



Office of Institutional  
Research & Effectiveness  
(OIRE)

## Student Learning Outcomes Assessment Resource Handbook

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# ASSESSMENT RESOURCES SUMMARY

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The Office of Institutional Research and Effectiveness has compiled the following information as a resource for assessment at Miami University. Recommendations for improvements are always welcome; please contact William Knight at [knightw3@miamioh.edu](mailto:knightw3@miamioh.edu).

## [Chapter 1: Overview of Student Learning Outcomes Assessment](#)

This section includes information on the rationale for and benefits of assessment; good practices in assessment; University, departmental, divisional, and office responsibilities; support resources for assessment; and a glossary of assessment terms.

## [Chapter 2: Department Assessment Plans](#)

This section includes information on the structure of departmental assessment plans, information for programs with external program accreditation, information about free-standing certificates, and a departmental assessment plan template.

## [Chapter 3: Department Assessment Reports](#)

This section includes information on the structure of departmental assessment reports, a departmental assessment report template, information about submitting assessment reports, and the assessment feedback rubric and a sample feedback report.

## [Chapter 4: Global Miami Plan Assessment](#)

This section includes information on global Miami Plan competencies and assessment.

## [Chapter 5: Assessment in Academic Support and Co-Curricular Units](#)

This section includes information on the required elements of assessment, lists of academic support and co-curricular units with contact persons and deadlines, and resources

## [Chapter 6: Learning Goals/Outcomes](#)

This section includes information on creating learning goals and examples of good and not-so-good learning goals.

## [Chapter 7: Curriculum Maps](#)

This section includes an overview and several examples of curriculum maps.

## [Chapter 8: Collecting Assessment Evidence](#)

This section includes information on and examples of direct and indirect measures and detailed descriptions of assessment methods.

## [Chapter 9: Using Surveys](#)

This section includes definitions, information on the appropriate use of surveys; advantages and disadvantages of surveys; types of surveys and survey questions; information on planning surveys, constructing survey items, and analyzing survey results; and frequently-asked questions.

## [Chapter 10: Using Tests](#)

This section includes definitions, information advantages and disadvantages of using tests, planning tests, features of a good test, analyzing test data, and frequently-asked questions.

## [Chapter 11: Using Performance-Based Assessment](#)

This section includes definitions, information on the appropriate use of performance-based assessment, advantages and disadvantages, types of performance-based assessment, planning performance-based assessment, analyzing performance-based data, and frequently-asked questions.

## [Chapter 12: Using Focus Groups](#)

This section includes definitions, information on appropriate use of focus groups, advantages and disadvantages, planning and conducting focus groups, and analyzing focus group data.

## [Chapter 13: Relating to Other Campus Assessment Efforts and Using Available Resources](#)

This section includes information on use of institutional data, transcript analysis, curriculum review, and anecdotal records; using interviews and unobtrusive measures; and the Office of Institutional Research and Effectiveness as an internal assessment resource.

## [Chapter 14: Analyzing, Interpreting, Communicating, and Acting on Assessment Results](#)

This section includes information on reporting assessment results; ensuring data quality; sharing assessment results; honest, balanced, fair, and useful reporting of assessment results; venues for sharing assessment results; advice for when people feel threatened by assessment results; ways to make results have the most impact; using assessment results effectively and appropriately; making better meaning of assessment results; moving from assessment results to action; provides case studies of departmental use of assessment activities; and includes frequently-asked questions.

## [Chapter 15: Making the Assessment Process More Manageable](#)

This section includes tangible suggestions for making assessment more manageable, setting priorities for assessment, examples of assessment information that may already be on hand, advantages and disadvantages of using samples of student work for Assessment, outlines a basic no-frills department assessment system, and includes information on rubrics.

## [Chapter 16: Motivating Colleagues to Participate in Assessment](#)

This section includes information on tangible actions to promote faculty participation in assessment, a discussion of the benefits of assessment, a consideration of assessment and academic freedom, why grades

are not sufficient evidence for assessment, common misconceptions about assessment, and a listing of journals that publish scholarship on assessment of college student learning.

### [Chapter 17: Print and Online Assessment Resources and Assessment Conferences](#)

This section includes information on print and online assessment resources as well as assessment conferences.

# Chapter 1: Overview of Student Learning Outcomes Assessment

*By taking ownership of assessment and developing an internally driven core process, colleges and universities can profile their students' learning within institutional educational practices and intentions. Moreover, within this context, assessment becomes a means to examine its educational intentions on its own terms within the complex ways that humans learn and within the populations an institution serves.*

(Maki, 2004, p.15)

Miami University's 2019 strategic plan documents notes in its statement of purpose:

Now is the time for Miami to transform for a new era, building an adaptive, responsive and financially sustainable foundation, with students immersed in academic and co-curricular experiences that prepare them to succeed in today's interconnected world. We will welcome students, faculty and staff of all backgrounds to a united Miami community, always learning and committed to a culture of investment and continuous improvement. (p. 4)

The Higher Learning Commission, Miami's regional accreditation, association, requires universities to assess student learning outcomes within the majors or degree programs as well as general education. The relevant accreditation criteria are listed below:

*3.A. The institution's degree programs are appropriate to higher education.*

- 1. Courses and programs are current and require levels of performance by students appropriate to the degree or certificate awarded.*
- 2. The institution articulates and differentiates learning goals for its undergraduate, graduate, post-baccalaureate, post-graduate, and certificate programs.*
- 3. The institution's program quality and learning goals are consistent across all modes of delivery and all locations (on the main campus, at additional locations, by distance delivery, as dual credit, through contractual or consortia arrangements, or any other modality).*

*4.B. The institution demonstrates a commitment to educational achievement and improvement through ongoing assessment of student learning.*

- 1. The institution has clearly stated goals for student learning and effective processes for assessment of student learning and achievement of learning goals.*
- 2. The institution assesses achievement of the learning outcomes that it claims for its curricular and co-curricular programs.*
- 3. The institution uses the information gained from assessment to improve student learning.*
- 4. The institution's processes and methodologies to assess student learning reflect good practice, including the substantial participation of faculty and other instructional staff members.*

Thus, due to both internal commitments and external requirements, the University must have assessment of student learning conducted at the departmental, divisional and institutional levels. Assessment is important not only because we are required to do it, but also because it is the right thing to do.

The University of Delaware (n.d.) has articulated the following benefits of assessment:

- increasing our confidence that we are putting our time and resources into activities that we value as an institution
- increasing our confidence that we are allocating resources to areas that are producing the outcomes we value
- gathering and using data that will enable us to make decisions that lead to improved instruction, stronger curricula, and effective and efficient policies
- strengthening our ability to say that our graduates are well-prepared to succeed in their future endeavors
- having ready access to data that will satisfy the requirements of accrediting agencies and funding agencies, and will inform various accountability driven conversations
- gathering and using data that will strengthen arguments for increased funding and/or resource allocations to areas that are producing valued outcomes
- increasing the effectiveness of our communications about the value of a Miami University education

The following principles of good practice, originally released at the American Association for Higher Education's Assessment Forum, provide important guidance for Miami's assessment efforts:

- The assessment of student learning begins with educational values.
- Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
- Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
- Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
- Assessment works best when it is ongoing, not episodic.
- Assessment fosters wider improvement when representatives from across the educational community are involved.
- Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
- Assessment is more likely to lead to improvement when it is part of a larger set of conditions that promote change.
- Through assessment, educators meet responsibilities to students and to the public.

- Educational programs, in order to be successful, require full engagement of faculty and staff members in the conversations about, and the design and practice of, student learning outcomes assessment.

(Hutchings, Ewell, & Banta, 2012)

Responsibility for maintaining and improving an effective assessment program rests with several sources:

## University Responsibilities

The University Assessment Council is responsible for overseeing assessment of student learning at Miami University. Its mission is “to promote a culture of assessment of student learning outcomes at Miami University in which data are used to improve the quality of the educational experience.” Toward that end, the committee:

- advises on policies, procedures, faculty development efforts, and best practices relating to assessment of student learning outcomes;
- annually collects assessment reports from departments and programs, including academic support units;
- annually reviews the effectiveness of plans, reports, and practices for assessing student learning at the University, department and program levels;
- communicates to Miami faculty and staff about assessment of student learning (e.g., *Assessment Briefs*);
- assists divisional committees in evaluating assessment plans and reports effectively prior to a department’s academic program review;
- provides guidance to Liberal Education Council on the assessment of the Global Miami Plan; and
- assists with other initiatives involved in the assessment of student learning as requested by the Provost.

The committee consists of the following members: Assistant Provost for Institutional Research and Effectiveness (chair); Director of Center for Teaching Excellence; Director of Liberal Education; Associate Dean of Students; Associate Dean of University Libraries; and one member (typically an associate dean) from each of the academic divisions who oversees assessment and/or curricular initiatives in the division.

## Departmental Responsibilities (Academic, Academic Support, and Co-Curricular)

The departmental procedure for assessing student learning in degree programs is as follows:

**Appoint departmental assessment contact(s)** who is/are responsible for coordinating assessment of all majors, degree programs, and “free-standing” certificates. Submit name to William Knight, Assistant Provost, for Institutional Research and Effectiveness, who will provide assistance and support.

**Determine an annual submission date.** Each department will be expected to submit its new plan (when developing or revising) and its annual assessment report(s) once each year. Departments may select either end of June or end of December for the annual submission date. Materials should be submitted annually to Dr. Knight by the selected date.

**Develop or revise plan for assessing at least three student learning outcomes** for each degree program, major and free-standing certificate in department. Try to select at least one introductory and one capstone/culminating course to collect and assessment data. If the program is offered in in-person and online modes, be sure to compare findings. Submit to Dr. Knight by the annual submission date (when developing or revising).

**Collect data (student work) from the appropriate courses and other learning opportunities** annually (or as often as possible) during appropriate semesters or times. Assess using the rubric(s), scoring guides or other instruments identified in your assessment plan.

**Share assessment progress and findings annually with faculty or staff colleagues** in the department. Once sufficient data are available to develop significant findings, **identify steps for improvement that are aligned with findings.**

**Create an annual report** that summarizes the plan for assessment (outcomes, method of assessment), significant findings from the assessment, and plans for improvement based upon assessment findings. If there is insufficient evidence to lead to substantive conclusions, submit an annual report summarizing where you are in the data-gathering process. Submit report to Dr. Knight by your selected submission date (end of June or December) each year.

Each year, **review the brief feedback report** offered by Dr. Knight and be sure to address recommendations during the next reporting cycle.

Prior to your program review, carefully review the evaluation report of the divisional committee as well as report of prior program review teams. Meet with your representative on the University Assessment Council to revise the assessment plan to address feedback offered in reports.

## Divisional Responsibilities

Each division's curriculum and/or assessment committee is responsible for reviewing each department's assessment activity by the end of April the year prior to when the department undergoes program review. The procedure is summarized below.

1. University Assessment Council members train all appropriate divisional committees on how to evaluate departmental assessment activity each year. The Assistant Provost provides committees with the annual assessment reports of the department that have been created since the last program review.
2. Committees review and evaluate departments' assessment activity and creates summary reports. Committees submit reports to William Knight, Assistant Provost for Institutional Research and Effectiveness.
3. The report is included in all program review materials and evaluated by the external and internal review teams as part of the normal program review process.

## Liberal Education Office Responsibilities

The Revision of the Global Miami Plan approved by University Senate in 2014 included a brief description of a plan for assessing student learning. The assessment plan noted that the "two signature competencies of written communication and critical thinking will be formally assessed."

The Office of Liberal Education in collaboration with Liberal Education Council and the University Assessment Council is responsible for overseeing assessment of student learning in the Global Miami Plan.

## Office of Institutional Research and Effectiveness Responsibilities

The Assistant Provost for Institutional Research and Effectiveness provides leadership and support for all aspects of student learning assessment. Upon request the Office of Institutional Research and Effectiveness provides information (e.g., courses taken, entrance examination scores, institutional survey results) to contextualize and enrich assessment results as well as assistance with surveys and data analysis.

## Support for Departments and Divisions

- **Assessment Resources Website**, which includes an overview of assessment of student learning, templates for and samples of departmental assessment plans and reports, sample rubrics and curriculum maps, templates and samples of evaluation reports of departmental assessment activity, etc.;
- **Annual Feedback on Assessment Reports** to offer departments further ideas and support for continuous improvement;

- **Training Workshops for Divisional Committees**, which offers guidelines for evaluating departmental assessment reports as well as an interactive portion in which participants practice evaluating sample documents from an imaginary department;
- **Bi-Monthly Assessment Briefs**, which provide success stories, tips and assessment findings from departments and other units across the University;
- **Assessment Projects**, which focus on special topics of interest, such as comparing the quality of learning in a full-term versus a compressed delivery course.

