assessment

- **Written**: tests, examinations, assignments
- **Practical**: skills testing; lab/workshop practice
- **Oral**: interviews, discussions, debates, various formats
- **Aural**: listening tests
- **Project work**: individual/group; research/design
- **Field work**: data collection and reporting
- **Portfolio**: combination of techniques

*Multiple modes of Assessment gives us a better chance of really finding out what our students understand*
Multiple Intelligences

Naturalist
Musical
Logical - Mathematical
Linguistic
Interpersonal
Intrapersonal
Bodily - Kinesthetic
Spatial
Implications of MI Theory for Innovative Forms of Teaching, Learning and Assessment

“If we truly accept and value the theory of MI, then we are obliged as teachers to be far more inventive in our teaching. We must search for and develop methodologies that will allow all intelligences to shine in the learning experience. ……we must grasp the notion of constructivism with both hands and give the students the freedom to explore and construct knowledge and understanding, beginning with their own strengths”. (Hyland (ed.) Final Report MI Project, 2000, p. 126)
One of the big challenges is to move away from assessment based solely on terminal exams – not intelligence fair, forcing all kinds of learning to fit into the paper and pencil test straight jacket.

Purposes of Assessment: feedback, diagnosis, motivation, guidance, learning support, selection, grading, certification, progression, professional recognition, gate-keeping.....
FOR A FAIR SELECTION
EVERYBODY HAS TO TAKE
THE SAME EXAM: PLEASE
CLIMB THAT TREE
CLASS, ALL YEAR LONG, I'VE TAUGHT EACH OF YOU TO LEARN AT YOUR OWN PACE IN YOUR OWN PERSONAL STYLE.

I'VE SET GOALS FOR EACH OF YOU, INDIVIDUALLY, TO HELP YOU REACH YOUR OWN UNIQUE POTENTIAL. AND NOW THE RESULTS OF THAT WILL BE MEASURED.

WITH A STANDARDIZED TEST.
### Example of Matching the Assessment to the Learning Outcome

<table>
<thead>
<tr>
<th>Learning outcomes</th>
<th>Assessment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate good presentation skills.</td>
<td>a) Multiple choice questions</td>
</tr>
<tr>
<td>2. Formulate food product</td>
<td>b) Prepare a 1000-word research proposal</td>
</tr>
<tr>
<td>3. Identify an area for research</td>
<td>c) Lab-based project</td>
</tr>
<tr>
<td>4. Identify signs and symptoms of MS in a patient</td>
<td>d) Make a presentation to peers</td>
</tr>
</tbody>
</table>
Assessing your assessment – is it doing the job you want it to do? Is it comprehensive?

<table>
<thead>
<tr>
<th>Learning Outcome 1</th>
<th>Assessment Task 1 e.g. Written Exam</th>
<th>Assessment Task 2 e.g. Project</th>
<th>Assessment Task 3 e.g. Presentation</th>
<th>Assessment Task 4 e.g. Lab work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe…</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Outcome 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigate..</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Outcome 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate..</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To what extent has each Learning Outcome been achieved?

- Not a question of “yes” or “no” to achievement of Learning Outcomes.
- Rubric: A grading tool used to describe the criteria which are used in grading the performance of students.
- Rubric provides a clear guide as to how students’ work will be assessed.
- A rubric consists of a set of criteria and marks or grade associated with these criteria.
Linking learning outcomes and assessment criteria.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Grade 1</th>
<th>Grade 2 : 1</th>
<th>Grade 2 :2</th>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>On successful completion of this module, students should be able to: ■ Summarise evidence from the science education literature to support development of a line of argument.</td>
<td>Outstanding use of literature showing excellent ability to synthesise evidence in analytical way to formulate clear conclusions.</td>
<td>Very good use of literature showing high ability to synthesise evidence in analytical way to formulate clear conclusions.</td>
<td>Good use of literature showing good ability to synthesise evidence in analytical way to formulate clear conclusions.</td>
<td>Limited use of literature showing fair ability to synthesise evidence to formulate conclusions.</td>
<td>Poor use of literature showing lack of ability to synthesise evidence to formulate conclusions.</td>
</tr>
</tbody>
</table>
Important to ensure that there is alignment between teaching methods, learning outcomes and assessment criteria.

Clear expectations on the part of students of what is required of them are a vitally important part of students’ effective learning (Ramsden, 2003)

This correlation between teaching, learning outcomes and assessment helps to make the overall learning experience more transparent and meaningful for students.

For the good teacher, learning outcomes do not involve a “paradigm shift”.

There is a dynamic equilibrium between teaching strategies and Learning Outcomes.
Teacher-Centred Approach – Aims and Objectives.

