Fundamentals of Assessment

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Educational Developer

Slides available at:
https://goo.gl/44cbrt
Learning Outcomes

Be the end of this session, participants will be able to:

● Effectively use learning outcomes to guide and enhance assessment
● Define formative and summative assessment and describe how each are used in a course
● Give students effective feedback on their submitted assignments
● Explain the benefits of using a rubric to guide assessment of student work

Slides available at: https://goo.gl/44cbrt
Why do we assess students?
On what should we be assessing?
“Students may take notes in lectures, seminars, or from their reading, they may have been through the prescribed activities in laboratories or on field trips, but it is only when faced with assessment tasks that the majority of students seriously engage with the material” (Bloxham & Boyd, 2007, p. 3)
Writing Useful Learning Outcomes

Well written learning outcomes:
• **Define** what students will be able to do

• **Are** written in SPECIFIC and BEHAVIOURAL terms (start with a measurable verb)

• **Indicate** what will be assessed and how it will be assessed

**An outcome describes what you want students to DO with what they learn and how they will show you what they have learned, not simply what they learn!**
Assessments are “defined” by the verbs used within a learning outcome.

For example:

1. Students should be able to recognize, and individually produce, writing appropriate to the genres and formats of professional communication including email and other correspondence, professional presentations, and technical reports.

2. Students should be able to recognize mixing problems and identify what information is needed to address these problems.

3. Define and explain key concepts in moral and political philosophy, such as Platonic form, ataraxia, utility, imperative, maxim, right of nature, general will, ideology, alienation, and oppression.
Backward Design

1. Identify Desired Results.

Big Ideas and Skills

2. Determine acceptable evidence.

Culminating Assessment Task

3. Plan learning experiences and instruction.

Learning Events

# Components of a Course Map

<table>
<thead>
<tr>
<th>Assessment Description/Title</th>
<th>Learning Outcomes Covered</th>
<th>Percentage of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Reflections</td>
<td>1, 3, 6</td>
<td>(4 per semester at 5% each) 20%</td>
</tr>
<tr>
<td>Unit Plan</td>
<td>1, 2, 3, 4</td>
<td>30%</td>
</tr>
<tr>
<td>Lesson Plan</td>
<td>1, 2</td>
<td>5%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>4, 5</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>3, 4, 5, 6</td>
<td>30%</td>
</tr>
</tbody>
</table>
Formative assessment: any task or activity which creates feedback (or feedforward) for students about their learning. It does not contribute to the final mark or grade (Irons, 2008)
- The objective of formative assessment is ‘assessment for learning’

Summative assessment: any assessment activity which results in a mark or grade which is subsequently used as a judgment on student performance (Irons, 2008)
- The objective of summative assessment is ‘assessment of learning’

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or
Open poll in your web browser
# A Sample Course Map

<table>
<thead>
<tr>
<th>Assessment Title</th>
<th>Learning Outcomes</th>
<th>Percentage of Course</th>
<th>Supporting Learning Experiences</th>
<th>Supporting Formative Assessment</th>
</tr>
</thead>
</table>
| Teaching Reflections Due: 1st Friday of each month | 1, 3, 6           | 20% (4 at 5% each)   | ● Class discussion questions  
● Shared reflection on experience  
● Lecture on effective reflection  
● Class Content  | ● Peer rubric reflection  
● Class discussion  
● Comments |
| Lesson Plan Due: October 14 | 1, 2            | 5%                   | ● Lecture on lesson planning  
● In-class activities                                                       | ● Lesson plan critique activity |
| Midterm Exam Written October 11 in class | 4, 5            | 15%                  | ● Class discussion questions  
● Student response system (SRS) questions  
● Class Content  | ● SRS questions  
● Review of questions  
● Sample Midterm |
| Unit Plan Due: November 20 | 1, 2, 3, 4       | 30%                  | ● Lecture on effective unit planning  
● Critique of unit plans  
● Unit Planning reading | ● Peer review  
● Monthly check in discussions  
● Critique of unit plans |
Discussion:

Why is it important we give students formative assessments?

Why is it important these formative assessments reflect the summative assessments in a course?
Feedback Activity – Part 1

Write a short description of this image
Feedback Activity – Part 2

Pick up a description
(not your own!)
and provide feedback on it.

About Campus, Cover Image, Jan Feb 2003, vol 7, num 6
Feedback Activity

What were some of the challenges you had with this activity?
Challenges of formative feedback

- Students only want grades as a form of recognition (Students may perceive the comments as a justification of the grade (Glover & Brown, 2006)).

- Too much continuous assessment, used for summative purposes, could result in assessment overload, anxiety about grades (Hernández, 2012).

- Students may not recognize the ways in which feedback is provided – if not written directly to them personally, it has not happened.

- Students should/need to be trained on how to develop skills to review their own work (Hernández, 2012).