## Glossary of Assessment Terms

**Assessment:** is the systematic collection, review, and use of information about educational programs undertaken for the purposes of improving student learning and development (Palomba & Banta, 1999). The purpose of assessment is to provide information about the student learning and development that occurs as a result of a program. A “program” may be any activity, project, function, or policy that has an identifiable purpose or set of objectives.

**Curriculum Mapping:** The process of aligning courses/activities with program/major level goals and objectives, often done systematically with faculty/staff involvement. Curriculum mapping is a process for recording what content and skills are actually taught in a class, activity, or program.

**Measure:** Measurement refers to the process by which the attributes or dimensions of some physical object (e.g., student) are determined. In the context of assessment of student learning or development, measurement can involve a combination of qualitative and quantitative information to determine levels or qualities of student learning and development. The word measure is also intended may address the type or level of program activities conducted (process), the direct products and services delivered by a program (outputs), and/or the results of those products and services (outcomes).

**Direct Measures** Direct measures require students to demonstrate their knowledge and skills. They provide tangible, visible and self-explanatory evidence of what students have and have not learned as a result of a course, program, or activity (Suskie, 2009; Palomba and Banta, 1999).

**Authentic:** based on examining genuine or real examples of students’ work. Work that closely reflects goals and objectives for learning. Authentic assessment reveals something about the standards that are at the heart of a subject; asking students to use judgment and innovation as they “do” and explore the subject. (Wiggins, 1989 as in Palomba & Banta, 1999).

**Embedded:** program, general education, or institutional assessments that are embedded into course work. In other words, they are course assessments that do double duty, providing information not only on what students have learned in the course but also on their progress in achieving program or organizational goals. Because embedded assessment instruments are typically designed by faculty and staff, they match up well with local learning goals. They therefore yield information that faculty and staff value and are likely used to improve teaching and learning (Suskie, 2009).

**Portfolio Assessment:** a type of performance assessment in which students' work is systematically collected and reviewed for evidence of student learning. In addition to examples of their work, most portfolios include reflective statements prepared by students. Portfolios are assessed for evidence of student achievement with respect to established student learning outcomes and standards (Palomba & Banta, 1999).

**Full-Cycle Assessment:** The complete process of developing learning goals (What do we want students to be able to do when they complete our program?), collecting assessment evidence (How well are students achieving these goals, and what factors influence their learning?), and reflecting upon implications and taking-action based on assessment results (How can we use the information to improve student learning?). Two additional steps in the assessment process that may be useful include mapping learning goals to the curriculum (Where do students have the opportunity for learning?) and stating expectations (What is the expected level of performance?)

**Indirect Measures:** Assessments that measure opinions or thoughts about students' or alumni's own knowledge, skills, attitudes, learning experiences, perception of services received or employers' opinions. While these types of measures are important and necessary they do not measure students' performance directly. They supplement direct measures of learning by providing information about how and why learning is occurring (Hansen, 2011).

**Focus Groups:** a group selected for its relevance to an evaluation that is engaged by a trained facilitator in a series of discussions designed for sharing insights, ideas, and observations on a topic of concern to the evaluation (National Science Foundation, 2010).

**Interviews:** occur when researchers ask one or more participants general, open-ended questions and records their answers (Creswell, 2008).

**Surveys:** A survey is a method of collecting information from people about their characteristics, behaviors, attitudes, or perceptions. Surveys most often take the form of questionnaires or structured interviews (Palomba & Banta, 1999). General definition: an attempt to estimate the opinions, characteristics, or behaviors of a particular population by investigation of a representative sample.

**The Higher Learning Commission (HLC)** is one of six regional institutional accreditors in the United States. The Higher Learning Commission accredits degree-granting post-secondary educational institutions in more than 1,000 colleges and universities in nineteen states. The states are Arkansas, Arizona, Colorado, Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, Oklahoma, New Mexico, South Dakota, Wisconsin, West Virginia, and Wyoming.

**Rubric:** A set of categories that define and describe the important components of the work being completed, critiqued, and assessed. Each category contains a gradation of levels of completion or competence with a

score assigned to each level and a clear description of what criteria need to be met to attain the score at each level.

**Student Learning Outcomes:** specify what students will know, be able to do, or be able to demonstrate when they have completed or participated in academic program(s) leading to certification or a degree. Outcomes are often expressed as knowledge, skills, attitudes, behaviors, or values. A multiple methods approach is recommended to assess student learning outcomes indirectly and directly. Direct measures of student learning require students to demonstrate their knowledge and skills. They provide tangible, visible and self-explanatory evidence of what students have and have not learned as a result of a course, program, or activity (Suskie, 2009; Palomba & Banta, 1999).

**Value Added:** the increase in learning that occurs during a course, program, or undergraduate education. Can either focus on the individual student (how much better a student can write, for example, at the end than at the beginning) or on a cohort of students (whether senior papers demonstrate more sophisticated writing skills in the aggregate than freshmen papers). Requires a baseline measurement for comparison (Leskes, 2002).

(adapted from the Glossary of Assessment Terms compiled by the IUPUI Advanced Practices Committee)

## References

- Creswell, J. W. (Ed.). (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd Ed.). Upper Saddle River, New Jersey: Pearson Prentice Hall.
- Hansen, M. (2011). Direct and Indirect Measures of Student Learning. *Minutes: Program Review and Assessment Committee (March 11, 2001)*. IUPUI.
- Leskes, A. (2002). Beyond confusion: An assessment glossary [Electronic version]. Association of American Colleges and Universities (AACU): *Peer Review*, Winter / Spring, 2002. Retrieved May 6, 2011 from: [http://assessment.uconn.edu/docs/resources/Andrea\\_Leskes\\_Assessment\\_Glossary.pdf](http://assessment.uconn.edu/docs/resources/Andrea_Leskes_Assessment_Glossary.pdf).
- Hutchings, P., Ewell, P, & Banta, T. (2012). *AAHE Principles of Good Practice: Aging Nicely*. Retrieved from <http://www.learningoutcomesassessment.org/PrinciplesofAssessment.html>.
- IUPUI Advanced Practices Committee. (n.d.). *Glossary of assessment terms*. Retrieved from <https://planning.iupui.edu/assessment/prac-files/glossary/glossary-terms.pdf>.
- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Miami University. (2019). *Miami University's strategic plan*. Retrieved from [https://miamioh.edu/files/documents/about-miami/president/strategic-plan/strategic-plan-06-28-19\\_508.pdf](https://miamioh.edu/files/documents/about-miami/president/strategic-plan/strategic-plan-06-28-19_508.pdf)
- National Science Foundation. (2010). *The 2010 user-friendly handbook for project evaluation*. United States. Retrieved April 22, 2011 from: <http://caise.insci.org/uploads/docs/TheUserFriendlyGuide.pdf>
- Palomba, C. A. & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco, CA: Jossey-Bass.

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

University of Delaware, Office of Educational Assessment. (n.d.). *Student learning outcomes assessment manual*.

Wiggins, G. (1989). A true test: Toward a more authentic and equitable assessment. *Phi Delta Kappan*, 70, pp. 703-713.

## Chapter 2: Department Assessment Plans

*Any undertaking benefits from some kind of plan. . . . Assessment is no different; it will be more effective and successful if you plan your work. (Suskie, 2009, p.98)*

### Overview of Department Assessment Plans

All degree programs (i.e., all graduate degrees, undergraduate majors or “free-standing” certificates) (see definition below) whether delivered in online or face-to-face mode, must develop an assessment plan that describes the student learning outcomes to be assessed, the direct and indirect forms of assessment of the student learning outcomes, and the means of disseminating assessment findings to faculty.

Co-majors, minors as well as certificate programs that are offered only to existing Miami students pursuing other Miami degrees are not required (but are highly encouraged) to develop assessment plans.

An assessment plan should be developed for a degree program in the following instances:

- when the degree program is first proposed;
- when an existing degree program changes the student learning outcomes to be assessed in significant ways (e.g., more than modest wording changes);
- when the faculty members decide that a better means (or methods) of assessment are needed.

### Externally-Accredited Programs

If a degree program and/or department or division is accredited by an external agency beyond the Higher Learning Commission (ABET, AACSB, CAEL, etc.), and *if the accrediting body requires full-cycle and direct assessment of student learning outcomes* (assessment of actual student work that is discussed and used for improvement), the program/unit may use the assessment data collected for these processes *provided that they comply with the HLC "full cycle" assessment requirement.*

### Free-Standing Certificates

The requirement for an assessment plan and annual reports apply to “free standing” certificate programs, i.e., those which are open to students external to Miami--that is, students who are not already pursuing any other Miami degrees. If a certificate program requires a student to be enrolled in an already existing Miami degree program, then a separate assessment plan is *not* needed.

## Assessment Plan Composition

- **Name of Program and Department**
- **Name of Person Completing the Plan**
- **Department or Program Mission Statement**
- **Listing of three or more measurable student learning outcomes.** Outcomes can be drawn entirely or partially from those used in other assessment plans (e.g. those required for professional accreditation or the academic division, such as the CAS Writing Outcomes Plan). Undergraduate degree programs are encouraged to include in their assessment plans at least one of the outcomes advanced in the Global Miami Plan (e.g., critical thinking, written communication). Outcomes should be aligned with the mission statement of the program or department.
- **Explanation of where the assessment will be done.** A capstone or culminating course as one of the courses is an ideal choice for one of the assessment sites. If the degree program or major includes liberal education courses, departments are encouraged to select at least one liberal education course. It is important to ensure that work will be assessed for at least 20% of majors.
- **Description of the methods to measure the outcomes.** Multiple methods should be used. Generally, departments and programs measure directly by collecting student work and assessing the work using a rubric(s) or rating scale(s). Departments or programs typically measure indirectly by including a question or questions about the outcomes on the relevant course evaluation(s). However, focus groups, surveys or gathering other indirect data (such as employer placement rates) are also good indirect measures.
- **Explanation of how the department or program will share the findings of the assessment** of the student learning outcomes with faculty and other stakeholders. Typically, a person responsible for assessment within the department or program prepares a draft of the report and shares it with faculty and perhaps others (staff, students) at a department meeting. Faculty discuss and plan what changes could be made to improve deficiencies revealed in the assessment findings. The improvement strategies are then incorporated into the final report. Each year, the improvements that were made are revisited, new assessment data discussed and additional improvements are made.

# Departmental Assessment Plan Template

## Program Information

- Academic Program (Major, Certificate Name)
- Actual Degree Name (B.S., B.A. in XXX)
- Department or Program
- Division
- Academic Year (when the plan will begin, or “already in progress”)

## Assessment Contact(s)

1. Name
2. Title
3. Email address

## Program Mission Statement

This is an educational mission statement focused on the major, not an organizational mission statement for your department or division. Often this statement can be found in the General Bulletin.

Example: *The mission of [insert name of major or degree program] is to [insert the program’s primary educational purpose] by providing majors [insert the program’s primary functions and activities] in order to [insert description of how the major or degree program contributes to the development and careers of its students].*

## Student Learning Outcomes

Each program or major should have at least three measurable outcomes. Outcomes describe the knowledge, skills, and abilities that a student should attain by completing the degree program. Each statement should be specific, well-defined, simple (not compound), and aligned with the program’s mission.

## Means of Assessment

- **Data Collection:** For each learning outcome, state where and when data will be collected, who will be responsible, how and if student work will be sampled, and estimated sample size. Please indicate how you will assure that the data are representative.
- **Direct, Course-Embedded Assessment:** For each learning outcome, list the course or courses where students will be demonstrating the outcomes and the assignment(s) in the course(s) that you will use for assessment purposes (e.g., capstone project, final examination, research paper, portfolio, etc.).

- **Scoring:** For each learning outcome, describe how you will score students' level of mastery of the outcomes. For example, will you use a rubric, rating scale or answer key, or will it be scored by a testing company? If your plan has a rubric or rating scale, be sure to include a copy as an appendix. Who will do the scoring? One or more persons? How will scores be reported (e.g., total scales or sub scores)? Note: It is better if the scorers are not the instructors of the students being assessed.
- **Indirect Assessment (Perceptions of Student Learning):** For each learning outcome, describe how you will indirectly assess students' and other stakeholders' perceptions of their learning in relation to these outcomes (e.g., course evaluations, focus groups with graduating students, alumni survey, employer survey, data relating to student outcomes such as number of publications, job placement, etc.). Attach relevant questions on online course evaluations, alumni survey, employer survey, focus session, etc. in an appendix.

### **Closing the Loop**

**Feedback Loop:** Describe how and when you plan to share the findings of the assessment of these outcomes with faculty and other stakeholders. Explain briefly how you will ensure that your unit makes improvements based upon the assessment findings and revises the assessment plan as needed.

