



PITTSBURG STATE UNIVERSITY

OFFICE OF ANALYSIS, PLANNING & ASSESSMENT

Assessment Handbook

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Preface

This handbook was created to serve as a guide for Pittsburg State college/departmental assessment program. The handbook is presented to help faculty and staff at Pittsburg State University improve their understanding of assessment. This handbook should be a beneficial guide to both new and experienced faculty and was written to provide simple, basic information. It, by no means, covers all of the information available on assessment. The information presented in this handbook was pulled from my experiences working with assessment as well as various assessment experts and Internet sources (see the reference section).

We are indebted to Mindy Maher, Ph.D., Director of Institutional Research and Assessment at Bluefield State College, Bluefield West Virginia, for allowing us to adapt her materials.

We hope that you will find this handbook to be a helpful tool as we all attempt to learn more about assessment. If any of the terms are unfamiliar, please refer to the glossary.

Sincerely,

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Chapter

1

Assessment Basics

What is assessment?

Purposes of assessment

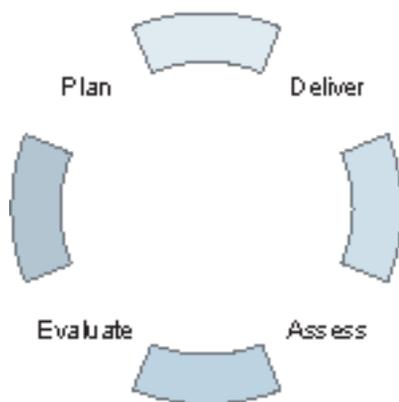
Components of effective assessment

Levels of assessment

The assessment process is not an end in itself, but is a *process* for educational improvement. An effective assessment program can be used to **improve student learning, facilitate instructional/academic improvements, and validate institutional effectiveness**. Most likely, your College's commitment to assessment is grounded in its mission to provide a quality learning environment for its students.

What is Assessment?

Although assessment generally refers to the evaluation of student learning, it can also be used to refer to the evaluation of institutional effectiveness. Whereas faculty members assess what their students know and are able to do within a course or academic program, a Registrar's Office might assess the effectiveness of the registration process.



Assessment is a process.

For continuous improvement to occur, major processes should be assessed after delivery. Then, assessment findings are evaluated and recommendations for improvement are fed into subsequent planning.



Assessment of student learning is a systematic attempt to...

- understand what students are/aren't learning
- provide feedback to reinforce student learning
- investigate and improve teaching strategies
- improve student learning!

Assessment of institutional effectiveness is...

- the process of setting goals, measuring performance, and using data in a cycle of planning and evaluation
- measuring an institution's ability to meet its stated goals and outcomes



Assessment is NOT...

- solely an administrative activity.
- a means of punishment. It is for improvement only!
- an intrusion into a faculty member's classroom or an infringement on academic freedom.

Purposes of Assessment

Although there are various purposes for assessment, a central function is to improve student learning, which is important for all educational institutions. In addition, assessment efforts are typically mandated by accreditation criteria, governing bodies, and university administration due to an increased **need for accountability** of educational institutions. As a consequence, a culture of assessment is rapidly growing on college campus as faculty and staff reap its benefits.

Accountability: Institutions of higher education are under increasing scrutiny from governing bodies and stakeholders to provide evidence of effectiveness. Assessment is the best means of providing such information.

Accreditation: Assessment of student learning and institutional effectiveness is also a key component to all accreditation criteria. For instance, the Higher Learning Commission of the North Central Association of Colleges of Schools states that:

...Assessment of student academic achievement is fundamental for all organizations that place student learning at the center of their educa-

capacity for effective assessment of student learning will figure more prominently than ever in the accreditation relationship established between the Commission and that organization.

Decision Making: Assessment results can be used to improve decision-making processes. For example, a program could use its assessment data to support requests for budget increases, curricular changes, changes in procedures, etc.