Student-Centred Approach - Learning Outcomes
It is important that the assessment tasks mirror the Learning Outcomes since, as far as the students are concerned, the assessment is the curriculum: “From our students’ point of view, assessment always defined the actual curriculum” (Ramsden, 1992).
Biggs (2003) represents this graphically as follows:

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Teacher Perspectives: Objectives → Learning Outcomes → Teaching Activities → Assessment

Student Perspectives: Assessment → Learning Activities → Outcomes
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“To the teacher, assessment is at the end of the teaching-learning sequence of events, but to the student it is at the beginning. If the curriculum is reflected in the assessment, as indicated by the downward arrow, the teaching activities of the teacher and the learner activities of the learner are both directed towards the same goal. In preparing for the assessment, students will be learning the curriculum” (Biggs 2003)
“Constructive Alignment” (Biggs, 2005)

Constructive

- The students construct understanding for themselves through learning activities. “Teaching is simply a catalyst for learning” (Biggs, 2003).

- “If students are to learn desired outcomes in a reasonably effective manner, then the teacher’s fundamental task is to get students to engage in learning activities that are likely to result in their achieving those outcomes…. It is helpful to remember that what the student does is actually more important in determining what is learned than what the teacher does” (Shuell, 1986)

Alignment

- Alignment refers to what the teacher does in helping to support the learning activities to achieve the learning outcomes.

- The teaching methods and the assessment are aligned to the learning activities designed to achieve the learning outcomes.

- Aligning the assessment with the learning outcomes means that students know how their achievements will be measured.
Constructive alignment is the deliberate linking within curricula of aims, learning outcomes, learning and teaching activities and assessment.

Learning Outcomes state what is to be achieved in fulfilment of the aims.

Learning activities should be organised so that students will be likely to achieve those outcomes.

Assessment must be designed such that students are able to demonstrate that they have met the learning outcomes.

Constructive alignment is just a fancy name for “joining up the dots”.

(Morss and Murray, 2005)
Steps involved in linking Learning Outcomes, Teaching and Learning Activities and Assessment

1. Clearly define the learning outcomes.
2. Select teaching and learning methods that are likely to ensure that the learning outcomes are achieved.
3. Choose a technique or techniques to assess the achievement of the learning outcomes.
4. Assess the learning outcomes and check to see how well they match with what was intended.

If the learning outcomes are clearly written, the assessment is quite easy to plan!
## Linking Learning Outcomes, Teaching and Learning Activities and Assessment

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Teaching and Learning Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive</strong></td>
<td>Lectures</td>
<td>• End of module exam.</td>
</tr>
<tr>
<td>(Demonstrate:</td>
<td>Tutorials</td>
<td>• Multiple choice tests.</td>
</tr>
<tr>
<td>Knowledge,</td>
<td>Discussions</td>
<td>• Essays.</td>
</tr>
<tr>
<td>Comprehension,</td>
<td>Laboratory work</td>
<td>• Reports on lab work and research project.</td>
</tr>
<tr>
<td>Application,</td>
<td>Clinical work</td>
<td>• Interviews/viva.</td>
</tr>
<tr>
<td>Analysis,</td>
<td>Group work</td>
<td>• Practical assessment.</td>
</tr>
<tr>
<td>Synthesis,</td>
<td>Seminar</td>
<td>• Poster display.</td>
</tr>
<tr>
<td>Evaluation)</td>
<td>Peer group presentation</td>
<td>• Fieldwork.</td>
</tr>
<tr>
<td></td>
<td>etc.</td>
<td>• Clinical examination.</td>
</tr>
<tr>
<td><strong>Affective</strong></td>
<td></td>
<td>• Presentation.</td>
</tr>
<tr>
<td>(Integration of</td>
<td></td>
<td>• Portfolio.</td>
</tr>
<tr>
<td>beliefs, ideas</td>
<td></td>
<td>• Performance.</td>
</tr>
<tr>
<td>and attitudes)</td>
<td></td>
<td>• Project work.</td>
</tr>
<tr>
<td><strong>Psychomotor</strong></td>
<td></td>
<td>• Production of artefact etc.</td>
</tr>
<tr>
<td>(Acquisition of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical skills)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning outcomes Module ED2100</td>
<td>Teaching and Learning Activities</td>
<td>Assessment 10 credit module Mark = 200</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>Cognitive</strong></td>
<td>Lectures (12)</td>
<td>End of module exam.</td>
</tr>
<tr>
<td>• Recognise and apply the basic</td>
<td>Tutorials (6)</td>
<td>Portfolio of lesson plans</td>
</tr>
<tr>
<td>principles of classroom</td>
<td>Observation of classes (6) of</td>
<td></td>
</tr>
<tr>
<td>management and discipline.</td>
<td>experienced science teacher</td>
<td></td>
</tr>
<tr>
<td>• Identify the key characteristics of high quality science teaching.</td>
<td>(mentor)</td>
<td></td>
</tr>
<tr>
<td>• Develop a comprehensive portfolio of lesson plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Affective</strong></td>
<td>Participation in mentoring</td>
<td>Report from school mentor</td>
</tr>
<tr>
<td>• Display a willingness to co-</td>
<td>feedback sessions in school (4)</td>
<td>End of project report.</td>
</tr>
<tr>
<td>operate with members of teaching</td>
<td>Participation in 3 sessions of</td>
<td></td>
</tr>
<tr>
<td>staff in their assigned school.</td>
<td>UCC Peer Assisted Learning (PAL) Programme.</td>
<td></td>
</tr>
<tr>
<td>• Participate successfully in Peer Assisted Learning project</td>
<td>Peer group presentation</td>
<td></td>
</tr>
<tr>
<td><strong>Psychomotor</strong></td>
<td>Teaching practice 6 weeks at 2</td>
<td>Supervision of Teaching Practice</td>
</tr>
<tr>
<td>• Demonstrate good classroom</td>
<td>hours per week.</td>
<td>Assessment of teaching skills</td>
</tr>
<tr>
<td>presentation skills</td>
<td>Laboratory work</td>
<td>(50 marks)</td>
</tr>
<tr>
<td>• Perform laboratory practical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>work in a safe and efficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>manner.</td>
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</tr>
</tbody>
</table>
1. Identify aims and objectives of module