**Timeline:** Attach a timeline of major assessment activities to fulfill the assessment plan.

## Chapter 3: Department Assessment Reports

An annual assessment report should achieve the following goals:

- the data and findings in the report are consistent with the overall assessment plan; and
- the work (following the first reporting year) builds upon the findings and improvements made in previous years.

### Components of Assessment Reports

#### Student Learning Outcomes

Student learning outcomes should exhibit the following characteristics:

- use action verbs to indicate specific and detailed action steps;
- be measurable or observable;
- be aligned with department or program's mission statement, University strategic goals, and division goals (if available);
- be focused on student learning, rather than teaching (e.g., outcomes should describe what you want students to know or be able to do, rather than the content of the course that the faculty will be delivering). For example, "introduce students to the literature of William Faulkner" focuses on the teaching of the course, while "demonstrate the capacity to analyze the metaphors in a literary passage" is a student learning outcome.

#### Means of Assessment

The assessment measures in an assessment report should do the following:

- appropriately assess and align with the intended student learning outcomes;
- contain multiple types of measures (e.g. direct/indirect, objective/subjective, qualitative/quantitative) for all or most outcomes (usually in the form of direct assessment of student work scored with a rubric or rubrics as well as indirect assessment of the outcomes which is most often done by including relevant questions related to outcomes on course evaluations);
- clearly describe assessment instruments (and include copies of the instruments as appendices to the annual assessment report);
- yield meaningful data or information for improvement;
- provide for measurement in all modes of multi-modal offerings, i.e. if a course has both in-person and online sections, sampling should occur in both types of sections.

#### Assessment Results/Findings

Findings described in the assessment report should:

- provide a clear, complete, and well-organized summary of results for all assessment measures;
- include appropriate supporting documentation (tables, charts summarizing the data gathered);
- be interpreted in an appropriate scope (e.g., sample size and generalizability are considered);
- compare data between modes of instruction (if appropriate), i.e. were there differences in student performance between in-person and online sections?
- include conclusions drawn from and supported by assessment data and evidence;
- indicate how the data was shared and discussed with faculty and other appropriate stakeholders;
- evaluate the appropriateness of target population, assessment instruments, and methods utilized;
- compare new findings to past trends as appropriate.

Note: If there are not sufficient data to reach conclusions or findings, please report on how much data were collected, and indicate an anticipated date of when enough data will be available to reach conclusions. If your program has a very small number of students in it, you can confer with the Assistant Provost to discuss the option of submitting assessment reports every other year.

*Note: Results must be free of student-identifiable information.*

#### Use of Results Towards Continuous Improvement

While assessment reports may focus mostly on a specific time period (the last year), the assessment itself is a continual loop: findings should build upon previous successes and missteps, and provide data for future teaching practice. To that end, reports should:

- provide clarity in how the assessment findings will be used to improve teaching and course design;
- identify key areas that need to be monitored, remediated, or enhanced;
- reflect with sufficient depth what was learned from this and previous assessment cycles, including how well strategies for improvement that were implemented as a result of previous reports are working;
- provide an action-based timeline or a list of new strategies for improvement.

#### Stakeholder Involvement

Assessment involves more than the chair/coordinator and the faculty member who compile the report. Faculty and other stakeholders' involvement is important. The assessment report should provide clear documentation of how the results, decisions, and actions were shared with faculty and staff members and other relevant constituencies. Those constituencies should have the opportunity to suggest plans for improvement of teaching and learning.

# Assessment Report Template

## Program Information

Academic Program (Major, Degree Name):

Degree (B.A., B.S, etc.):

Department or Program:

Division:

Academic Year Covered by This Report:

## Contact Person(s)

Name: Person(s) responsible for coordinating the assessment effort

Email:

## Program Mission Statement

This is the educational mission statement focused on the major, not an organizational mission statement for your department or division. (Note: Most can be found in the *Miami General Bulletin*.)

## Student Learning Outcomes

Each program or major should have at least three measurable outcomes. Outcomes describe the knowledge, skills, and abilities that a student should attain by completing the degree program.

## Procedure Used for Assessment

- *Direct Assessment (Evaluation/Observation of Student Work)*: For each learning outcome addressed by this report, state where and when data were collected (in a course, exam, or performance) and how they were evaluated (e.g., rubric, rating scale). Specify the course or courses where students demonstrated the outcomes (if applicable) and the assignment(s) that you used for assessment purposes (e.g., capstone project, final examination, research paper, portfolio, etc.). Describe how student papers were selected and sample size. Please indicate how you assured that the data are representative.
- *Scoring of student work*: For each learning outcome addressed by this report, describe how you scored students' level of mastery of the outcomes. For example, did you use a rubric, rating scale or answer key, or was it scored by a testing company? If you used a rubric or rating, be sure to include the instrument as an appendix. Who did the scoring? One or more persons? Note: It is preferable to have more than one person scoring and to ensure that the scorer was not the instructor of the student whose work is being assessed.

- *Indirect Assessment (Perceptions of Student Learning)*: For each learning outcome addressed by this report, describe how you indirectly assessed student, employer, or alumni perceptions of their learning in relation to the outcome (e.g., course evaluations, focus groups with graduating students, alumni survey, etc.).

Attach relevant questions on online course evaluations, alumni survey, focus session protocol, etc. in an appendix.

#### Assessment Results and Closing the Loop

- *Assessment Results*: After analyzing your data, present a summary of the data, preferably in a table, clearly indicating what any numbers represent (e.g., means? medians?). If any course has both in-person and online sections, include a comparative analysis of student performance between the modes.
- *Feedback Loop*: Describe how you shared the results with faculty and other stakeholders. Explain briefly how you will make improvements based upon the assessment findings (e.g., changes to the assessment plan, changes to the curriculum, other changes to the program or unit, such as changes in technology, personnel, admission criteria, frequency of course offerings, advising).

Be sure to track any strategies for improvement you noted in previous years' assessment reports to gauge their effectiveness.

## Submitting Annual Assessment Reports

Assessment Reports are due either June 30 or December 30 of each year. The report details assessment activity that occurred during the previous academic year. Please consult with the Assistant Provost to identify your deadline for submitting reports each year. Whichever deadline (June 30 or December 30) is selected, it is important that a report is submitted at least once each year.

Either of the following may be submitted:

- an assessment report that details activity and results as outlined in your assessment plan.
- a report of **assessment of student learning** that has been submitted to an external/disciplinary accreditation body (ABET, AACSB, etc.), along with supplementary information that summarizes the outcomes assessment, direct and indirect measures used to assess outcomes, basic summary of findings, and strategies for improvement that are based on findings.

Please email a Word version of your assessment report to **William Knight, Assistant Provost for Institutional Research and Effectiveness (knightw3@miamioh.edu)** by your annual submission deadline.

## Feedback on Departmental Assessment Reports

The Assistant Provost for Institutional Research and Effectiveness and/or other members of the University Assessment Council will provide brief written feedback on departmental assessment reports as soon as

possible after they are submitted. Feedback will be based upon the following rubric, although additional points and suggestions for next year's report may be included.

<b>Element</b>	<b>Strong</b>	<b>Needs Some Improvement</b>	<b>Needs Immediate Attention</b>
<b>Learning Goals or Outcomes</b>	Learning goals, are clear, measurable and actionable, follow the assessment plan, and are consistent across years (unless the plan is changed).	Learning goals are included, but they are not easily measurable and/or lead to actionable results.	Learning goals are not provided or explained in only a very general way.
<b>Assessment Methods</b>	Documentation of assessment instrument is included with report.	Assessment methods are mentioned, but examples are not included with report.	Methods are not mentioned nor included with report.
<b>Findings</b>	Findings clearly indicate where students excelled, met standards, and fell short; findings portion includes thoughtful analysis.	Findings show evidence of some analysis of student learning beyond broad and general statements.	Findings are reported in very general, overall terms or there is no mention of findings.
<b>Context of Findings</b>	Appropriate context is provided to assist readers in understanding what has been found.	Findings provide minimal context that would assist a reader in understanding what has been found.	No context of findings is provided.
<b>Dissemination of Results</b>	Results are widely disseminated and well presented. Report includes input from stakeholders.	There is indication that results were shared, but in a limited scope (i.e. report given to faculty but not discussed or no wide faculty input solicited).	No indication that results were shared.
<b>Action Plan</b>	Report summarizes specific and logical actions planned (including a timeline) and then taken based on findings for each and all of the assessed outcomes.	Report offers specific and logical actions taken for most of the outcomes.	Use of results is completely future-oriented (we plan to do this...) without a concrete timeline OR no mention of future action.
<b>Follow-up from Previous Reports</b>	Includes analysis of the efficacy of the actions taken from previous reports.	Inconclusive or limited information included about efficacy of actions taken from previous reports.	No information about the efficacy of actions taken from previous reports.

## *Sample Feedback Report*

### Feedback on Departmental Assessment Activity

**Department of** \_\_\_\_\_

*July 2019*

B.A./B.S. in \_\_\_\_\_

Thank you for providing your annual program assessment report in June. The report's learning goals are clear, lend themselves to measurement, and are consistent with those noted in the assessment plan and earlier annual assessment reports. Scoring samples of student work in several classes using rubrics is an excellent approach to assessment, but it would be helpful if the rubrics were included in the report. The findings clearly identify the number and percentage of students performing at each level of the rubrics for each learning outcome assessed this year, but it would be even more useful if more context and implications were provided. For example, are there patterns apparent for the writing goal in the capstone course? Were students who did better or worse than those who showed similar performance when writing was assessed in the 100-level course? Did results differ according to which elective courses were taken or by other factors? Staff members in the Office of Institutional Research and Effectiveness would be happy to have a conversation with you about data we can provide that might lend greater context to your findings. The results were shared in a faculty meeting, but it would be helpful to know more about what was concluded, what changes will take place as a result, etc. The report shows excellent follow-up from findings that were shared last year. Please see further details from the feedback rubric on the next page. Keep up the good work and please let me know how we can help. I look forward to receiving your next report in June 2020.

William E. Knight  
Assistant Provost for Institutional Research and Effectiveness  
Chair, University Assessment Council

Element	Strong	Needs Some Improvement	Needs Immediate Attention
<b>Learning Goals or Outcomes</b>	Learning goals, are clear, measurable and actionable, follow the assessment plan, and are consistent across years (unless the plan is changed).	Learning goals are included, but they are not easily measurable and/or lead to actionable results.	Learning goals are not provided or explained in only a very general way.
<b>Assessment Methods</b>	Documentation of assessment instrument is included with report.	Assessment methods are mentioned, but examples are not included with report.	Methods are not mentioned nor included with report.
<b>Findings</b>	Findings clearly indicate where students excelled, met standards, and fell short; findings portion includes thoughtful analysis.	Findings show evidence of some analysis of student learning beyond broad and general statements.	Finding are reported in very general, overall terms or there is no mention of findings.
<b>Context of Findings</b>	Appropriate context is provided to assist readers in understanding what has been found.	Findings provide minimal context that would assist a reader in understanding what has been found.	No context of findings is provided.
<b>Dissemination of Results</b>	Results are widely disseminated and well presented. Report includes input from stakeholders.	There is indication that results were shared, but in a limited scope (i.e. report given to faculty but not discussed or no wide faculty input solicited).	No indication that results were shared.
<b>Action Plan</b>	Report summarizes specific and logical actions planned (including a timeline) and then taken based on findings for each and all of the assessed outcomes.	Report offers specific and logical actions taken for most of the outcomes.	Use of results is completely future-oriented (we plan to do this...) without a concrete timeline OR no mention of future action.
<b>Follow-up from Previous Reports</b>	Includes analysis of the efficacy of the actions taken from previous reports.	Inconclusive or limited information included about efficacy of actions taken from previous reports.	No information about the efficacy of actions taken from previous reports.

# Chapter 4: Global Miami Plan Assessment

## Overview of Global Miami Plan Competencies

The revised Global Miami Plan embraces the competencies that are included in Association of American College and Universities' Liberal Education and America's Promise (AAC&U, 2005). It will promote and assess the plan's signature competencies: written communication and critical thinking.

Although every course will incorporate some opportunities for written communication and critical thinking, not every course in the Global Miami Plan will promote the competencies in the same way or with the same level of intensity. Courses meeting Foundation I (English Composition) and the Advanced Writing requirements, for example, will feature writing and writing instruction and thus will promote written communication more fully than may be done in other GMP courses.

Instructors will also promote at least two other competencies in their Global Miami Plan courses, but they have the option to select those competencies that best align with the goals and outcomes of the course.

On their syllabi, instructors should include a list of the competencies being promoted in each Global Miami Plan course as well as a brief indication of how they will be advanced in the course.

