Refining Your Assessment
Plan: Session 2

Selecting Direct and Indirect Evidence of Student Learning
Derek Herrmann and Ryan Smith
University Assessment Services (UAS)
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Refining Your Assessment Plan: Session 2

Direct Evidence of Student Learning
Direct Evidence of Student Learning

• Tangible, visible, self-explanatory, and compelling evidence of what students have and have not learned
### Indirect vs. Direct: Unfiltered vs. Filtered

<table>
<thead>
<tr>
<th>Type</th>
<th>Activity</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Conducting an experiment</td>
<td>Learning based on what you observe in actual student work</td>
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<tr>
<td></td>
<td>Building a portfolio</td>
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<td></td>
<td>Taking an objective test</td>
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<tr>
<td>Indirect</td>
<td>Taking an exit survey</td>
<td>Learning is based on indicators of learning or student reflection about learning</td>
</tr>
<tr>
<td></td>
<td>Obtaining a degree</td>
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</table>
Direct Evidence of Student Learning

- Performance assessments and traditional assessments
  - Traditional assessments
    - Multiple-choice tests, essay tests, and oral examinations
    - Usually designed only to collect assessment information, not give students a learning opportunity
Direct Evidence of Student Learning

• Performance assessments and traditional assessments
  – Performance assessments
    • Ask students to demonstrate their skills rather than relate what they have learned through traditional tests
    • Increasingly popular because they merge learning and assessment
Direct Evidence of Student Learning

• Embedded and add-on assessments
  – Embedded assessments – program, general education, or institutional assessments that are embedded into course work
  – Add-on assessments – beyond course requirements
Direct Evidence of Student Learning

• Effective assessment formats
  – Paper/thesis – students develop an argument and support it with information or data they have gathered
  – Project – students complete an assignment over a prolonged period of time
  – Development of a product – project whose focus is on the development of a tangible product
Direct Evidence of Student Learning

• Effective assessment formats
  – Performance – students prepare and present a performance of a valued activity
  – Exhibition – a project, product, or performance that is presented to judges and defended or debated with them
  – Case study/critical incident – students are given a realistic example of an application in their field
Direct Evidence of Student Learning

• Effective assessment formats
  – Clinical evaluation – students perform a professional service in a real-life setting
  – Oral exam – students answer spontaneous questions put to them by experts
  – Interview – similar to an oral exam but the forum in which it is carried out may not be as public or involve as many questioners as an oral exam
Direct Evidence of Student Learning

• Effective assessment formats
  – Comprehensive exam – students complete a time-limited essay test that requires them to organize and present central ideas, facts, and concepts in response to questions
  – Portfolio – students gather examples of their work, write about aspects of their learning and achievement, and include their written reflections
Direct Evidence of Student Learning

• Effective assessment formats
  – Portfolios
    • Showcase portfolio – document the extent of learning by featuring the student’s best work
    • Developmental portfolio – designed to show student progress and includes evidence of growth by comparing products from early and late stages of the student’s academic career
    • Collective portfolio – collections of student work that are created by faculty for assessment purposes
Curriculum Mapping

• Analyze learning opportunities by mapping learning goals against courses
## Curriculum Mapping

<table>
<thead>
<tr>
<th>Course</th>
<th>Goal 1</th>
<th>Goal 2</th>
<th>Goal 3</th>
<th>Goal 4</th>
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<td>Exhibition</td>
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<tr>
<td>340</td>
<td></td>
<td>Case study/critical incident</td>
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<td>Case study/critical incident</td>
</tr>
<tr>
<td>392</td>
<td>Clinical evaluation</td>
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Curriculum Mapping

- Transcript analysis – review a sample of transcripts of graduating students to learn courses they choose and when they take them.
Curriculum Mapping

• Syllabus analysis – can help determine if students have enough assignments and classwork to achieve each of the intended learning goals of the course, including the program, general education, or institutional goals that course is intended to support.
Indirect Evidence of Student Learning

Refining Your Assessment Plan: Session 2
Indirect Evidence of Student Learning

• Proxy signs that students are probably learning
• A report about learning rather than a direct demonstration of learning
• Make unique contributions to program assessment because they allow to pursue issues in depth and to solicit advice from important stakeholders
Dimensions of Learning and Direct/Indirect Assessment

- **Achievement**
  - ACCUMULATION OF LEARNING
  - Outcomes: GRE, NCLEX, RD exam, etc.

- **Change in Learning**
  - CHANGE IN BEHAVIOR, THINKING, ETC.
  - Outcomes: Advanced skills, critical thinking, etc.