2. Write learning outcomes using standard guidelines

3. Develop a teaching and learning strategy to enable students to achieve learning outcomes

4. Design assessment to check if learning outcomes have been achieved

5. Check for Constructive Alignment. If necessary modify module content, Teaching and Learning Strategies and Assessment in light of findings

“Bottom up” approach for existing modules
60 ECTS credits

15
10
5
5
10
10
5
1. Identify Programme Learning Outcomes

2. Design modules so that all Programme Learning Outcomes are reflected in the module Learning Outcomes

3. Assign ECTS credits to each module (1 year = 60 ECTS credits)

4. Design Teaching, Learning and Assessment strategies for each module (module descriptions).

5. Check that Constructive Alignment exists between module LOs, Teaching and Learning Activities and Assessment

“Top Down” Approach for designing new programmes
Does every learning outcome have to be assessed?

In theory “yes” but in practice “no”.
In some cases they have to be assessed, e.g. licence to practice (e.g. medicine) or to perform essential tasks (e.g. aircraft pilot).
When assessment is limited purely to an examination paper, it may not be possible to assess all the Learning Outcomes in such a short space of time – sampling of Learning Outcomes.
Even if all the Learning Outcomes are assessed on an examination paper, due to choice of questions, a student may not be assessed on all of them.
Learning Outcomes and Level Descriptors on Qualification Frameworks

A Learning outcome on its own does not give us an indication of the level of that learning outcome in a National Qualifications Framework.

The level of the programme in which the learning outcome (programme learning outcome or module learning outcome) is written must be indicated in the programme description.

The institution in which the programme is being taught must ensure:

- (a) that the programme learning outcomes map on to the relevant level in the National Qualifications Framework
- (b) that the module learning outcomes map on to the programme learning outcomes.
- (c) that within each module there is alignment between the Learning Outcomes, the Teaching and Learning Activities and the Assessment.
What other information, apart from the Learning outcomes is needed to describe a module?

- **Credit Weighting**: Number of ECTS credits.
- **Teaching Period(s)**: Term 1, Term 2 or both.
- **No. of Students**: Maximum number of students allowed to take the module.
- **Pre-requisite(s)**: Module(s) that should already have been passed by student.
- **Co-requisite(s)**: Another module that the student must take with this module.
- **Teaching Methods**: Details of number of lectures, tutorials, etc.
- **Module Co-ordinator**: Name of person in charge of module.
- **Lecturer(s)**: Name(s) of person(s) teaching the module.
Module Description (continued)

- **Module Objective**: A sentence stating the objective of the module.
- **Module Content**: A list of topics covered in the module.
- **Learning Outcomes**: On successful completion of this module, students should be able to:
  
  [List of learning outcomes].
- **Assessment**: Details of total mark for module and details of the breakdown of this total mark, e.g. written paper, continuous assessment, project, etc.
- **Compulsory Elements**: Any part of assessment that MUST be passed in order to pass the module, e.g. professional practice component.
- **Penalties (for late submission of Course/Project Work etc.)**: Details of marks deducted for late submission.
- **Pass Standard and any Special Requirements for Passing Module**: The minimum mark that must be obtained in order to pass the module.
- **End of Year Written Examination Profile**: Number and duration of examination papers.
- **Requirements for Supplemental Examination**: Number and duration and date of repeat examination for those who fail the module.
Portfolio Assessment

- Development of portfolios by students is an example of a multi-purpose assessment technique.
- Focuses on process, product and development, reflection, setting targets and self-evaluation by the students.
Our Students and Graduates

What do we wish our graduates to be capable of when they leave our institution?