LEAP competencies are listed below with links to the AAC&U's Valid Assessment of Learning on Undergraduate Education (AAC&U, n.d.) (VALUE) rubrics:

### Intellectual and Practical Skills

- [Inquiry and analysis](#)
- [Creative thinking](#)
- [Oral communication](#)
- [Reading](#)
- [Quantitative literacy](#)
- [Information literacy](#)
- [Teamwork](#)
- [Problem solving](#)

## Personal and Social Responsibility

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning
- Foundations and skills for lifelong learning
- Global learning

## Integrative and Applied Learning

- Integrative and applied learning

## Assessment Plan

In keeping with the requirement of the Higher Learning Commission that assessment of student learning outcomes is conducted on all general education programs, the two signature competencies of written communication and critical thinking will be formally assessed using modified versions of the AAC&U VALUE rubrics once every two years.

The assessment plan for the Global Miami Plan includes both direct and indirect measures of the two signature outcomes—critical thinking and written communication—as well as support for several other outcomes featured in the program: intercultural perspectives, global learning, and experiential (integrative and applied) learning.

Assessment measures in the plan include:

1. Direct assessment of critical thinking and written communication in capstone courses, using rubrics for each outcome;
2. Indirect assessment of critical thinking and written communication, as well as overall perception of liberal education, in mock interviews of juniors and seniors.

These two measures are supplemented on occasion by discrete assessment projects relating to other components of the Global Miami Plan, such as assessment of written communication in select Advanced Writing courses, assessment of global learning in select Global Perspectives Foundation courses, comparison of on-ground and online version of the same GMP course, etc.

To enhance the direct assessment process, rubrics have been created by faculty committees for five outcomes of the Global Miami Plan.

In addition to assisting with direct assessment of outcomes, these rubrics serve several purposes:

1. Provide information to instructors who are developing or teaching GMP courses;
2. Reveal to students and others the goals and expectations of particular GMP requirements;
3. Serve as a tool for faculty to design and assess key assignments within GMP courses;
4. Provide guidance to the Liberal Education Council when approving proposals for the GMP.

Assessment data will not be tied to individual instructors or individual students. Instead, data will be analyzed and used to better understand student learning for curricular revision and improvement.

In addition, during each department's academic program review, the department or program's syllabi for Global Miami Plan courses will be reviewed by the LEC Director (in consultation with the appropriate LEC subcommittees) to ensure that the courses continue to comply with the appropriate GMP criteria.

Assessment data on the Global Miami Plan signature competencies and in departmental program reviews will also be reviewed by LEC and appropriate subcommittees, and improvements will be made to the criteria, faculty development, or assessment plans to ensure a high-quality liberal education program.

## References

Association of American Colleges and Universities. (2005). An introduction to LEAP. Retrieved from <https://www.aacu.org/sites/default/files/files/LEAP/IntroToLEAP2015.pdf>

Association of American Colleges and Universities. (n.d.). VALUE. Retrieved from <https://www.aacu.org/value>.

# Chapter 5: Assessment in Academic Support and Co-Curricular Units

## Overview of Assessment in Academic Support and Co-Curricular Units

To comply with accreditation requirements of the Higher Learning Commission (HLC), all academic degree programs and academic support/co-curricular units must engage in full-cycle assessment. Full cycle assessment includes identification of clear goals or objectives for the unit each year; a method of measuring those goals or objectives; summary of evidence collected; and development of strategies for improvement based upon the evidence collected. The strategies for improvement may relate to the assessment process as well as to the operation of the unit. All academic year, academic support and co-curricular units will be required to submit an annual report at the end of each fiscal year that includes the following elements:

- at least three concrete goals or objectives for the unit;
- a brief description of the method(s) you use for assessing how well the goals/objectives were met;
- a summary of data collected (e.g., table or graphs) with brief narrative explanation;
- evidence that findings are discussed widely among faculty/staff of the unit (e.g., date of staff meeting when the findings were discussed);
- reflections on assessment findings, including strategies for improvement based on evidence; and
- improvement strategies tracked over time (In other words, note whether the improvement strategies you tried worked or not in subsequent reports.).

Rather than create a separate annual report to be submitted to the University Assessment Council, units are encouraged to simply ensure that the elements listed above are incorporated into existing annual reports.

**Units should please email their annual report with the above elements included to *William Knight, Assistant Provost for Institutional Research and Effectiveness (knightw3@miamioh.edu)* by June 30 of each academic year.**

Reports will be maintained in a Google folder and shared with HLC reviewers.

Each year, beginning in 2019, a member of the University Assessment Council reviews the reports to ensure that each unit is engaging in full-cycle assessment activity. Assessment activity described in the annual reports will be reviewed using the rubric below, and a brief list of strengths and areas for improvement will be sent to each unit for consideration during the following reporting cycle.

## List of Academic Support Units

<b>Program</b>	<b>Contact</b>	<b>Submit Deadline</b>
Center for Teaching Excellence	Ellen Yeziarski	June 30
e-Learning Miami	Ryan Baltrip	June 30
First Year Experience/UNV 101	Jeff Wanko	December 30
Global Initiatives	Cheryl Young	June 30
Howe Center for Writing Excellence (also includes Howe Business Writing Center, English Language Learning Writing Center)	Liz Wardle	Jun 30
Office for the Advancement of Research & Scholarship	Jim Oris	December 30
Office of Research for Undergraduates	Joyce Fernandes	June 30
Undergraduate Academic Advising & FYE	Jeff Wanko	June 30
University Honors Program	Zeb Baker	June 30
University Libraries	Aaron Shrimplin	Dec 30

## List of Co-Curricular Units

<b>Program/Unit</b>	<b>Contact</b>	<b>Submit Deadline</b>
General Description of Assessment Activity in Student Life	Gwen Fears	Dec 30
Armstrong Student Center	Gwen Fears	Dec 30
Community Engagement & Service	Gwen Fears	Dec 30
Community Standards	Gwen Fears	Dec 30
Dean of Students	Gwen Fears	Dec 30
Diversity Affairs	Gwen Fears	Dec 30
Miami Tribe Relations	Gwen Fears	Dec 30
Off-Campus Outreach	Gwen Fears	Dec 30
Orientation and Transitions	Gwen Fears	Dec 30
Parent and Family Programs	Gwen Fears	Dec 30
Residence Life	Gwen Fears	Dec 30
Rinella Learning Center	Gwen Fears	Dec 30
Student Activities & Greek Life (Cliff Alexander Center)	Gwen Fears	Dec 30

## Resources for Assessment in Academic Support and Co-Curricular Units

Northwestern University. (n.d.). *Student affairs assessment and planning*. Retrieved from <https://www.northwestern.edu/studentaffairs/assessment/assessment-strategies/strategy/index.html>

Schuh, J.H. & Associates (2008). *Assessment methods for student affairs*. San Francisco: Jossey-Bass.

Student Affairs Assessment Leaders. (n.d.). *Assessment resources*. Retrieved from <http://studentaffairsassessment.org/assessment-resources>.

Texas A&M University. (n.d.). *Student leader learning outcomes*. Retrieved from <https://silo.tamu.edu/>. [also includes rubrics]

Texas A&M University. (2017). *Using co-curricular mapping to promote student learning outside the classroom*. Retrieved from <https://silo.tamu.edu/wp-content/uploads/2018/07/MappingforTexasAM.pdf>.

Texas A&M University. Student Life Studies. (n.d.). [*Assessment podcasts*]. Retrieved from <https://studentlifestudies.tamu.edu/learning-center/>

Upcraft, M. L., and Schuh, J. H. (1996). *Assessment in student affairs: A guide for practitioners*. San Francisco: Jossey-Bass.

Upcraft, J.H. Schuh, M.L. & Associates. (2001). *Assessment practice in student affairs: an applications manual*. San Francisco: Jossey-Bass.

## Chapter 6: Learning Goals/Outcomes

*Understanding and clearly stating what your program is trying to accomplish serves as a foundation for a successful assessment plan.*

(University of Central Florida, 2008, p.16)

### Creating Learning Goals

Fresno State University (n.d.) provides the following overview of effective learning goals (also known as learning outcomes and learning objectives):

Learning objectives are brief, clear statements of learning outcomes of instruction that are related to and flow from the program goals. While goals express intended outcomes in broad, global language, learning objectives use precise terms that focus on the students, rather than the curriculum. Learning objectives should be written using active verbs, such as: identify, explain, translate, construct, solve, illustrate, analyze, compose, compile, design. Specific use of verbs such as to know or understand should be avoided, since they are too vague to provide needed clarity.

The University of Connecticut (n.d.) expands upon this discussion:

Learning outcomes are statements that describe significant and essential learning that learners have achieved, and can reliably demonstrate at the end of a course or program. Learning outcomes identify what the learner will know and be able to do by the end of a course or program – the essential and enduring knowledge, abilities (skills), and attitudes (values, dispositions) that constitute the integrated learning needed by a graduate of a course or program.

The learning outcomes approach to education means basing program and curriculum design, content, delivery, and assessment on an analysis of the integrated knowledge, skills, and values needed by both students and society. In this outcomes-based approach to education, the ability to demonstrate learning is the key point.

An effective set of learning outcomes statements informs and guides both the instructor and the students:

For teaching staff: It informs...

- the content of teaching.
- the teaching strategies you will use.
- the sorts of learning activities/tasks you set for your students.
- appropriate assessment tasks.
- course evaluation.

For students: The set of learning outcomes provides them with...

- a solid framework to guide their studies and assist them in preparing for their assessment.
- a point of articulation with graduate attributes at course and/or university (i.e., generic) level.

Learning outcome statements may be broken down into three main components:

- an action word that identifies the performance to be demonstrated;
- a learning statement that specifies what learning will be demonstrated in the performance;
- a broad statement of the criterion or standard for acceptable performance.

for example:

ACTION WORD (performance)	LEARNING STATEMENT (the learning)	CRITERION (the conditions of the performance demonstration)
analyzes	global and environmental factors	in terms of their effects on people

### Examples of Goals, Objectives, and Outcomes

Goal	Objective	How This Objective Might Be Reformulated as a <b>Learning Outcome</b>
(Geology) To develop knowledge, understanding, and skills related to the recognition and interpretation of igneous and metamorphic rocks.	To explain the different magma geochemistries derived from partial melting of the mantle in different tectonic regime.	Students should be able to demonstrate how magma geochemistry relates to partial melting of the mantle by contrasting the outcomes of this process in different tectonic regimes through the critical analysis of specific case studies.
(Biochemistry) To explain the biochemical basis of drug design and development.	To demonstrate the application of molecular graphics to drug design.	Students should be able to apply the principles underpinning the use of molecular graphics in the design of drugs to illustrate general and specific cases through a computer-based presentation.
(English) To introduce students to modes of satiric writing in the eighteenth century.	To familiarize students with a number of substantive 18th century texts. Students will be trained in the close reading of language and its relation to literary form.	Students should be able to analyze the relationship between the language of satire to literary form by the close examination of a selected number of 18th century texts in a written essay.
(Engineering) This course introduces senior engineering students to design of concrete components of structure and foundation and the integration of them into overall design structures.	The student is able to function in teams.	Functioning as a member of a team, the student will design and present a concrete structure which complies with engineering standards.
(Geography) Become acquainted with topographic maps and their usage.	Use topographic maps and employ these maps to interpret the physiography and history of an area.	Students should be able to: -Locate and identify features on topographic maps by latitude and longitude and township and range. -Contour a topographic map and construct a topographic profile. -Identify major landform features on topographic maps and relate them to basic geologic processes of stream, groundwater, glacial, or marine erosion and deposition. -Interpret geologic maps and geologic cross-sections.

Measurable student outcomes are specific, demonstrable characteristics – knowledge, skills, values, attitudes, interests – that will allow us to evaluate the extent to which course goals have been met.

Example Translating a Course Goal Into Measurable Student Outcomes  
Dental Health 101

The student:	Course Goal	The student can:	Measurable Student Outcomes
	<ul style="list-style-type: none"><li>• Understands proper dental hygiene.</li></ul>		<ul style="list-style-type: none"><li>• Identify the active ingredient in toothpaste.</li><li>• Explain why teeth should be cleaned at least twice per year.</li><li>• Describe how poor dental hygiene can lead to poor overall health.</li></ul>

Example Showing a Link Between Objectives and Assessment  
Refining a Goal Into Measurable Objectives

Goal: Students will be familiar with the major theories of the discipline.

Does this goal convey any information?

- Would a student know what was expected of his/her work?
- Would a colleague know the focus of your department's teaching?
- Would an employer know what your students could do?

Refining the goal into a measurable objective

Students will be familiar with the major theories of the discipline.