Institutional Improvement: Simply put, the purpose of assessment is improvement: improvement of student, academic programs, and university processes.

Components of Effective Assessment

First and foremost, a successful assessment program requires dedication from the Pittstate faculty, staff, and administration and a commitment to student learning; however, commitment and dedication must also be tempered by proper planning. Although volumes of books and scores of conference presentations have centered on the making of an effective assessment program, there are a few key points they generally have in common.

- Assessment efforts must stem from the University mission statement and be driven by goals and objectives.
- Assessment must be founded on a plan that is continuously evaluated and revised.
- Assessment must be faculty driven (or unit-driven when assessing institutional effectiveness) and be sustained by administrative commitment.
- Assessment results must be used to document outcomes, make improvements in teaching or curriculum, and assist with planning/budgeting decisions.

Levels of Assessment

Assessment of student learning occurs within three levels: course, program, and institution.

I. Institutional-Level Assessment involves assessing students across an

II. **Program-Level Assessment** involves assessing student learning within a department or unit. For example, certification tests can be used to gauge student learning/readiness upon program completion.

III. **Course-Level Assessment** involves assessing student learning within a single course (usually across multiple sections). For example, Developmental English may be assessed to ascertain how well students are learning grammar and writing skills using a pre-test at the beginning of the semester and a post-test at the end.

An Additional Note About Program-Level Assessment

One important step in the development of an institutional assessment plan is the establishment of program-level assessment plans. Program assessment can be used to determine if intended outcomes are being achieved and how programs can be improved.

Effective program assessment provides answers to three questions:



1. What is the program trying to accomplish?
2. How well is the program accomplishing its intended outcomes?
3. How can the program improve?

Chapter 2

Getting Started

*Developing an assessment plan
Constructing goals and objectives*

Planning is the first step toward the development of a successful assessment program. **Assessment efforts must be driven by stated goals and objectives** in order to understand how assessment efforts coincide with Pittstate's mission, to know what is being measured, and to determine whether findings are acceptable. The assessment plan serves as a road map to guide the Pittsburg State University assessment endeavors.

Developing an Assessment Plan

Although the development of an assessment plan isn't quite this easy, here are five quick steps toward developing an assessment plan.

1. Establish goals tied to University mission and purposes.
2. Create specific objectives to measure each goal.
-  3. Select assessment tools (multiple methods) for each objective.
4. Collect and analyze the data to evaluate whether objectives and performance criteria were met.
5. Use the findings to facilitate continuous improvement, assist with decision making, provide a basis for evaluation, and make recommendations for improvement(s).

Constructing Goals and Objectives

Successful assessment begins with a clear sense of what the program/unit intends to accomplish. To begin, program goals and objectives must be defined. Once these are identified, assessment can begin to determine how well these goals and objectives are being met. Keep in mind, different disciplines use different terminology to label goals and objectives. **The concept, not the label, is what is most important.**

Goals are broad, long-range statements about the general purpose of instruction or a department. Goals are primarily used in policy making and general planning. Typically three to five goals per program are acceptable, but goals are determined by program needs and may require more than five. Keep in mind the Pittsburg State University's strategic planning goals when establishing program goals.

Where do you start?

Consider these steps to assist with creating goals.

- What should students know and be able to do upon completion (of course, program, etc.)?
- Describe the ideal student or graduate in your program (or the ideal process).
- Describe the ideal process (registration, accounting, student services, etc.).
- Review how the program is described in existing university statements (catalog, brochures, accreditation reports, course syllabi, etc.)?
- For what do you want your department to be known on campus?

Examples of Goals

Student Learning Goal: Students will master skills required to function as a professional in their field of study.

Student Learning Goal: Students will demonstrate an understanding of the important concepts and methods in the sciences.

Institutional Effectiveness Goal: Student enrollment will increase.

Institutional Effectiveness Goal: The campus technology system will be expanded.