Gardner (1999) talks of school graduates who will need to be *highly literate, flexible, capable of troubleshooting/problem-finding, adaptable to changing roles*…..

Are they capable of this when they leave school and come to University?

Are they capable of this when they leave University?

If not – why not?

Black *et al* (2003) state that establishing good formative assessment practices *requires that most teachers make significant changes. This involves extra work and risk taking*
Giving feedback to students

Make it quick, clear and focussed
Relate it to the assessment criteria and learning outcomes.
Learning Outcomes are usually written at threshold level. “Learning outcomes should be treated as threshold statements. They should not describe the performance of the average or typical student as so many people in workshops seemed to assume” (Moon 2002 p. 8).
Use rubrics or formal marking schemes to show how well the requirements are met.
Steps in feedback:
- Affirm what is done well
- Clarify: ask questions about specific aspects
- Make suggestions for improvement
- Give guidance about what the student needs to do next

The statement below is no longer acceptable due to the transparency of learning outcomes.

I cannot tell you what a first class honours is but I will know it when I see it!
In the first instance a teacher asks for clarification of a point being made. ‘Can you tell me more about?’, I note what you say about... would you like to say more/elaborate?...’ This extends the conversation and allows the student time to articulate the point more clearly. The teacher does not make a judgement on the point being made, by either agreeing or disagreeing with it but, rather, allows the students to move away from what is often a monosyllabic first response to a more considered reply.

Having gone through a process of clarification a teacher may then offer a judgement, a value, on the point made. This should be in a very positive tone, for example, 'I like your point about.....', or 'that is a very interesting concept', which, again, keeps the conversations open.
Concerns: On the third step of the ladder, a teacher is given an opportunity to voice his/her concerns, in ways that will allow the student an opportunity to think through the answer again.

Suggest: It is particularly helpful when the teacher, using the final step, offers one or more suggestions, which the student should consider when revisiting the work – it usually helps to give two alternatives where possible to allow the student to make the decision...
Group Work

Group work can combine many aspects of feedback and enrich understanding. It provides students with opportunities to engage in self and peer assessment and to moderate and regulate their responses before obtaining teacher assessment. It honours different intelligences and allows students to show understanding in the way that is best for them.
CATS provide a tool chest of ‘feedback devices’ the purpose of which for teachers ‘to use these CATs as starting points, ideas to be adapted and improved upon’ (p105)

Most CATs are easy to design and use and provide very useful information on teaching and student learning.

Angelo and Cross provide 50 choices!

Regular rich feedback ‘helps students and teachers clarify their goals and assess progress toward them while there is still time to make changes based on that feedback’ (p115)
Use Classroom Assessment Techniques (CATS) for

1. Formative purposes: quick feedback to learners and teacher about how well the learning outcomes are being achieved

2. Summative purposes: test lower order skills (recall of information, basic concepts); use terminal exams for higher order thinking skills (application, evaluation)

3. Coursework – where we can be creative.
THE MINUTE PAPER - Popular CATS

- Students must evaluate and generate a question
- Generates very useful feedback to the lecturer quickly
- Students need to listen, concentrate and pay attention
- Usually used at the end of the class (allow 2-3 mins – depends on class size)
- Have the question prepared in advance – board/slide etc so that students can begin to answer immediately
- Ask for short, concise and considered responses
- Focus on most important point, one thing they have learned
- One question they have to ask
- Responding and giving feedback can take time and this must be factored in to the teaching schedule
MUDDIEST POINT - POPULAR CATS

- Muddiest Point: provides information on what students find least clear
- Very simple to use – efficiently gathers information on what is causing confusion to students
- Use at the end of the lecture
- You can combine the Minute Paper and Muddiest Point by asking re what the student really understood today and what is still puzzling them/what is still muddy.
- Avoid overuse!
REFERENCES ASSESSMENT


Wilson, D. 2001 *The Dimensions of Understanding*. Assessment for Understanding,
Learning Outcomes

At the end of this presentation you should be able to:

- Discuss the various forms of Assessment.
- Outline various techniques of Assessment.
- Explain how to link Learning Outcomes to Teaching and Learning Activities and to Assessment.
- Discuss some innovative forms of Assessment.