Explanation of the process

Objective = verb (active behaviors) + object (products, skills/performances, content/knowledge, attitudes/dispositions)

Objective = (be familiar with) + (major theories of the discipline)

Start with the object aspect of the objective. Suppose five major approaches (theories) to conflict resolution are: withdrawal, smoothing, forcing, compromising, and problem solving.

Students will be familiar with withdrawal, smoothing, forcing, compromising, and problem solving.

Specifying what the department views as the major approaches (theories) is an improvement in the wording of the objective.

Students will be familiar with withdrawal, smoothing, forcing, compromising, and problem solving.

Sharpening the verb will also make it better – what does “be familiar with” imply about a student's knowledge or skills?

Objective = (be familiar with) + (withdrawal, smoothing, forcing, compromising, ...)

- Avoid vague phrases: appreciate, understanding, have an awareness of, etc.
- Use action verbs: generalize, produce, evaluate, etc.

Action-oriented verbs make objectives more concrete.

This objective might be revised into two objectives:

- Students will summarize ...
- Students will choose and defend ...

Objectives obtained through the revision of the original goal:

- Students will summarize the five major approaches to conflict resolution: withdrawal, smoothing, forcing, compromising, and problem solving.
- Students will choose and defend a conflict resolution approach appropriate for a given situation.

Checklist to Review Program-Level Draft of Learning Outcome Statements\*

	Outcome #1	Outcome #2	etc.
Describes what students should represent, demonstrate, or produce?			
Relies on active verbs?			
Aligns with collective intentions translated into the curriculum and co-curriculum?			
Maps to curriculum, co-curriculum, and educational practices?			
Is collaboratively authored and collectively accepted?			
Incorporates or adapts professional organizations' outcome statements when they exist?			
Can be assessed quantitatively and/or qualitatively?			

\*Based on *Assessing for Learning: Building a Sustainable Commitment Across the Institution* (Maki, 2004)

The University of Central Florida (2008) notes that learning outcomes should be **SMART**:

**Specific**

- Define learning outcomes that are specific to your program. Include in clear and definite terms the expected abilities, knowledge, values, and attitudes a student who graduates from your program is expected to have.
- Focus on intended outcomes that are critical to your program. When the data from the assessment process are known, these outcomes should create an opportunity to make improvements in the program that is being offered to your students.

**Measurable**

- The intended outcome should be one for which it is feasible to collect accurate and reliable data.
- Consider your available resources (e.g., staff, technology, assessment support, institutional level surveys, etc.) in determining whether the collection of data for each student learning outcome is a reasonable expectation.
- Include more than one measurement method that can be used to demonstrate that the students in a particular program have achieved the expected outcomes of that program.

### **Aggressive but Attainable**

- “Don’t let the perfect divert you from what is possible.” When defining the learning outcomes and setting targets, use targets that will move you in the direction of your vision, but do not try to “become perfect” all at once.
- The following is a collection of questions that might help you to formulate and define aggressive but attainable outcomes for your program.
- How have the students’ experiences in the program contributed to their abilities, knowledge, values, and attitudes? Ask:
  - Cognitive skills: What does the student know?
  - Performance skills: What does the student do?
  - Affective skills: What does the student care about?
  - What is the knowledge, abilities, values, and attitudes expected of graduates of the program?
  - What would the perfect program look like in terms of outcomes?
  - What would a good program look like in terms of outcomes?

### **Results-Oriented and Time-Bound**

- When defining the outcomes, it is important to describe *where you would like to be within a specified time period* (e.g., 10% improvement in exam scores within 1 year, 90% satisfaction rating for next year, 10% improvement in student communication performance within 2 years). Also, determine what standards are expected from students in your program. For some learning outcomes, you may want 100% of graduates to achieve them. This expectation may be unrealistic for other outcomes. You may want to determine *what proportion of your students achieve a specific level* (e.g., 80% of graduates pass the written portion of the standardized test on the first attempt). If you have previously measured an outcome, it is helpful to use this as the baseline for setting a target for next year.

The University of Virginia (n.d.) provides details about levels of cognitive learning outcomes:

Learning outcomes can be classified using Bloom’s Taxonomy, which categorizes student performance into six cognitive levels, organized from basic (Knowledge) to complex (Synthesis). You can match active verbs to each cognitive level as you write your student learning outcomes.

Figure 1. Bloom's Taxonomy.



Source: Bloom, B. S. (1969). *Taxonomy of educational objectives: The classification of educational goals: Handbook I, Cognitive domain*. New York: McKay. graphic from <https://fctl.ucf.edu/teaching-resources/course-design/blooms-taxonomy/>

Figure 2. Revised Bloom's Taxonomy.



Source: Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman. Graphic from <https://silo.tamu.edu/wp-content/uploads/2018/07/MappingforTexasAM.pdf>

The University of Central Florida expands the illustration of levels of outcomes to also include affective and skill outcomes:

*Affective:*

Affective learning is concerned with attitudes, values, interests, appreciation and feelings toward people, ideas, places, and objects. Values refer to views and ideas that an individual believes in. Affective outcomes range from receiving (or willingness to participate in an activity) to adopting a value system that directs behavior.

	Affective	Description
Accepting		Willingness to participate in an activity or to attend to a stimulus; getting and holding the attention of students
Responding		Actively participates; demonstrates interest in an object, activity, or phenomena; seeks or pursues this object, activity, or phenomena
Valuing		Value or worth attached to an object, activity, or phenomena; varies from simple acceptance to commitment
Organization		Compare and contrast and resolve conflict to build a consistent value system; emphasis on comparing and synthesizing values
Characterization by Value		Adopt a value system for a length of time that contributes to a particular "lifestyle" (i.e., directs behavior)

*Skills:*

The original researchers did not develop a classification method for the skills domain. Other researchers, including Harrow (1972) and Simpson (1972), provided two classification methods. The one proposed by Simpson is used here to describe the psychomotor (skills) domain. The skills domain is used to classify movement patterns and behaviors.

	Skill	Description
Perception		Uses sense organs to obtain cues to guide action; ranges from awareness of stimulus to translating cue perception into action
Set		Readiness to take action; includes mental, physical and emotional set (or readiness to act)
Guided Response		Knowledge of the steps required to perform a task; includes imitation and trial-and-error
Mechanism		Perform tasks in a habitual manner, with a degree of confidence and proficiency
Complex Overt Response		Skillful performance of motor acts involving complex patterns of movement
Adaptation		Skillful performance of motor acts involving complex patterns of movement; modifies movement patterns to account for problematic or new situations



	Key Words: Affective
Accepting	Ask, choose, describe, follow, give, hold, identify, locate, name, point to, reply, select, use
Responding	Answer, assist, compile, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write
Valuing	Complete, describe, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read report, select, share, study, work
Organization	Adhere, alter, arrange, combine, compare complete, defend, explain, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize
Characterization by Value	Act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, use, verify

	Key Words: Skills
Perception	Choose, describe, detect, differentiate, distinguish, identify, isolate, relate, select, separate
Set	Begin, display, explain, move, proceed, react, respond, show, start, volunteer
Guided Response	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Mechanism	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Complex Overt Response	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Adaptation	Adapt, alter, change, rearrange, reorganize, revise, vary
Origination	Arrange, combine, compose, construct, design, originate

## Examples of Good and Not-So-Good Learning Goals

The University of Central Florida also provides the following examples of poor, better, and best outcome statements:

### Example 1:

Poor: Students completing the undergraduate program in Hypothetical Engineering will have knowledge of engineering principles.

This is a weak statement because it does not specify which engineering principles a graduate from the program should know. Also, it does not define what is meant by "have knowledge." Are they supposed to be able to simply define the principles, or be able to apply the principles, etc.?

Better: Graduates will be competent in the principles of engineering design, formulating requirements and constraints, following an open-ended decision process involving tradeoffs, and completing a design addressing a hypothetical engineering need.

This statement is better because it lists the specific areas in hypothetical engineering in which a student must be competent. However, it is still vague, as the level of competency is not stated. Are they expected to understand these concepts and how they will apply them?

Best: Graduates will be able to apply and demonstrate the principles of engineering design, formulating requirements and constraints, following an open-ended decision process involving tradeoffs, and completing a design addressing a hypothetical engineering need.

This is a much better learning outcome statement for two reasons. First, the specific requirements are listed; and second, the level of competency is also stated. A student must be able to apply and to demonstrate the listed engineering principles.

Example 2:

Poor: Ph.D. students of Hypothetical Engineering will be successful in their research.

This statement is very vague and provides no indication of what “successful” means. It does not specify what type or quality of research skills is expected from the student.

Better: Ph.D. students of Hypothetical Engineering will be successful in conducting high-quality research.

Although the quality of research expected from the doctoral students is identified, there is no indication of specific research capabilities that a student should possess. Therefore, even though it provides more detail than the previous statement, it is still lacking.

Best: Ph.D. graduates of Hypothetical Engineering will be able to conduct high-quality, doctoral research as evidenced by their results of experiments and projects, dissertations, publications, and technical presentations.

What is expected of a doctoral student in this program is clearly defined and stated, making this an effective learning outcome statement. The quality of research expected as well as the specific research requirements are articulated in the outcome statement.

Example 3:

Poor: Students should know the historically important systems of psychology.

This is poor because it says neither what systems nor what information about each system students should know. Are they supposed to know everything about them or just names? Should students be able to recognize the names, recite the central ideas, or criticize the assumptions?

Better: Students should understand the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

This is better because it says what theories students should know, but it still does not detail exactly what they should know about each theory, or how deeply they should understand whatever it is they should understand.

Best: Students should be able to recognize and articulate the foundational assumptions, central ideas, and dominant criticisms of the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

This is the clearest and most specific statement of the three examples. It provides even beginning students an understandable and very specific target to aim for. It provides faculty with a reasonable standard against which they can compare actual student performance.

Example 4:

Poor: Students should be able to independently design and carry out research.

The problem with this is that the statement does not specify the type or quality of research to be done.

Better: Students should be able to independently design and carry out experimental and correlational research.

This specifies the type of research, but not the quality students must achieve. If a student independently does any research that is experimental or correlational, it would be viewed as acceptable.

Best: Students should be able to independently design and carry out experimental and correlational research that yields valid results.

Here, the standard for students to aim for is clear and specific enough to help faculty agree about what students are expected to do. Therefore, they should be able to agree reasonably well about whether students have or have not achieved the objective. Even introductory students can understand the outcome statement, even if they don't know exactly what experimental and correlational research methods are.

Northern Arizona University (2006) provides the following examples of learning goals from its academic programs prefaced with, "Students will be able to..."

- articulate the role of communication in a diverse and democratic society.
- develop detailed lesson plans for teaching secondary or junior college levels.
- demonstrate an introductory knowledge of works of art, history, music, philosophy, literature, and religion as expressions of the Humanities.
- present physical and human geography content knowledge, description, analyses, and syntheses through the use of oral presentations.
- develop the skills necessary to collect, analyze, interpret, and present data.
- carry out important laboratory procedures in chemistry.
- think critically and globally, being able to analyze problems and develop solutions with little direction from outside sources.
- evaluate the quality of reported Justice research.
- apply the scientific method to conduct and interpret research inquiries using a combination of qualitative and quantitative research methods.
- apply the discussion to policy and real-world applications.

- demonstrate the knowledge of mental structures and processes that underlie individual human experience and behavior.
- Organize and orally deliver content based on audience and purpose.
- Communicate effectively with employees and guests in hospitality industry settings.

Walvoord (2010, p. 14) provides examples of poor learning goals:

Goals must be in the "students will be able to..." format. Here are some goal statements that are not acceptable for this purpose (though they may be perfectly fine statements for other purposes):

- The curriculum emphasizes X,Y,Z.
- The institution values X,Y,Z.
- The institution prepares its students for X,Y,Z.
- Students are exposed to X, Y,Z.
- Students participate in X,Y,Z.

## References

- Fresno State University. Office of Institutional Effectiveness. (n.d.). *Assessment of learning*. Retrieved from <http://www.fresnostate.edu/academics/oie/assessment/>.
- Harrow, A. J. (1972). *A taxonomy of the psychomotor domain: A guide for developing behavioral objectives*. New York: David McKay Company, Inc.
- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Northern Arizona University. (2006). *The path to achievement and excellence in assessing student learning at NAU: A guide for faculty, sharing our best practices, 2007-2008*
- Simpson, E. (1972). *The classification of educational objectives in the psychomotor domain: The psychomotor domain (Vol. 3)*. Washington, DC: Gryphon House.
- University of Central Florida, Office of Operational Excellence and Assessment Support. (2008). *Program Assessment Handbook*. Retrieved from [http://oeas.ucf.edu/doc/acad\\_assess\\_handbook.pdf](http://oeas.ucf.edu/doc/acad_assess_handbook.pdf)
- University of Connecticut. (n.d.). *Assessment primer*.
- University of Virginia, Office of Institutional Assessment & Studies. (n.d.). *Planning assessments*.
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

## Chapter 7: Curriculum Maps

*Curriculum mapping is a method to align instruction with desired goals and program outcomes. It can also be used to explore what is taught and how. The map or matrix documents what is taught and when, reveals gaps in the curriculum, [and] helps design an assessment plan. (University of Hawai'i, n.d., n.p.)*

Curriculum maps or curriculum matrices are very effective tools for relating learning goals to classes, co-curricular programs, and other educational opportunities. Three curriculum maps are shown below from the University of Hawai'i (n.d.). The first is a simple example for an undergraduate program. The second is a more complex example for an undergraduate program with multiple tracks. The third is for a doctoral program.