Objectives are brief, clear statements that describe desired outcomes in relation to broader goals. Objectives specify what is expected and describe what should be assessed. Keep in mind that objectives state your desired outcomes. **If these desired outcomes are not met, be prepared to follow-up with an improvement plan or recommendations for change.**

Before writing objectives, ask yourself: For each goal, what are the specific behaviors, skill, or abilities that would identify if the goal is being achieved?

Writing Objectives... Objectives should:

- use simple terminology to describe intended outcomes
- be realistic and achievable
- use action verbs to describe definite, observable actions
- include the actions and behaviors being assessed
- include a description of the conditions in which the action takes place
- include the criteria for assessment (what is the expected level of performance?)
- describe the target group (who is being assessed?)



Examples of Objectives

Student Learning Objective: Students' pass rate on the CAAP exam will meet or exceed the national norm for each sub-test.

Student Learning Objective: Students' mean scores will be at least a 3.0 on a 4-point scale on the final project in their capstone course, as assessed by the departmental rubric.

Institutional Effectiveness Objective: The official duplicated yearly headcount of credit students will increase by at least 20% over the previous year.

Institutional Effectiveness Objective: 100% of all deadlines for HB2224 will be met.

Chapter 3

Assessment Tools

What is Being Assessed?

Assessment Tools

Strengths and Weaknesses for Common Tools

Guidelines and Tips

Creating Rubrics

Once goals and objectives have been established, the next step is to identify appropriate assessment tools to measure the stated objectives. Various assessment tools are available and the strengths and weaknesses of each should be weighed in relation to the needs of the department. Upon selection, these tools should be described, along with any pertinent rationale, in the assessment plan.

What is Being Assessed?



- **Student learning** (knowledge of the discipline, skills, and values)
- **Student/Client Attitudes and Perceptions** (topics: advising and registration, campus facilities, course scheduling, curriculum, support services, campus climate, teaching, student activities, preparation for work or graduate school, etc.)
- **Program Processes and Services** (Are students/clients being served efficiently and effectively?)

Assessment Tools

Assessment Tools

Data Source	Assessment Tool Examples	Who/What is Analyzed?	What Will the Data Tell You?
Self-Report	Surveys Interviews Focus groups Reflective essays	Students (entering, enrolled, & graduating) Alumni Employers Faculty Staff Parents	Perceptions and Campus climate Perceived learning University services Attitudes Needs
Achievement/ Knowledge Test	End-of-the-course questions Instructor designed tests Pre & post-tests Standardized tests Certification exams	Students (Program-level assessment typically assesses students near program completion and either compares them to an established standard or to entering students)	Mastery and knowledge of principles and skills
Students Academic Work	Capstone course products Portfolios Presentations Papers and reports Course assignments S&Ls assessments	Students (Program level assessment typically assesses students near program completion and either compares them to an established standard or to entering students)	Mastery and knowledge of principles and skills
Campus Data	Enrollment data Credit hour data Class distribution Student use data	Administrative units Programs Student success Student transcripts	Trends Accuracy Efficiency Processes

Strengths and Weaknesses for Common Tools

SELF-REPORTS:

Surveys (a series of questions used to obtain feedback from target group)

Strength: quick to administer and can provide immediate feedback

Weakness: difficult to create effective survey and to obtain honest, helpful responses

Focus groups (orchestrated discussions with target groups to obtain feedback)

Strength: provides a wealth of information

Weakness: may be difficult to analyze information obtained, time consuming, and may be difficult to obtain honest answers

ACHIEVEMENT/KNOWLEDGE TESTS:

Embedded questions on exams (key questions are inserted into a course exam and later extracted for assessment purposes)

Strength: students are motivated to perform because items are graded

Weakness: locally-developed tests are not always considered “valid”

Instructor-designed exams/tests

Strength: items can be created to match assessment needs and can be implemented departmentally across different sections and instructors

Weakness: locally-developed tests are not always considered “valid”

Pre- and Post-Tests

Strength: can provide a measure of progress or growth in student learning across a semester or a program