- **Engagement**
  - PROCESSES THAT SUPPORT LEARNING
  - Processes: Time studying, tutoring, interaction with faculty, services, etc.

- **Persistence**
  - CONSEQUENCES OF LEARNING
  - Outputs: Graduation, retention, satisfaction, utilization, etc.

**Figure adapted from:** R. Shavelson, 2009, *Measuring College Responsibly* and N. Salkind, *Tests and Measurement for People Who Think They Hate Tests and Measurement.*
Indirect Evidence of Student Learning

• Stakeholders
  – Students: fundamental source of assessment information
  – Faculty
    • Continually observe and reflect on student learning
    • Can be documented with tools such as structured observations and rating scales
Indirect Evidence of Student Learning

- Stakeholders
  - Field experience supervisors
    - Can be a fountain of information on how well students are demonstrating key goals, including knowledge, skills, attitudes, and dispositions
    - Evaluation form with rating scale, comments, or both
    - Can provide compelling evidence of how well students have achieved program goals
Indirect Evidence of Student Learning

- Stakeholders
  - Alumni
    - Can describe their post-graduation experiences and their views of their education
    - Not always practical or meaningful to contact alumni
  - Employers
    - Can provide valuable information about employer needs and how well a program or college prepares students for careers in their businesses
    - Ask for general perceptions of a program or college and its graduates
Indirect Evidence of Student Learning

• Techniques
  – Surveys
    • Elicit information about people’s beliefs, experiences, or attitudes
    • Can be closed-ended or open-ended (assessment surveys commonly use both formats)
    • Could survey various stakeholders
Indirect Evidence of Student Learning

• Techniques
  – Surveys
    • Should be careful to obtain reasonable samples
      \textit{(response rate: proportion of contacted individuals who complete the survey)}
    • Online surveys provide quick, inexpensive access to respondents and automatic, reliable data recording
Indirect Evidence of Student Learning

• Techniques
  – Interviews
    • Provide an opportunity for interaction between interviewer and interviewee (both a potential strength and limitation)
    • Structured interviews often used because they provide consistent data across different interviewers and respondents
Indirect Evidence of Student Learning

• Techniques
  – Interviews
    • Questions can be closed-ended or open-ended. (common closed-ended questions are dichotomous, request rankings of magnitude, or include checklists)
    • Can be conducted face-to-face, by telephone, or by any other method that provides the opportunity for interaction between interviewer and interviewee
Indirect Evidence of Student Learning

• Techniques
  – Interviews
    • Obtaining a representative sample is an important challenge
    • Analyzing interview data requires a thoughtful review of what respondents said, and the summary should be succinct, but with sufficient detail to be useful
Indirect Evidence of Student Learning

• Techniques
  – Focus groups
    • Planned discussions among small groups of participants who are asked a series of carefully constructed questions about their beliefs, attitudes, and experiences
    • Conducting focus groups requires an understanding of group dynamics and the ability to mentally juggle content and process
Indirect Evidence of Student Learning

• Techniques
  – Focus groups
    • Can be implemented in a variety of ways, ranging from an unstructured, open-ended process to one that is highly structured
    • Usually involve from six to ten participants
    • Facilitators often conduct more than one focus group to develop a thorough understanding of the issues being explored
Indirect Evidence of Student Learning

- Techniques
  - Reflective essays
    - Invite students to reflect on some aspect of their university experience
    - Should be based on carefully crafted, open-ended questions
    - Classroom assessment techniques could be used to obtain student reflections about their programs
Indirect Evidence of Student Learning

- Techniques
  - Others
    - Retention and graduation rates
    - Quality and reputation of graduate programs
    - Placement rates
    - Student participation rates
    - Honors, awards, and scholarships
Indirect Evidence of Student Learning

• Guidelines for gathering feedback
  – Allow feedback to be provided anonymously or confidentially
  – Maintain a focus on using data for improvement
  – Reinforce an atmosphere of mutual respect by thanking stakeholders for their feedback
Indirect Evidence of Student Learning

• Guidelines for interpreting feedback
  – Avoid…
    • Acting defensively
    • Rationalizing any undesirable behaviors/processes identified
    • Brushing off the feedback with misplaced humor or sarcasm
    • Putting the program down, assuming that stakeholders are correct in all aspects
Indirect Evidence of Student Learning

• Guidelines for interpreting feedback
  – Explore the feedback and look for recurring themes
  – Identify constructive ways to use the feedback