### Excerpt From a Hypothetical Biology Program Curriculum Matrix

Courses	Intended Student Learning Outcomes			
	Apply the scientific method	Develop laboratory techniques	Diagram and explain major cellular processes	Awareness of careers and job opportunities in biological sciences
BIOL 101	I	I		I
BIOL 202	R	R	I	
BIOL 303	R	M, A	R	
BIOL 404	M, A		M, A	R
Other: Exit Interview				A

Example From an Undergraduate Program With Multiple Tracks

Key

I=Introduced

R=Reinforced and opportunity to practice

M=Mastery at the senior or exit level

A=Assessment evidence collected

Track 1	Track 2	Track 3	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5
Core: CRS 255 (3 credits)			I	I	I	I	I
Core: Three theory courses (9 credits)				I	I		
Core: Writing (3 credits)			I			I	I
Core: Design (3 credits)				I		I	
CRS 310, 312, 350				R		R	
CRS 325			R	R			
CRS 355				R	R		
CRS 405						R	R
CRS 410				R	R		
CRS 450				R	R		
CRS 455			R				R
CRS 495			A	A	A	A	A
	CRS 215, 315				R	R	R
	CRS 316			R		R	
	CRS 318		R		R	R	
	CRS 320, 415			R		R	
	CRS 420				R	R	R
	CRS 495		A	A	A	A	A
		CRS 352	R				R
		CRS 360		R	R		
		CRS 382	R				
		CRS 385				R	R
		CRS 460	R				R
		CRS 480	R	R		R	
		CRS 485	R	R			
		CRS 495	A	A	A	A	A

Example From a Ph.D. Program

Key

SLO=Student Learning Outcome

Ph.D. Requirements	SLO 1	SLO 2	SLO 3	SLO 4
Course	X			
Requirements				
Qualifying Exam		X	X	
Comprehensive Exam	X	X		X
Dissertation	X	X	X	
Final Exam	X	X	X	
Seminar		X		X
Requirements				

Here is an example of a curricular map for an academic support or student affairs area that shows when knowledge and skills are introduced (I), reinforced (R), and assessed (A):

	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3
Activity 1	I		I
Activity 2		I	
Activity 3	R		I
Activity 4		R	R
Activity 5	R	R	
Activity 6			R
Activity 7	A	A	
Activity 8		A	A

## Reference

University of Hawai'i, Assessment Office. (n.d.). Curriculum mapping/curriculum matrix. Retrieved from <http://manoa.hawaii.edu/assessment/howto/mapping.htm>

## Chapter 8: Collecting Assessment Evidence

*There is no more critical juncture in implementing a successful assessment of the major than the moment of methods selection. (Johnson, McCormick, Prus, & Rogers; 1993; p.153)*

### Direct and Indirect Measures of Student Learning

It is important to distinguish between direct and indirect methods of collecting assessment information since units must use at least one direct measure. Suskie (2009) explains that direct methods provide demonstrations of what students know and can do that can be evaluated objectively.

### Examples of Direct Measures of Student Learning

- course-embedded assessments
- ratings of student skills by their field experience supervisors
- scores and pass rates on appropriate licensure or certification exams
- capstone experiences, such as research projects, presentations, theses, dissertations, oral defenses, exhibitions, performances, scored using a rubric
- other written work, performances, and presentations, scored using a rubric
- portfolios of student work
- scores on locally designed multiple-choice or essay tests such as final examinations in key courses, qualifying examinations, and comprehensive examinations
- score gains (referred to as value added) between entry and exit on published or local tests or writing samples
- observations of student behavior (such as presentations and group discussions), undertaken systematically and with notes recorded systematically
- summaries and assessment of electronic class discussion threads
- think-alouds, which ask students to think aloud as they work on a problem or assignment
- classroom response systems (clickers) that allow students in their classroom seats to answer questions posed by the instructor instantly and provide an immediate picture of student understanding
- feedback from computer-simulated tasks such as information on patterns of action, decisions, and branches
- student reflections on their values, attitudes, and beliefs, if developing those are intended outcomes of the program

Indirect measures, on the other hand, are often used to collect information from students on what they believe they learned and how and why they learned it. (Suskie, 2009)

## Examples of Indirect Measures of Student Learning

- course grades and grade distributions
- assignment grades, if not accompanied by a rubric or scoring criteria
- retention and graduation rates
- admission rates into graduate programs and graduation rates from those programs
- scores on tests required for further study (such as the GRE) that evaluate skills learned over a lifetime
- quality and reputation of graduate programs into which alumni are accepted
- placement rates of graduates into appropriate career positions and starting salaries
- alumni perceptions of their career responsibilities and satisfaction
- student feedback of their knowledge and skills, and reflections on what they have learned over the course of their program
- questions on end-of-course student evaluation forms that ask about the course rather than the instructor
- student, alumni, and employer satisfaction with learning collected through surveys, exit interviews, or focus groups
- student participation rates in faculty research, publications, and conference publications
- honors, awards, and scholarships earned by students and alumni

The University of Virginia (n.d.) notes that:

Direct and indirect evidence can complement each other and when used in tandem can become more than the sum of the two. Indirect evidence may yield insights into students' experiences, ideas for assessment, or information that helps to interpret assessment results or guide application of results. Direct evidence can be brought to bear to test the validity of students' opinions or self-assessments. Student learning is sufficiently complex that multiple approaches may be needed. (n.p.)

The University of Central Florida (2008) provides the chart below that highlights use of both direct and indirect methods for assessment of several learning outcomes:

Outcomes	Use of Direct and Indirect Methods for Assessment of Learning Outcomes			
	Graduating Senior Survey	Capstone Course	Portfolio	Focus Group
Satisfaction with advising	Direct			Indirect
Acquiring necessary skills and knowledge		Direct	Direct	Indirect
Proficiency in written communication skills		Direct	Direct	Indirect

## Description of Direct Assessment Methods

The University of Central Florida also provides the following descriptions of assessment methods:

### Capstone Course Assignments or Projects

Capstone course assignments or projects can be useful tools for program-level assessment. The assessment of important program learning outcomes can be integrated into a capstone course or project. Assessments structured into the capstone experience can include one or more of the following: exams, integrative papers or projects, research projects, reflective essays, oral reports, surveys, and focus groups. Capstone courses or projects are typically discipline-based and may be designated as a senior seminar or an assessment course. Graduates from a program demonstrate their competence in several areas and their ability to synthesize learning in the major with a product or performance. Projects are generally judged by a panel using prespecified scoring rubrics for the purpose of identifying where to improve the program.

Example: A panel of faculty members acts as evaluators of performances by music students, theatre students, etc., using a rubric that focuses on the important performance criteria and the quality of each. This method of assessment provides the student a chance to demonstrate the ability of absorbing and integrating their experiences and knowledge.

### Advantages

- When capstone courses or projects are required, they can provide an ideal data collection opportunity because seniors are accessible.
- Assessments can provide an opportunity to motivate students through the curriculum. Also, they can provide quality data that permit meaningful reflection on the program.
- Seniors are well into the curriculum and can reflect on their learning experience and the curriculum.
- These assessment methods provide seniors with an opportunity to provide meaningful feedback when they believe that their opinions are respected and valued.
- Students get feedback on their accomplishments, and student responsibility is encouraged.
- They can be used for both student evaluation (assess seniors' overall ability and knowledge gained from the program) and program evaluation (annual, continuous evaluation of curriculum from student feedback).
- They support program coherence.
- They provide an opportunity to create local assessment instruments that can be used in conjunction with other methods, such as surveys and standardized tests.
- Many faculty members are engaged in planning the topics and the design of the capstone experience.
- This assessment allows flexible course content (i.e., adaptable to different courses).

## Disadvantages

- Capstone surveys could yield invalid or misleading feedback, particularly when responses are not anonymous.
- Student performance may be impaired due to “high stakes” of the project.
- A faculty member may develop the idea that the capstone course or project should only involve him or her.
- Successfully completing the capstone course may be a requirement for graduation which may generate some anxiety for both faculty and students.

## Considerations

- Ensure that the course assignments or projects accurately represent the major or program requirements.
- Use checkpoints to prevent difficulties, especially towards the end, which may affect a student’s graduation.
- Maintain the curriculum and evaluation of assignments across all sections.
- Ensure that students understand and value the importance of the capstone experience and take it seriously.
- Secure administrative support before implementing a capstone experience since there are usually high costs associated with it because of the small class size required to maximize the faculty-student interaction.
- Design capstone course or project to assess curriculum goals and outcomes.

## Case Studies, Simulations, and Hypothetical Situations

A case study is a focused, systematic examination of one instance of a phenomenon such as an event, program, process, or person. Typically, case studies involve collection of qualitative and quantitative data such as observations, surveys, and interviews for an in-depth study of the phenomenon. Students can conduct case studies and/or respond to hypothetical situations.

## Advantages

- Can be used to assess student work of both a quantitative and qualitative nature
- Are useful when a student learning outcome is to comprehensively study and understand a phenomenon of particular interest to the field
- Provide an opportunity for students to apply learned skills in context

## Disadvantages

- Tend to be expensive, labor-intensive, and time-consuming, which can be prohibitive within a course

## Considerations

- Single or multiple cases (collective case study) may be investigated.
- Different approaches may be used such as a highly structured approach or an unstructured process.

## Content and Embedded Assessment Approaches

### Course-Embedded Questions and Assignments

Course-embedded questions are predetermined questions that measure student learning in specific areas and can be used to assess students' knowledge, skills, behavior, and attitudes within a scheduled test. The test is typically a locally-developed test. Often instructors of a particular course use the same questions within their unique course tests at a particular point in the course (e.g., midterm or final). Growth in discipline-specific knowledge, skills, or attitudes may be gauged using the same set of embedded questions in tests for different courses throughout the curriculum.

### Portfolio Assignments

A portfolio is a collection of samples of student work. The contents can vary widely, from a collection of photographs, to written assignments, to a collection of computer programs. Sometimes an electronic portfolio is used to facilitate storage and access of the samples of student work. A rubric may be used to evaluate a collection of students' works (e.g., writing, homework, etc.) over a period of time. This method of assessment can provide longitudinal data to gauge growth of particular skills or understandings, as well as an opportunity for student reflection. Typically, each assignment included in a portfolio has been reviewed and graded. A committee or a designated group of faculty members may review portfolios in a program for the purpose of identifying where improvements in the program are needed.

### *Assessment of Papers, Projects With Standard Scoring Rubrics*

A rubric is an assessment tool that can be used to specify scoring criteria for a paper, project, performance, or other method of assessment. Usually all of the key elements of an assignment and their weighting on the total score are identified. A rubric is most effective when it is shared with students prior to the start of an assessment assignment. For more information on developing rubrics, see <http://rubistar.4teachers.org>.

### *Research Paper*

This is an assessment method which can be used to evaluate students' abilities to analyze, synthesize, and/or evaluate information that has been taught. A scoring rubric makes evaluation criteria clear when assessing research papers. On the program assessment level, it could be part of a capstone project or a tool used in the senior year to determine if students have achieved programmatic learning outcomes.

## *Essays*

Essays may be designed to measure specific learning outcomes (e.g., writing skills, appreciation for art, appreciation of diversity, etc.). These essays are scored using rubrics established by a panel of faculty. The rubrics may be reviewed for the purpose of identifying elements needing more emphasis in the academic program.

## *Direct Observation by Instructor, Expert Evaluators*

A panel of individuals or an expert (e.g., supervisor) can score student performance in practice (e.g., music, communications, clinical). The panel may include members of the faculty, advisory board members, experts in the field, etc. Scoring rubrics are often used to improve inter-rater reliability.

## *Direct Observation by Peer*

In-class exercises can be assessed by peers or peer panels using scoring rubrics. This provides a first-hand familiarity of criteria on the actual rubrics that will be used to assess future work. Students can use rubrics to assess examples of work not produced by classmates (e.g., use of a rubric to assess a videotaped speech for specific elements of speech).