Weakness: similarity of questions is needed for comparison purposes, danger of “teaching to the test”, and test/re-test issues

Standardized or certification exams (national exams)

Strength: provides normative data for comparisons and provides a beneficial benchmark for students

Weakness: may or may not fit with learning objectives

STUDENT ACADEMIC WORK:

Capstone Course Products (a culminating product of student work)

Strength: excellent source for program-level assessment data

Weakness: may result in small sample sizes

Portfolios (collections of student work, usually rated with a rubric)

Strength: assessing several samples of work provides more valid data than assessing performance at one point in time

Weakness: obtaining objective evaluations of work (creating rubric and training raters)

Course assignments (oral presentations, papers, lab assignments that would be rated with a rubric)

Strength: existing assignments make assessment easier and more pertinent

Weakness: obtaining objective evaluations of work

CAMPUS DATA:

Archival data (pre-existing or post-hoc data, such as grades in previous or subsequent courses, retention and enrollment data, graduation statistics)

Strength: can provide a wealth of background data

Weakness: may or may not be a direct measure

Guidelines and Tips

Guidelines for Choosing Assessment Tools

- 1. Tools must relate to goals and objectives:** Data collected should provide evidence of whether or not objectives were met.
- 2. Use multiple methods:** In order to obtain valid results, important goals/objectives should be assessed using more than one measure. Use both direct/indirect and qualitative/quantitative measures (see glossary).
- 3. Choose tools that will be useful:** The point of assessment is to use the data to improve processes and student learning, so choose useful tools.
- 4. Keep it simple:** Good assessment doesn't have to be complicated or overwhelming.
- 5. Use existing tools:** When possible, use or adapt assessment measures that are already being used. The most effective assessment plan is one that uses available information and resources!



Using Direct and Indirect Tools

Assessment tools are labeled as either **direct** or **indirect**:

- **Direct tools** refer to objective measures of knowledge or ability, such as students' scores on a national standardized exam, student performance on a final paper, or the number of applicant inquiries received after a recruiting visit.
- **Indirect tools** refer to subjective measures of attitude, perception, or belief such as a questionnaire to assess students' perceptions of their knowledge or a survey of the effectiveness of a recruiting visit.

Both direct and indirect assessment tools are invaluable for assessing either student learning or institutional effectiveness. For example, when assessing student support services it is important to have direct measures of the number of students served and the outcome of these services, but it is equally valuable to gather indirect data to obtain students' evaluation of the services received.

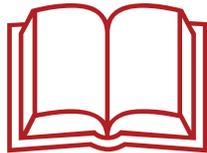
It is important to have a balance of both direct and indirect tools in your assessment plan. An assessment plan without indirect tools does not provide data on the opinions and perceptions of its clients/students. Similarly, an assessment plan without appropriate direct tools does not provide data on actual processes or student learning.

Tips for Academic Program-Level Assessment Tools

Program-level assessment should provide data on the culmination of student learning within academic programs. Assessment measures can be used to **compare entering students with advanced students** in order to examine learning over time. Or, assessment measures can be used to examine the level of knowledge and skills attained by program graduates by **assessing advanced students in comparison to a stated level of competence.**

Tips for Academic Course-Level Assessment Tools

Course-level assessment should provide the instructors with information on student learning within an individual course to assist with academic planning, curriculum issues, and teaching revisions. **Assessment can either be performed within a single instructor's classroom or applied across all sections and all instructors for a particular course.** The latter method improves validity of the data and can often increase the consistency of teaching across multiple sections.



The syllabus is an important resource for course-level assessment. **Instructors should begin by reviewing the course goals stated on the syllabus to choose appropriate assessment tools.** One popular tool for course-level assessment is the **pre-/post-test.** This method involves creating a test that assesses the most important course goals and administering this test one the first and last day of the semester. This method provides a measure of knowledge gain and can be used in combination with an item analysis to determine students' strong and weak areas. Instructors might also consider using a **final paper, project, or presentation** to assess student learning in a course. In such cases, a rubric can be used to assess the student academic work.

