Matching Evaluation Methods to Learning Outcomes

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Comfort Zone?

A. I was hired for my subject expertise and have little background in assessment or curriculum design. I follow the assessment as set out on the course outline.

B. I am a subject expert, and I have learned about assessment through my classroom experiences. I design/update assessments as needed and I seek help from Teaching and Learning Centre, colleagues, library staff…

C. I have a formal education in assessment, curriculum design, psychometrics and can help colleagues design assessments and marking schemes
Assessment and Evaluation

• What are the primary reasons for assessing and evaluating learning?
• How do you know if your students have learned?
• What types of assessments do you currently use as evidence of learning?
Key Steps for Assessment

1. Identify essential learning
2. Select assessment method
3. Plan the assessment
4. Evaluate the learning
5. Provide feedback
1. Identify Essential Learning

- Define the *essential outcomes* to be achieved by the learner upon completion of the course
- Weight outcomes equally or differentially?
- Define the “Level” of learning using Bloom’s Taxonomy.
Intended Learning

Dialogue:

Striped Dog: I taught him how to whistle.

Snoopy: I don't hear him whistling.

Striped Dog: I said I taught him. I didn't say he learned it.
Define the level of learning

Bloom’s Taxonomy (Revised)


Based on an APA adaptation of Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001)
2. Select the assessment method

• intended learning
• learning styles
• cost effectiveness
• class size
• authenticity
Categories of Tests

Objective Tests
- (requires student to choose a response)
- harder to develop
- easier to score

Subjective Tests
- (requires student to construct a response)
- easier to develop
- harder to score
Objective Type Tests (forced response)

- multiple choice
- true/ false
- matching
- fill in the blanks
Table of Specifications

- Learning to be measured (course outcomes)
- Weighting (relative importance)
- Level and Domain of knowledge: (Bloom’s Taxonomy)
  - Cognitive, Affective, Psychomotor
- Sampling
- Timing/Pacing
<table>
<thead>
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<th>Learning Outcome</th>
<th>Assignment 1</th>
<th>Assignment 2</th>
<th>Assignment 3</th>
<th>Final Weight</th>
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<tr>
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Subjective Type Tests
FREE RESPONSE

• essay
• short answer
• performance or demonstration
• project
• product
3. Plan the assessment

- sample according to importance
- time
- length of test
- format
- criteria for success
- class size
- frequency/attempts
Two major items in assessment design

• Validity (true measure of learning)

• Reliability (consistent measure of learning)
How to improve validity:

- define essential learning
- adequate sampling
- select the appropriate number of items relative to weighting
- item analysis
How to improve reliability:

• Control the assessment conditions
• Longer the test - the more reliable
• At least two measurements of the trait being measured
• Use a scoring rubric
• Train the assessors
4. Evaluate the learning

- Relate the performance to a standard or criterion
- Assign a value (numerical grade)
Importance of a Rubric

- identifies what you want students to know or be able to do
- identifies expectations
- clarifies grading and reduces subjectivity
- clarifies level of performance
- consistency among raters
5. Provide Feedback

**Formative**
- may or may not be graded
- integrated into classroom activity
- early and often

**Summative**
- final grade
- further learning
Best Practices

• Agreed upon standards among faculty
• Criteria must be known to students in advance
• Provide samples of best work
• Provide adequate time
• Use a variety of test measures
• Provide more than one opportunity to demonstrate learning
Application

1) Create 3 learning activities for a single course outcome, one within each learning domain.

2) Create a table of specifications for a course demonstrating that the assignments (minimum of 3) match the course learning outcomes according to the criteria specified.
Resources

• The Art of Evaluation, A Handbook for Educators, Tara Fenwick and Jim Parsons, 2000, Thompson Educational Publishing

• Exceptional Teaching, Ideas in Action, 2006, EMC Paradigm Publishing

• www.mohawkcollege.ca/CTL
Pitfalls to Avoid

• Assessment method doesn’t match learning outcome
• Assessing what you haven’t taught
• Using too many levels of achievement
• Not providing criteria for success in advance
• Not considering gender, culture or physical factors when planning assessment
• Lacks relevance/authenticity
Time for reflection

Within your group, describe key points that you will integrate into your assessment practice.
Key points to remember

• Authentic (real life) assessment
• Match the assessment method with the learning intended
• Plan the test (validity and reliability)
• Provide exemplars or test samples
• Use a criterion-referenced system for scoring subjective type tests
• Provide feedback often
• Monitor the assessment process
Questions? Comments?

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