Fundamentals of Course Design II: Assessment and Exam Design
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Course Design Workshop Series
• Developing learning goals
• How to assess learning goals
• Writing a syllabus
• Developing lesson plans

Backward Design
1. Identify Desired Results.
2. Determine acceptable evidence.
3. Plan learning experiences and instruction.

Integrated Course Design

Learning Goals
Teaching & Learning Activities
Feedback & Assessment


1. Identify Desired Results.

- What should students know, understand, and be able to do?
  - How? By using:
    - Established standards, benchmarks, skills determined by industry, professional orgs, etc.
  - Then prioritize

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• Have students achieved desired results? How will we know?
  • Need evidence to document or validate desired learning achieved
  • Not by just covering content

Today

• Assessment and Exam Design
  – Types of Assessment
  – Exam Creation
  – Alternatives
  – Grading
  – Wrap-up

Learning Goals

• After today's workshop, you will be able to:
  – Use backwards design to develop exams and assessments with learning goals in mind
  – Identify whether students are meeting course expectations
  – Begin designing some assessments for your (proposed) class
Types of Assessment

Formative Assessment
Summative Assessment

Types of Assessment

<table>
<thead>
<tr>
<th>Formative</th>
<th>Summative</th>
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<tbody>
<tr>
<td>Monitors learning</td>
<td>Evaluates learning</td>
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<tr>
<td>Low stakes</td>
<td>High stakes</td>
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<td>Examples:</td>
<td>Examples:</td>
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<td>– Have students write 1–2 sentences identifying main points of lecture</td>
<td>– Midterm exam</td>
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<td>– Turn in research proposal for early feedback</td>
<td>– Final project</td>
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<td>– Paper</td>
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<td>– Senior Recital</td>
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I’m gonna need more specific feedback on my formative assessments.
Activity #1: Think-Pair-Share

Develop three low-stakes, formative assessments you could use in your (proposed) course.
Fair or unfair...

| If 1 = 5  
| 2 = 25  
| 3 = 125  
| 4 = 625  
| Then 5 =? |

If 5 is the wrong answer!

Question Types

Fixed-Response
- Correct response selected from several alternatives
- Student supplies a word/short answer

Uses/benefits:
- With classroom response system (clickers)
- Reliable exam scores
- Objective, impartial scoring – fairness
- Quick scoring and results
- Assess factual knowledge
Common MCQ Mistakes to Avoid

- Double-barreled questions
- Inconsistencies in grammar, length, or style
- Ambiguous or confusing stems
- “All of the above” or “None of the above”
- “All,” “never,” or “always”
- Trying to “trick” students

Question Types

Open-Ended
- Generally can be used to assess understanding and application, critical thinking, problem solving
- Requires written, original answer
- Often used for:
  - Encourage/reward writing skill development
  - Examine student attitudes/creativity
  - Assess argument development & analysis/reasoning
  - Express values, views, opinions
Open-Ended Questions

Other Tips for Exam Creation

• Mixture of both fixed-choice and open-ended
• Include point values for each problem
• Create a detailed rubric
• Talk to students about test taking tips
• Pre-test your exam/take it YOURSELF first

Alternative Assessments

Mix up retrieval practices
Draw on multiple intelligences
Employ a holistic approach to learning
Portfolios or Digital Media

Activity #2: Alternative Assessments

Begin planning one alternative form of assessment you could use in your (proposed) course
DOES NOT ACCEPT LATE PAPERS
TAKES FIVE WEEKS TO GRADE THEM
Questions?

Activity #3: Workshop

Begin constructing formative and summative assessments for your (proposed) course

5 Commandments of Assessment and Exam Design
I. Thou shall use formative assessments often
II. Honor thy learning goals
III. Thou shall design your course backwards
IV. Thou shall include higher-order cognitive dimensions
V. Thou shall seek out additional resources
Resources


• Fundamentals of Course Design workshops 3 & 4

• Stanford: Tomorrow’s Professor

Thank you!

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for Teaching and Learning