Creating Rubrics for Assessing Student Work

Rubrics are an effective way to assess students' ability on qualitative measures, such as portfolios, papers, oral presentations, etc. A rubric is simply a set of scoring guidelines used to evaluate student work. It consists of a set of categories to outline levels of competence (such as excellent, good, fair, poor). These categories are used to evaluate the important components of the work being assessed. For example, an oral presentation might be assessed on the student's organization, delivery style, and content of the speech.

Why are rubrics effective? Rubrics...

- make grading more consistent & fair
- set standards for student work
- clarify expectations
- help students to evaluate their own work
- form the basis for assessment

Constructing a rubric

1. Determine what components or essential traits will be used to evaluate student work.

- On what do you base your grades? Enter this on the far left column of your rubric (see example on next page).

2. Determine how many levels of competence (criterion) to measure.

- Four levels are the most commonly used and are easier to distinguish when rating (see examples below):
 - ◆ Exemplary, Proficient, Marginal, Unacceptable
 - ◆ Advanced, Proficient, Novice, Beginner
 - ◆ Strong, Acceptable, Weak, Not Acceptable
 - ◆ Advanced, Mastery, Aware, Unaware
 - ◆ Excellent, Good, Fair, Poor



3. For each level of competence, provide a clear description of expected performance.

- Use objective descriptors, not value statements
- Include both qualitative & quantitative differences

4. Try it out! Revise!

- Test your rubric on sample work to look for possible “kinks”
- Think about loopholes (such as late assignments, wrong format, wrong assignment, plagiarism, etc.)

Sample Rubric for Public Speaking Assignment

Rule # Description	Point Scale				
	Excellent 4	Good 3	Fair 2	Poor 1	Score
Provides an appropriate introduction and conclusion to organize the speech.	Speech is well organized with a thorough introduction and conclusion to preview and summarize the topic.	Speech is organized with a good introduction and conclusion to preview and summarize the topic.	Speech is inadequately organized with a weak introduction and conclusion.	Speech is unorganized and does not contain an appropriate introduction or conclusion.	
Provides main points that are well developed and clear.	Main points of the speech thoroughly explain the topic and are very clear, well developed, and focused.	Main points of the speech are clear, well developed and focused.	Main points of the speech are not adequately clear, developed or focused.	Main points are weak or not appropriate.	
Uses appropriate posture, movement, and eye contact to give a polished and professional presentation.	Speaker uses excellent eye contact and gestures to appear strong and professional.	Speaker uses good eye contact and gestures to appear fairly polished and professional.	Speaker uses inadequate eye contact and/or gestures and is not adequately strong or professional.	Eye contact is absent and gestures are either distracting or absent.	
Speaks clearly and understandably using standard, edited English.	Speaker uses very clear and understandable speech and speaks in standard, edited English.	Speaker uses understandable speech and speaks in standard edited English.	Speaker is not adequately clear or understandable and does not speak in standard edited English.	Speaker is not clear or understandable speech and does not speak in standard, edited English.	

Chapter 4

Implementation

Collecting data and analyzing results
Closing the feedback loop

The final step occurs in three parts: 1) collecting the necessary data, 2) analyzing the results to determine if objectives were met, and 3) using the results to make decisions and changes in order to improve student learning and/or institutional effectiveness.

Data analyses do not need to be overly complicated. Their purpose is to **provide useful information on whether or not objectives were met**. Data can be misleading, so be sure to discuss data in relation to goals and objectives. For instance, capstone courses are commonly used to identify strengths and weaknesses in student learning across the entirety of the program. These data should not be used to evaluate the performance of the capstone course instructor.