- Limited opportunity to enter into dialogue about feedback (Irons, 2008).
More Challenges

• Providing appropriate feedback is hard!
• Comments are limited and often do not suggest how to improve student learning (Irons, 2008)
• Sometimes feedback is inappropriate or biased (i.e. giving positive feedback just to make students feel better)
• It is difficult to provide students thorough, effective feedback in a timely manner (Hernadez, 2012)
A Key Aspect of Feedback

• “The crucial variable appears not to be the quality of the feedback (which is what teachers tend to focus on) but the quality of student engagement with that feedback.” (Gibbs, 2006, p.26)

• feedback should be a two-way conversation: it should take the form of assessment dialogues in an attempt to clarify the assessment process (Carless 2006).
How can I be fair in my feedback?
Assessment Criteria

• Criteria should be based on the learning outcomes (clear and communicated) or other predefined criteria.

• One should not assume students will understand a list of assessment criteria.
  • Feedback may need to be more *dialogical* to develop understandings of academic terms and appropriate practices.
  • A more thorough understanding of criteria may be achieved through the use of exemplars.
Feedback Activity – Part 3

- On a separate piece of paper, using the same ‘assignment’, establish 3 criteria to structure your feedback
  - (eg. Use of colour in description, creativity, etc.)

- Write 3 comments explaining how well these criteria were met
  - Strengths, weakness, options for improvement

- Remember to be clear, specific and constructive
Feedback Activity – Part 4

• As a pair, discuss the nature of the feedback given. Some points you may want to talk about are:
  • Focus (task, process)
  • Function (descriptive, evaluative)
  • Clarity
  • Specificity
  • Tone and word choice
  • Future Suggestions
# The Analytic Rubric

- Separates different assessment criteria and addresses them comprehensively

<table>
<thead>
<tr>
<th>Standards</th>
<th>5 - 4 Exemplary</th>
<th>3 - 2 Satisfactory</th>
<th>1-0 Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Has excellent organization that catches audience’s interest; maintains focus throughout; summarizes main points</td>
<td>Has topic and gives outline of speech; is mostly organized; provides adequate “road map” for the listener</td>
<td>An irrelevant statement; gives listener no focus or outline of the presentation</td>
</tr>
<tr>
<td>Content</td>
<td>Demonstrates substance and depth; is comprehensive; shows mastery of material</td>
<td>Covers topic; uses appropriate sources; is objective</td>
<td>Does not give adequate coverage of topic; lacks sources</td>
</tr>
<tr>
<td>Quality of conclusion</td>
<td>Delivers a conclusion that is well documented and persuasive</td>
<td>Summarizes presentation’s main points; draws conclusions based upon these points</td>
<td>Has missing or poor conclusion; is not tied to analysis; does not summarize points that support the conclusion</td>
</tr>
<tr>
<td>Delivery</td>
<td>Has natural delivery; modulates voice; is articulate; projects enthusiasm, interest, and confidence; uses body language effectively</td>
<td>Has appropriate pace; has no distracting mannerisms; is easily understood;</td>
<td>Is often hard to understand; has voice that is too soft or too loud; has a pace that is too quick or too slow; demonstrates one or more distracting mannerisms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>Weight</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>X 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X 1.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Helpful Adjectives and Adverbs for Rubric Construction

<table>
<thead>
<tr>
<th>Not Meeting Expectations</th>
<th>Progressing</th>
<th>Proficient</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Fewer than ___</td>
<td>More than ___</td>
<td>All</td>
</tr>
<tr>
<td>Never</td>
<td>Seldom, rarely</td>
<td>Sometimes, often</td>
<td>Always</td>
</tr>
<tr>
<td>Incomplete</td>
<td>Less than complete</td>
<td>Somewhat complete</td>
<td>Complete</td>
</tr>
<tr>
<td>Inadequate</td>
<td>Less than adequate</td>
<td>Adequate</td>
<td>Superior</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>Minimal</td>
<td>Satisfactory</td>
<td>Maximum</td>
</tr>
<tr>
<td>Unclear</td>
<td>Vague</td>
<td>Understandable</td>
<td>Articulate</td>
</tr>
<tr>
<td>Rarely clear</td>
<td>Sometimes unclear or inaccurate</td>
<td>Often clear, often accurate</td>
<td>Clear, accurate</td>
</tr>
<tr>
<td>...to an unacceptable level</td>
<td>...to a minimal level</td>
<td>...to an acceptable level</td>
<td>...to the highest level</td>
</tr>
<tr>
<td>Includes no elements of...</td>
<td>Includes few elements of...</td>
<td>Includes most elements of...</td>
<td>Includes all elements of...</td>
</tr>
<tr>
<td>Improper</td>
<td>Sometimes improper</td>
<td>Somewhat proper</td>
<td>Clear</td>
</tr>
<tr>
<td>Unclear</td>
<td>Somewhat unclear</td>
<td>Some degree of clarity</td>
<td>Proper</td>
</tr>
<tr>
<td>Inappropriate</td>
<td>Limited</td>
<td>Somewhat appropriate</td>
<td>Appropriate</td>
</tr>
<tr>
<td>Lacks enough of...</td>
<td>Minimal amount of...</td>
<td>Adequate number of...</td>
<td>All Necessary...</td>
</tr>
<tr>
<td>Inconsequential, Unimportant</td>
<td>Somewhat relevant</td>
<td>Important</td>
<td>Significant</td>
</tr>
<tr>
<td>Unnecessary</td>
<td>Somewhat useful</td>
<td>Essential</td>
<td>Critical, crucial</td>
</tr>
<tr>
<td>Illogical</td>
<td>Somewhat reasonable</td>
<td>Reasonable</td>
<td>Logical, rational</td>
</tr>
<tr>
<td>Random</td>
<td>Somewhat instinctive</td>
<td>Somewhat intuitive</td>
<td>Intuitive</td>
</tr>
</tbody>
</table>
The Holistic Rubric

