

## Choosing Appropriate Data Collection Methods

### Questions to Guide Method Selection:

1. What are your student learning outcomes?
2. How are you already measuring these outcomes?
3. What data and/or measures are you missing?
4. How do you plan to use the data collected?

**Direct data sources** look at actual student work to determine if learning has occurred.

Table 1. Examples of Direct Evidence of Student Learning

Assessment Method	Description	Examples	Scoring Method
<b>Capstone Experiences</b>	<ul style="list-style-type: none"> <li>• Culminating projects that provide information about how students integrate, synthesize and transfer learning</li> <li>• Assess competence in several areas</li> <li>• May be independent or collaborative</li> <li>• Focus on higher order thinking</li> <li>• Are useful in program-level assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Exams</li> <li>• Integrative papers</li> <li>• Projects</li> <li>• Oral reports</li> <li>• Performances</li> </ul>	Pre-specified rubric
<b>Embedded Assessments</b>	<ul style="list-style-type: none"> <li>• Procedures embedded into course curriculum</li> <li>• Usually locally developed</li> <li>• Can be used to assess discipline-specific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Exam questions</li> <li>• Course assignments</li> </ul>	Raw scores Pre-specified rubrics
<b>Internships and Field Experiences</b>	<ul style="list-style-type: none"> <li>• Demonstrate learning outside of the classroom in a real-world situation</li> </ul>	<ul style="list-style-type: none"> <li>• Performance on the job</li> </ul>	Observation checklist or rubric
<b>Performance Assessments</b>	<ul style="list-style-type: none"> <li>• Use student activities to assess skills and knowledge</li> <li>• Assess what students can demonstrate or produce</li> <li>• Allow for evaluation of both process and product</li> <li>• Focus on higher order thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Essay tests</li> <li>• Artistic productions</li> <li>• Experiments</li> <li>• Projects</li> <li>• Presentations</li> <li>• Homework assignments</li> <li>• Reports</li> </ul>	Pre-specified rubric
<b>Portfolios</b>	<ul style="list-style-type: none"> <li>• Collection of student work over time that is used to demonstrate growth and achievement</li> <li>• Usually allows for student to self-reflect on incorporated work</li> <li>• Focus on higher-order thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Written assignments</li> <li>• Works of art</li> <li>• Projects</li> <li>• Lab research</li> <li>• Exams</li> <li>• Reflective essay</li> </ul>	Pre-specified rubric
<b>Standardized Assessments</b>	<ul style="list-style-type: none"> <li>• Instruments developed outside the institution with standardized administration and scoring procedures</li> <li>• Psychometrically tested based on norming groups</li> <li>• Usually allow for national comparisons</li> </ul>	<ul style="list-style-type: none"> <li>• CAAP</li> <li>• CLA</li> <li>• MAPP</li> </ul>	Answer key or scored by testing company

### Questions to Guide Indirect Method Selection:

1. How will data gathered through indirect methods add to data you already have?
2. How much time and resources are available for data collection and analyses?
3. What level of depth of information is needed?

**Indirect data sources** require inferring student abilities, knowledge, and values rather than measuring them directly.

Table 2. Examples of Indirect Evidence of Student Learning

Assessment Method	Description	Examples	Scoring Method
<b>Document Analysis</b>	<ul style="list-style-type: none"> <li>Systematic review of institution, program, and/or course documents</li> <li>Can identify relationships between courses in a program</li> <li>Can identify potential sources of direct data sources</li> </ul>	<ul style="list-style-type: none"> <li>Curriculum analysis</li> <li>Syllabi analysis</li> <li>Program or curriculum mapping</li> </ul>	Systematic review
<b>Focus Groups</b>	<ul style="list-style-type: none"> <li>Carefully planned discussions among groups of 6-10 respondents focused on a constructed series of open-ended questions</li> <li>Allows for gathering specific and detailed information</li> <li>Allows for direct follow-up</li> <li>Focus is on beliefs, attitudes, and experiences</li> <li>Should be conducted by neutral parties</li> </ul>	<ul style="list-style-type: none"> <li>Graduating seniors discuss strengths and weaknesses a program</li> </ul>	Identify recurring themes in discussions
<b>Interviews</b>	<ul style="list-style-type: none"> <li>Directed conversation based on questions designed to gather extended responses</li> <li>Allows for gathering specific and detailed information</li> <li>Allows for direct follow-up</li> <li>Focus is on often on beliefs, attitudes, and experiences</li> <li>Should be conducted by neutral parties</li> </ul>	<ul style="list-style-type: none"> <li>Exit interviews</li> </ul>	Identify recurring themes in discussions
<b>Surveys</b>	<ul style="list-style-type: none"> <li>An ordered series of questions in a systematic manner</li> <li>Can supplement and contextualize direct measures.</li> <li>Allows for easy data collection with large groups of respondents</li> <li>Administered online or paper-and-pencil</li> <li>Can be used to gather data from respondents at distant sites</li> <li>Focus is on beliefs, attitudes, and experiences</li> </ul>	<ul style="list-style-type: none"> <li>Alumni surveys</li> <li>Exit surveys</li> <li>National surveys (e.g., NSSE, CCSSE)</li> </ul>	Tabulate responses to report in tables or graphs  Identify recurring themes in open-ended questions
<b>Audit Measures</b>	<ul style="list-style-type: none"> <li>Provide information about student success rates in courses, programs, and institutions.</li> </ul>	<ul style="list-style-type: none"> <li>Course Grades</li> <li>Placement rates (e.g., into 4-yr institutions, into graduate schools)</li> <li>Graduation rates</li> </ul>	Tabulate data and report percentages

### Assessment Methods to Consider

Every assessment method has potential value. To find the best methods for each particular situation, think carefully about student learning outcomes, program/course goals, and purpose of the assessment. Linda Suski (2009) offers strategies to consider:

If you want to...	Consider using...
Assess thinking and performance skills	Assignments or prompts planned and evaluated using scoring rubrics
Assess knowledge, conceptual understanding, or skill in application and analysis	Multiple-choice tests
Assess attitudes, values, dispositions, or habits of mind	Reflective writing, surveys, focus groups, or interviews
Draw an overall picture of student learning	Portfolios
Compare your students against peers elsewhere	Published tests or surveys

**Adapted from:**

Allen, M., Noel, R. C., Rienzi, B. M. & McMillin, D. J. (2002). *Outcomes Assessment Handbook*. California State University, Institute for Teaching and Learning, Long Beach, CA.

Division of Instructional Innovation and Assessment, The University of Texas at Austin. *Instructional Assessment Resources*. 2010. <http://www.utexas.edu/academic/diia/assessment/iar/>.

Stanford University Institutional Research & Decision Support. (2010). Assessment Methods retrieved 5/14/2010 from <http://www.stanford.edu/dept/pres-provost/irds/assessment/downloads/AM.pdf>.

Suskie, L. (2009). *Assessing student learning: a common sense guide* (2<sup>nd</sup> ed.). San Francisco, CA: Jossey-Bass.