Collecting Data



Data for Institutional Effectiveness: Data collection for institutional effectiveness purposes tends to be straightforward and simple. **The stated goals/objectives should outline the necessary data to be collected.** For example, student services might have an objective to increase the number of students who receive tutoring services by 5% over the previous year. Consequently, the necessary data would be the number of students who received tutoring during the previous and current years in order to determine the percentage change. **Reviewing your objectives with data collection in mind can help determine if they are adequately specific and measurable.**

Data for Academic Assessment: Data collection for academic assessment is more complex and often depends on the assessment tool being used. Use the following chart as a reference for data collection based upon common academic assessment tools. The lists provided do not include all possible forms of data collection, but are a starting point for commonly used methods.

Assessment Method	Data Collection & Statistics
Standardized Tests	<ul style="list-style-type: none"> - number of students - overall mean score and range - sub-test mean scores and range (if available) - comparative data (national or regional means)
Pre-/Post-Tests	<ul style="list-style-type: none"> - number of students (only students who took both tests) - mean score for pre- and post-test and range - mean change score - data analysis comparison
Instructor-Designed Exam/Questionnaire (multiple choice, etc.)	<ul style="list-style-type: none"> - number of students - overall mean score and range - data analysis
Student Academic Work (composition project, portfolio, papers, presentation, etc.)	<ul style="list-style-type: none"> - number of students - overall mean rubric score and range - mean rubric score and range for each component
Survey/Questionnaire (with multiple choice items)	<ul style="list-style-type: none"> - number of students - number / percent of students responding to each item (for each question)
Survey/Questionnaire (with a Likert scale)	<ul style="list-style-type: none"> - number of students - mean score for each question - overall mean score and range (if applicable) - mean score and range for sub-sections (if applicable)
Survey/Questionnaire (with short answers)	<ul style="list-style-type: none"> - number of students - either a listing of all comments or a narrative summary of qualitative data

More Advanced Data Procedures

Once you've mastered the previous types of data collection and basic statistics, you might be interested in going further with your data. If so, here are some slightly more advanced methods to consider:

- Compare data across semesters! Collect data using the same tools over time to compare scores from year to year.
- Calculate standard deviations for your mean scores. Although they are generally not necessary for academic assessment, they provide a more accurate measure of the variability of scores (in comparison to the range).
- Compare scores obtained from different course sections (or compare day/evening sections or full-time/adjunct instructors).
- Correlate assessment data with students' overall course grades.
- Compare assessment data to students' placement scores.
- Compare assessment data to students' prior coursework. For example, a Chemistry instructor might compare students' assessment results based upon whether or not the students had taken College Algebra prior to Chemistry.

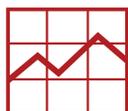


Analyzing Results

Collecting data is the first step, but analyzing the data is just as important. Once mean scores have been calculated and other types of data are presented, the data must be examined for “meaning.” More specifically, were your stated goals and objectives met? Did your assessment results meet your expectations?

Things to Consider When Analyzing Student Learning Data:

- What do the data indicate about students' mastery of subject matter or skills?
 - What do the data indicate about students' ability after program completion (graduate school or employment)?
 - Are there specific areas where student performance is outstanding? Weak?
 - Are there indications that point to weaknesses in general education skills (research, critical thinking, writing, etc.)?
- Do you see specific areas where you would like or expect to see higher performance levels?
- What was the most valuable thing learned from the assessment results?
- Was the assessment tool sufficient, or does it need to be revised?



Things to Consider When Analyzing Institutional Effectiveness Data:

- What do the data indicate about the quality of services provided?
- What do the data indicate about the satisfaction of the client?
- Are there specific areas where performance is outstanding or weak?
- Do you see specific areas where you would like or expect to see higher performance levels?
- What was the most valuable thing learned from the assessment results?
- Was the assessment tool sufficient, or does it need to be revised?



Closing the “Feedback Loop”

Remember, one purpose of assessment is **improvement**. So, data should be analyzed with this in mind. In order for assessment to be meaningful, its data must be used to improve processes.