- Groups several different assessment criteria under grade headings.

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Always prepared and attends class. Participates constructively in class. Is a team player. Demonstrates initiative and improvement. Seeks to understand and acknowledge others’ thoughts. Often reaches full potential if sufficiently challenged. Class assignments have something extra about them. Exceptional content knowledge. Demonstrates ability to integrate new knowledge into work. Challenges his/her own thoughts and ideas.</td>
</tr>
<tr>
<td>B</td>
<td>Usually prepared and attends class. Participates constructively in class, works well with others, and is a team player. Excellent content knowledge. Completes all class assignments. Demonstrates initiative and improvement. Seeks to understand and acknowledge others’ thoughts. Stretches to reach full potential.</td>
</tr>
<tr>
<td>C</td>
<td>Sometimes prepared and attends class. Average content knowledge. Occasionally or only challenges thought when encouraged by others. Assignments reflect average work. Sometimes an active participant in class. Works well with others.</td>
</tr>
<tr>
<td>D</td>
<td>Rarely prepared or attends class. Rarely participates constructively in class. Assignments are late, incomplete, or not turned in at all. Low level of content knowledge. Does not strive to reach potential.</td>
</tr>
</tbody>
</table>
The Single-Point Rubric

• The single point rubric describes the target and leaves room for reasons for not meeting or advancing beyond this criteria

<table>
<thead>
<tr>
<th>Concerns (Areas that Need Work)</th>
<th>Criteria (Standards for this Performance)</th>
<th>Advanced (Evidence of Exceeding Standards)</th>
</tr>
</thead>
</table>

**Knowledge of Issue:** The creator includes relevant words/phrases, meaningful symbols and other words to show a deep understanding of the issue.

**Argumentation:** Piece shows an opinion on the issue and uses symbols, mottos, etc. effectively to make an argument to the viewers/readers of the piece.

(Scores Below Meeting Criteria)  (Score of Meeting Criteria; usually around B)  (Scores Above Meeting Criteria)
The Dichotomous Rubric

- Consists of major questions to be answered to give “levels of achievement”
### What my students get back....

<table>
<thead>
<tr>
<th></th>
<th>0-1-2-3</th>
<th>4-5-6-7</th>
<th>8-9-10</th>
</tr>
</thead>
</table>
| **Analysis/Reflection** | - Some questions are not adequately addressed  
- Reasoning/rationale for most responses is not clear  
- Insufficient or simple examples provided | - Most questions are fully addressed  
- Where appropriate reasoning/rationale for most responses is provided  
- General examples are provided and are discussed | - Each question is fully and professionally addressed and supporting evidence provided  
- Where appropriate reasoning/rationale for responses is provided  
- Specific, relevant and concrete examples provided and discussed |
| **Strategies and questioning** | - Rationale for the strategy chosen hard to identify  
- Reflection of the effectiveness of the questioning within the lesson is discussed, but vague or unclear | - Rationale for the strategy chosen is identified  
- Reflection of the effectiveness of the questioning within the lesson is discussed | - Clear rationale for the strategy chosen is identified in an effective and apparent manner  
- Reflection of the effectiveness of the questioning within the lesson shows deep understanding |
| **Overall clarity, communication and referencing. (Section grade divided by 2; total mark is out of 5)** | - Responses lack clarity or are organized in a haphazard way,  
- Several grammar or referencing errors may be present. | - Responses are somewhat clear and are organized in a methodical way  
- Grammar or referencing errors may be present. | - Responses are clear, concise, and organized in a purposeful way.  
- Proper grammar and referencing are used throughout. |
Summary

Basic principles of formative feedback:

☐ Feedback should measure (give guidance to) the student’s current learning state

☐ Formative assessment should be used as a means for closing the gap between the student’s learning state and the learning goals

☐ Formative feedback needs to be high quality and effective in its advice (Black, 1999)

☐ Rubrics can be helpful in guiding self, peer, and instructor feedback.
References & Useful Readings


- More at https://goo.gl/z5iy7Z
QUESTIONS?

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