## *Examinations and Tests*

### Standardized Examinations and Tests

#### National Test

Exams available nationally with standardized scores and sub-scores can be used to determine where to improve the program

Examples: Educational Testing Service (ETS) Field Exams, Psychology Area Concentration Achievement Test (PACAT), The Chauncey Group DANTE (Statistics Exam)

#### State Test

Exams available within the State of Ohio with standardized scores and sub-scores that can be used to determine where to improve the program Examples: teacher assessments leading to licensure, Ohio CPA Exam, state licensing for nurses.

### Local Examinations and Tests

#### Local Tests

Exams are designed by members of an academic program or administrative program to measure student achievement of specific learning outcomes. The assessment purpose of these tests may be to identify where improvement is needed within the academic or administrative program.

**Pre-Post Test** These are a type of locally developed test administered before and after a specified learning experience to measure students' level of knowledge, skills, behaviors, and attitudes. (The learning experience can be a program, course, or unit.) Post-test scores are compared to pre-test scores to determine if the students have learned specific information or concepts.

#### Certification and Licensure Exam

Certain disciplines (especially in health-related disciplines) require that students pass specified certifications and licensure exams. Students' performance on these exams and their sub-scores, when available, are a source of data that can be used to assess student learning.

## Description of Indirect Assessment Methods

### Surveys

#### Institutional Level

This category includes locally and nationally developed surveys that focus on evaluating satisfaction with academic programs and service experience, perceived learning outcomes, plans for further education and employment, further education and/or employment placement, and plans of undergraduate and graduating undergraduate and graduate students.

#### Advantages

- Surveys can be an important tool in understanding student's academic needs and their perception of their educational experience. Additionally, surveys can be used to determine students' satisfaction with the services offered at the university as well as program-specific services such as advising, etc.

#### Disadvantages

- Surveys are used to gather data regarding the perceptions of individuals about personal experiences. In most instances, this method does not provide direct evidence of knowledge, skills, and abilities. When this method of assessment is implemented, a direct measurement approach should be used as well.

#### Considerations

- Careful planning for developing and administering institutional level surveys is critical for success. All stakeholders should be included.
- Institutional level surveys have budget implications that should be carefully considered.

## Other Indirect Assessment Methods

### Focus Group

Individuals who are users of the program or who benefit from the academic preparation made possible as a result of completing the program (e.g., employers, alumni, faculty, parents, etc.) can provide important qualitative data that can be used to identify strengths and weaknesses within the program.

### Advisory Committee

Individuals who are experts in the field can assess student preparedness and curriculum content. This method of assessment provides a current and relevant level of analysis which is beneficial to the development of the curriculum as well as the assessment of students' knowledge, skills, and attitudes.

### Structured Interview

One-on-one structured interviews with students, faculty, employers, and alumni conducted by a trained interviewer can provide useful information. This information can be used to identify strengths and weaknesses within the program.

### Student Activity and Study Log

A log that reflects the amount of time a student spends studying or involved in specific activities can provide important data that can be used to identify opportunities for improvement. This can be managed electronically in a spreadsheet by individuals and combined into a group for assessment purposes.

### Institutional Data

Institutional level data such as retention rates, graduation rates, demographics, time-to-graduation, and enrollment in graduate level programs by former graduates can provide useful information regarding the strengths and weaknesses of a program.

## Using Existing Student Work

Walvoord (2010) is a strong proponent of using samples of existing student work along with rubrics for assessment.

## Advantages

- Information is already available.
- There are no student motivation problems, since students must complete the work for a grade.
- There is no direct cost.
- It reflects what faculty members actually teach, not what's included on standardized tests, so faculty members are more motivated.

## Disadvantages

- Evidence is not comparable across institutions.
- Everyone evaluates differently, so common standards or rubrics and training are needed.
- Information is in multiple parts and multiple formats, so it needs to be collected in ways that permit easy access.
- There is quite a bit of work, especially at the beginning.

## Rubrics

A rubric is a scoring tool that lays out the specific expectations for an assignment. Rubrics divide an assignment into its component parts and provide a detailed description of what constitutes acceptable or unacceptable levels of performance for each of those parts. Rubrics are composed of four basic parts (University of Connecticut, n.d.):

- a task description (the assignment)
- a scale of some sort (levels of achievement, possibly in the form of grades) (Scales typically range from 3 to 5 levels.)
- the dimensions of the assignment (a breakdown of the skills/knowledge involved in the assignment)
- descriptions of what constitutes each level of performance (specific feedback)

The University of Connecticut (n.d.) lists the following benefits of using rubrics.

- Rubrics provide timely feedback – grading can be done more quickly. Since students often make similar mistakes on assignments, incorporating predictable notes into the descriptions of dimensions portion of a rubric can simplify grading into circling or checking off all comments that apply to each specific student.
- Rubrics prepare students to use detailed feedback. In the rubric, the highest-level descriptions of the dimensions are the highest level of achievement possible; whereas the remaining levels, circled or checked off, are typed versions of the notes/comments an instructor regularly writes on student work explaining how and where the student failed to meet that highest level. Thus, in using a rubric the student obtains details on how and where the assignment did or did not achieve its goal, and even suggestions (in the form of the higher-level descriptions) as to how it might have been done better.
- Rubrics encourage critical thinking. Because of the rubric format, students may notice for themselves the patterns of recurring problems or ongoing improvement in their work.
- Rubrics facilitate communication with others. TAs, counselors/tutors, colleagues, etc. can benefit from the information contained in the rubric (i.e., provides information to help all involved in a student's learning process).

- Rubrics help faculty refine their teaching skills. Rubrics showing a student’s continuing improvement or weaknesses over time, or rubrics showing student development over time, can provide a clearer view of teaching blind spots, omissions, and strengths.
- Rubrics help level the playing field. To aid first-generation or non-native speakers of English, rubrics can act as a translation device to help students understand what teachers are talking about.

Rubric for Problem-Based Learning (University of Delaware, n.d.)			
Criteria	3 (Ideal)	2	1
Realism	Based on an actual or fictionalized real- world situation linking topic to learner.	Contrived or contains unrealistic elements that decrease credibility.	Unrealistic, lacking relevant context.
Content	Addresses significant conceptual issues; directly related to major content goals.	Encourages superficial rather than in-depth understanding concepts.	Relevance of topic peripheral or not apparent.
Engagement	Stimulates discussion and inquiry through its relevance and presentation.	Generates limited or superficial discussion; provokes little curiosity.	Lacks a “hook”; obscure or pedantic presentation.
Complexity	Appropriately challenging; group effort and cooperation required; some ambiguity appropriate; integrates multiple concepts.	Difficult but may encourage a “divide and conquer” approach. Concepts not well integrated.	Solution accessible to most students working alone; focused on single concept.
Resolution	Open to multiple resolutions or multiple pathways to solution, depending on student assumptions and reasoned arguments.	Resolution is more obvious but allows reasonable opportunity for judgment and discussion.	One right answer is expected; limited opportunity for analysis and decision making.
Structure	Progressive disclosure via multiple stages, builds on existing student knowledge.	Staging does not flow well; transition could be improved.	Too much or too little information provided at once; short cuts thinking/research.
Questions	Limited in number, short, and open-ended; stimulate probing for deeper understanding.	Most are directive; preempt student-generated learning issues.	Lead to “yes-no” answers rather than thoughtful discussion.
Research	Promotes substantive research using multiple resources.	Research limited to textbook material	Limited necessity for research.

Sample of a Rubric for a Slide Presentation on Findings From Research Sources (Suskie, 2009)

	(5) Well done	(4-3) Satisfactory	(2-1) Needs improvement	(0) Incomplete
Organization	Clearly, concisely written. Logical, intuitive progression of ideas and supporting information. Clear and direct cues to all information.	Logical progression of ideas and supporting information. Most cues to information are clear and direct.	Vague in conveying viewpoint and purpose. Some logical progression of ideas and supporting information but cues are confusing or flawed.	Lacks a clear point of view and logical sequence of information. Cues to information are not evident.
Introduction	Presents overall topic. Draws in audience with compelling questions or by relating audience's interests or goals.	Clear, coherent, and related to topic.	Some structure but does not create a sense of what follows. May be overly detailed or incomplete. Somewhat appealing.	Does not orient audience to what will follow.

The University of Virginia (n.d.) offers the following guidelines on developing rubrics:

- Clearly define the assignment including the topic, the process that students will work through, and the product they are expected to produce.
- Brainstorm a list of what you expect to see in the student work that demonstrates the particular learning outcome(s) you are assessing.
- Keep the list manageable (3-8 items) and focus on the most important abilities, knowledge, or attitudes expected.
- Edit the list so that each component is specific and concrete (for instance, what do you mean by coherence), use action verbs when possible and descriptive, meaningful adjectives (e.g., not adequate or appropriate but correctly or carefully).
- Establish clear and detailed standards for performance for each component. Avoid relying on comparative language when distinguishing among performance levels. For instance, do not define the highest level as thorough and the medium level as less thorough. Find descriptors that are unique to each level.
- Develop a scoring scale.
- Test the rubric with more than one rater by scoring a small sample of student work. Are your expectations too high or too low? Are some items difficult to rate and in need of revision?

and the University of Virginia (n.d.) offers the following advice on using rubrics:

- Evaluators should meet together for a training/norming session.
- A sample of student work should be examined and scored.
- More than one faculty member should score the student work. Check to see if raters are applying the standards consistently.
- If two faculty members disagree significantly (e.g., more than 1 point on a 4-point scale), a third person should score the work.

- If frequent disagreements arise about a particular item, the item may need to be refined or removed.

## References

Assessment Commons. (n.d.). *Assessment rubrics*. Retrieved from <http://assessmentcommons.org/view-all-resources/>.

Association of American Colleges and Universities. (n.d.). *VALUE Rubrics*. Retrieved from <https://www.aacu.org/value-rubrics>.

Fresno State University. Office of Institutional Effectiveness. (n.d.). *Rubric library*. Retrieved from <http://www.fresnostate.edu/academics/oie/assessment/rubric.html>.

Johnson, R., McCormick, R., Prus, J., & Rogers, J. (1993). Assessment options for the college major. In T. W. Banta & Associates (Eds.), *Making a difference: A decade of assessment in higher education* (pp. 153-167). San Francisco: Jossey-Bass.

Suskie, L. A. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco: Jossey-Bass.

University of Central Florida, Office of Operational Excellence and Assessment Support. (2008). *Program Assessment Handbook*. Retrieved from [http://oeas.ucf.edu/doc/acad\\_assess\\_handbook.pdf](http://oeas.ucf.edu/doc/acad_assess_handbook.pdf).

University of Connecticut. (n.d.). *Assessment primer*. Retrieved from <http://assessment.uconn.edu/primer/index.html>.

University of Delaware. (n.d.). *Rubric to evaluate PBL problems*. Retrieved from <https://cpb-us-w2.wpmucdn.com/sites.udel.edu/dist/c/6655/files/2013/08/rubric-for-PBL-problems.pdf>.

University of Delaware. (n.d.). *Rubrics*. Retrieved from <https://ctal.udel.edu/resources-2/rubrics/>.

University of Virginia, Office of Institutional Assessment & Studies. (n.d.). *Planning assessments*.

Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

## Chapter 9: Using Surveys

*This chapter provides suggestions for designing and using surveys for assessment purposes. Included are guidelines for constructing effective surveys as well as suggestions for how different types of surveys can meet the various assessment needs of a department.*

### Definitions (Survey, Response Rate, and Response Bias)

A survey is a list of pre-determined questions created to gather responses to specific questions from a range of people. Information is usually gathered from one person at a time, but the format can vary (e.g., telephone, paper, or web). Surveys can be used as a sole source of data or in conjunction with institutional data or other information. (Dillman, 2000; Suskie, 1992)

The response rate refers to the number of people who participated in the survey. The response rate can affect the reliability of the survey. Response bias occurs when respondents to a survey are different from those who did not respond. This can affect the validity of the survey.

### Appropriate Use of Surveys

Surveys are used to:

- explore attitudes, opinions, values, experiences, expectations, and needs
- gather information from and about large populations
- make comparisons among subgroups of the population
- compare results from year to year
- gather data for statistical projections
- gather statistically representative data

Surveys should not be used:

- for audiences that are uncomfortable with numbers and statistics
- for when there are small numbers of participants
- without a clear understanding of the issues
- when investigating issues of a sensitive or intrusive nature

### Advantages and Disadvantages of Surveys

#### Advantages

- Surveys can gather information from a large number of people.
- The responses to a well-designed survey with a high response rate can be generalized to a larger population.
- Survey data usually allow for statistical analysis that examines relationships among variables or groups of variables.