Things to Think About

- How could teaching, curriculum, and/or processes be changed to improve outcomes?
- How could this information be used to help students improve their own learning (by providing feedback)?
- Who else would benefit from or use this information (other faculty, students, administrative offices, etc.)?

How to Use Assessment Data

- **Make Informed Decisions:** Use the findings to support planning and budgetary decisions or to supplement existing program review processes.
- **Share the Good News!** Communicate findings with other campus programs or stakeholders.
- **Plan for Next Year:** Use the findings to create goals and objectives for the upcoming year.
- **Improve Future Assessment:** Consider ways to improve the assessment process (reflect upon the tools, target group, timing, objectives, etc.)



Resources

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Terminology

Accountability: The demand by a community (public officials, taxpayers, etc.) for school officials to demonstrate that invested funds in education have led to measurable student learning.

Assessment plan: A document that outlines desired outcomes (student learning outcomes for academic programs), assessment tools (direct and indirect) used to measure the attainment of each outcome, goals or expected performance, data collection timelines and procedures, data analysis procedures, the individual(s) responsible for collection/review of data, and how the data will be communicated and used.

Benchmark: A performance standard used to measure competence and/or progress in relation to stated goals.

Classroom Assessment Techniques (CATs): see Formative Assessment

Cohort: A group whose progress is followed at different points in time.

Commercial, norm-referenced, or standardized exams: Tests that are purchased from a private vendor and administered to a large group of students. These “objective” tests are usually multiple-choice, and scores can be compared to a reference or norm group.

Competency test: A test that establishes whether a student has met a minimum standard of skills or knowledge. For example...

Competency: The level of performance that is considered to be acceptable.

Criteria or performance criteria: The standards by which performance is evaluated.

Criterion-referenced test: Tests that are designed to provide information on performance relative to a predetermined level or criteria (based on educational goals or outcomes), rather than comparing test performance to others (such as a reference or norm group).

Direct assessment tools: An objective measure of students’ knowledge, ability, or goal attainment.

Embedded assessment: A means of gathering assessment data that is built-in to the existing course or program. For example, a final research paper may be used for both a grade in a course and an assessment of students’ ability to locate and evaluate sources on the Internet.

External validity: The ability to generalize results of a study or test to other settings.

Formative assessment: Informal assessment of progress that is used to provide prompt feedback to improve teaching and student learning. Also called Classroom Assessment Techniques (CATs), these tools are usually not graded or formally analyzed.

Indirect assessment tools: A subjective measure of students’ knowledge, ability, or attitude (such as surveys or opinion polls).

Internal validity: Internal validity refers to the ability of a test to assess what it is intended to measure (taking into account its design and possible confounding variables).

Item analysis: Analyzing each item on a test (the proportions of students who select each answer) in order to determine students' strengths and weaknesses and possible problems with the test.

Locally developed or instructor-developed exams: Objective and/or subjective assessment tools designed by college faculty.

Mean or average: One of several ways of representing a group of responses with a single score (add up all the individual scores in a group and divide by the number of people or cases in the group).

Norm(-ative): An established standard of achievement that is commonly derived from the average performance of a large group.

Norm-referenced test: Tests that are designed to illustrate achievement differences between and among groups.

Portfolio: A collection of multiple student work samples that are generally compiled over time (within one course or across multiple courses) and are rated using rubrics.

Qualitative assessment: Measures that collect non-numerical data, such as interviews or short-answer questions.

Quantitative assessment: Measures that collect numerical data that can be analyzed statistically.

Reliability: The extent to which a test (or experiment) will produce the same results upon repeated trials.

Rubrics: A set of categories used to evaluate the important components of the work being assessed. Each category consists of levels of competence with a score to be assigned to each level and a clear description of what criteria must be met to attain each score.

Stakeholder: Anyone with a vested interest in the outcome of a program (such as faculty, students, administration, community members, and governing bodies).

Status report: A description of the implementation of the assessment plan, data analysis, how the data will be used in decisions or to improve student learning, and the results of previous changes.