### Disadvantages

- Surveys can be expensive, especially paper surveys that require printing, postage, and processing.
- Important issues can be overlooked on surveys when the questions and responses are predetermined.
- The quality of survey data is strongly dependent on the survey design.
- Response rates and response bias are difficult to control.

## Types of Surveys and Survey Questions

### Types of Surveys

The paper survey is being used less frequently due to the prevalence of web-based surveys. Respondents usually mark their responses directly onto a printed paper or scan form. The assessment planning team must consider survey printing costs, how the survey will be distributed and collected, and how the data will be processed and analyzed.

The web or on-line survey is commonly used. Planning a web survey requires computer expertise to ensure that the form and collection work properly. An accurate list of email accounts is imperative, since participants are usually invited to complete this survey via email.

### Types of Survey Questions

Open-ended questions contain a blank area where participants give their response. There are no pre-set categories or limit in choices, although the length of the answer may be controlled. Closed questions give a set of response choices, usually on a Likert type scale, such as 1-Strongly Agree, 2-Agree, 3-Undecided, 4-Disagree, and 5-Strongly Disagree. Responses can also be alternative choices such as when participants are asked to indicate their class level (freshman, sophomore, junior, senior, or graduate student).

General guidelines for writing survey questions are included below. However, assessment teams would be wise to consider securing help from experts, because writing good survey questions can be challenging.

## Planning Surveys

The assessment team must decide if the survey will be anonymous. Anonymous surveys protect respondent privacy, thus encouraging more candid responses and higher response rates. However, anonymous surveys do not allow for matching survey responses to institutional data, making it necessary to request information such as sex, major, and class level. These surveys also do not allow for tracking of respondents for second mailings or longitudinal projects.

Who will be asked to participate in the survey? Depending on the size of the group and the purpose of the assessment, the team must choose a sample, based on the goals and objectives being assessed. The survey would target graduating seniors, for example, if an objective includes determining opinions of graduating seniors.

A final consideration during planning stages is whether to use incentives. Incentives can be small items such as bookmarks, coupons, or extra credit given to all participants. They can be larger prizes (cash, free books, or gift certificates) given to a randomly selected few through a drawing.

## Constructing Survey Items

- Surveys should include wording that is simple, clear, non-ambiguous, direct, concrete, and uniformly understood.
- Survey items should:
  - be stated in a neutral manner.
  - generate a variety of responses.
  - be simple sentences. (Compound sentences and multiple phrases can be ambiguous.)
  - consist of only one question. (Beware of double-barreled questions.)
- Survey items should not:
  - include universals (e.g., all, always, none, and never), limiters (e.g., only, just, merely), double negatives, abbreviations, or unconventional phrases.
  - be too intrusive or personal.

## Analyzing Survey Results

Closed questions are usually analyzed with statistical procedures. Simple frequencies of responses are adequate for many assessment projects. (Frequencies show the number or percentage of respondents who indicated each response choice.) Measures of central tendency and distribution are useful for variables that have a continuous scale, such as grade point average. (Examples are maximum, mean, median, minimum, mode, standard deviation, variance, and skewness measures.)

Open-ended questions can be categorized, grouped, and summarized. Categories should be developed using actual responses that become variables to be used, similar to closed-ended items. Groups of responses can be made on any variable according to major, class level, etc. Summarizing comments is useful when the number of comments is large or when a particular audience is not likely to read the entire set of comments.

## Frequently-Asked Questions

What affects the survey response rate?

The length of the survey is one of the most crucial factors. The longer or more complicated a survey, the less likely participants are to complete it. Appearance is important. The survey should be easy to complete, with clear and concise instructions. Survey completion can be encouraged with a cover letter that explains the purpose of the survey and assures confidentiality of respondent answers. Survey timing has an effect on response rate. For example, a survey administered during midterm exams will probably not have as great a response rate as one administered at a less hectic time in the semester. The type of survey and collection method can also have a bearing on survey response rates. Surveys that are distributed and collected in classes will have higher response rates than those sent through the mail or via the web. Response rates can also be influenced by situations that are not within the control of the assessment team (participant interest in the topic, other surveys being administered at the same time, and current events).

What kind of follow-up can or should be done?

Second mailings, reminder e-mails, and reminder telephone calls will generate additional survey responses and will also increase the cost and resources needed to conduct a survey.

## References

Dillman, D. (2000). *Mail and internet surveys: The tailored design method*. New York: John Wiley.

Suskie, L. A. (1992). *Questionnaire survey research: What works*. Tallahassee, FL: The Association for Institutional Research.

# Chapter 10: Using Tests

*This chapter provides guidelines for using locally and externally developed tests for assessment. Tips for planning and developing a test as well as for analyzing its quality are included.*

## Definitions (Test and Standardized Test)

Tests are commonly used in association with cognitive goals, to review student achievement with respect to a common body of knowledge associated with a discipline or practice.

A standardized test is one in which the initial construction, as well as conditions for administration and scoring, have a uniform procedure. This ensures that scores can be interpreted in a consistent manner from one administration to the next. Standardized tests are usually designed by test development specialists, either internally or externally.

## Appropriate Use of Tests

Tests should be used when:

- a valid and reliable test is available.
- student acquisition of knowledge or ability to process and use knowledge is to be demonstrated (i.e., the outcome of interest is cognitive in nature).
- student knowledge about a wide range of content is to be evaluated (in survey and capstone courses).
- multiple observations of content-related knowledge are needed (math and foreign languages).
- more resources are available for constructing the assessment instrument than for scoring and reporting results.
- a large group is being assessed.

Tests should not be used when:

- there is disagreement about the choice, design, or content of the test to be used.
- the scoring of the test is not reliable or valid.
- the content of the test does not match the goals of the department.
- the number of participants is small.

## Advantages and Disadvantages of Tests

Advantages

- Well-constructed tests sample student knowledge with efficiency and reliability. The test given can determine what many students know in a brief period of time.

- The repeated use of a test will provide a means of comparison between different student groups or the same group over time. This type of testing practice provides reviewers with a rich context for evaluation, decision making, and making recommendations.

#### Disadvantages

- Tests lack flexibility. Because tests are usually designed by organizations and companies outside the department, the content of the test is predetermined and cannot be modified to match department goals or curriculum.
- Tests can be expensive. Costs associated with purchasing tests and processing results must be considered during assessment planning.

## Planning Tests

One of the most important planning decisions is the choice of test. Tests can be standardized (purchased tests that are developed by a testing company) or created locally by a department or committee. The match between test and assessment purpose is critical.

## Features of a Good Test

A good test:

- has a well-defined purpose or intent.
- has a foundation based on a set of written goals and objectives.
- shows evidence that the test's purpose was achieved (reliability and validity information about test items, the test as a whole, and the relationship between test scores and other indices of academic performance).
- contains detailed scoring procedures that allow for specific interpretations and feedback to those tested and to those making decisions.

## Analyzing Test Data

Test data are scaled and then analyzed using a number of techniques including descriptive statistics and/or multivariate analysis (Palomba & Banta, 1999). Descriptive statistics techniques (maximum, mean, median, minimum, and mode) describe the characteristics of the data. Multivariate analysis requires using regression methods and analyzing variances within the data. Multivariate analysis typically uses preliminary testing and background characteristics of participants to attempt to predict test scores.

## Frequently-Asked Questions

What are some strategies for creating a department test for assessment purposes?

One common practice is to develop and adopt common pre-tests and post-tests in courses with multiple sections. Items for common tests can be culled from existing exams. Another practice is to determine a portion of each unit exam, a specific set of items, which will be scored for program assessment and for individual evaluation.

This practice is sometimes referred to as course-embedded testing (Palomba & Banta, 1999, p. 13). It is important to notify students how this testing will affect assignment of their grades.

What are the basic steps in developing a test?

Seven sequential steps are recommended:

1. Determine outcomes to be measured.
2. Develop test blueprint.
3. Write test items.
4. Review, critique, and edit items.
5. Pilot test items.
6. Obtain reliability and validity data.
7. Revise, reuse, and report.

How is using a test for assessment different from using a test in the classroom?

Generally, instructors develop their own classroom tests, making all decisions about when and how to construct, administer, and score the test and report results. The tests are constructed without formality or documentation for the purpose of assigning grades related to individual student learning. **When tests are used for assessment, planning, implementing, and using results becomes a group effort, a shared set of decisions and responsibilities. Consensus is emphasized.** Some additional planning time, communication, and record keeping will be needed. Test performance is generally used along with other information to describe group achievement and is independent of grading.

## References

Palomba, C. A., & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass.

# Chapter 11: Using Performance-Based Assessment

*While tests and surveys remain the most popular assessment instruments, many departments are beginning to recognize the value of assessment that is based on student activities. This chapter explores different types of performance-based assessment activities and discusses the means to maximize their effectiveness.*

## Definition of Performance-Based Assessment

Performance-based assessment is the process of using student activities, rather than tests 33333 surveys, to assess skills and knowledge. Class assignments, auditions, recitals, and projects, while intended to evaluate the individual student, can be reviewed as a whole (using all or a sample) to evaluate a course, program, or college. These activities are often used in conjunction with tests to provide a complete picture of student skills and abilities. Critics of testing point out that tests, particularly multiple-choice tests, do not provide sufficient opportunity for students to think through what they are doing or to want to do their best.

## Appropriate Use of Performance-Based Assessment

Performance-based measures should be used:

- when activities can be linked directly to the curriculum.
- in academic programs that develop complex, integrated skills.
- when the focus of the academic program is on the creation of products or performances.

Performance-based measures should not be used:

- where there are limitations of time and/or scope.
- when other assessment techniques such as surveys, focus groups, or tests can better serve the needs of the assessment.
- when statistical analysis is required.
- when there is not widespread faculty and/or administrative support for performance-based assessment.
- when there is not consensus among faculty regarding the objectives, goals, and criteria by which measures will be evaluated.

## Advantages and Disadvantages of Performance-Based Assessment

### Advantages

- Performance-based assessment builds on daily work (assignments, exams, projects) of students and faculty.
- Performance-based assessment enables faculty to determine student skills and abilities and for students to learn more about how to improve their own skills.
- Performance-based assessment can help faculty determine how to link their teaching to desired learning outcomes.

### Disadvantages

- Performance-based measures are labor intensive. A significant amount of time and care must be set aside for planning and using performance assessment.
- It is not clear that performance-based measures can be generalized to the student population. This lowered level of generalization can affect the perceived validity of the measure.
- Assessment activities that are separate from the daily teaching routine of the department can be perceived as intrusions by students and faculty.

## Types of Performance-Based Assessment

### Portfolios - examples of student work collected over time

The use of student portfolios has a long history in disciplines such as art and architecture and is rapidly gaining popularity in other areas, particularly in the assessment of writing skills. Portfolios can be used to evaluate individual student progress while allowing a department to take a critical look at overall performance of students in the program. Typical portfolio contents are exams (multiple choice and essay), research papers, essays, projects, and audio/video tapes.

### Assessment Center Method - simulation of real-life situations in which student performance is evaluated by expert judges

This assessment method attempts to create a professional situation in which students participate (performance, audition, recital, or exhibit). The activity evaluates individual student performance and provides feedback to the department on the effectiveness of its program.

## Planning Performance-Based Assessment

The following should be considered when planning performance-based assessment measures (Palomba & Banta, 1999, p. 118):

1. What skills are being examined?
2. What tasks can appropriately demonstrate the skills?
3. What are the criteria for evaluating performances or products?
4. What is a reliable process for rating the performances or products?
5. Who is most appropriate to conduct this assessment, and how can they be trained?
6. How will the results be evaluated?

## Analyzing Performance-Based Data

The intended outcomes for the course or program are identified. Then faculty members set standards for evaluating portfolio materials or performance measures. Performance-based assessment is most effective when faculty members agree on the intended outcomes of the course or project, as well as the standards set for the evaluation.

## Frequently-Asked Questions

Should we use the students' best work or choose from a range of grades?

Either is useful, but the department must decide which selection will best suit the department's purpose. Since the students' best will vary, a great deal can be learned about the program from looking at those assignments which earned the highest grades. What differences exist in these work samples? Why are some students' best works better than others? On the other hand, selecting from a wide range of grades will say something as well. What is failing, average, or excellent work in certain courses or programs? Is there commonality among each of these ranges that gives some clue as to who is doing what kind of work and why?

Who decides which items or projects will be included in portfolios or used for performance assessments?

A decision is made based on the type of assessment to be done. In some cases, faculty members will ask their students to select for their portfolios what they (the students) consider to be their best work. At other times, the instructor will provide a list of class assignments or exams to be included. Departments may even choose to create the portfolios themselves. It may be important to advise students of the purpose of the portfolio review and to keep the focus on the program rather than the individual student.

## References

Palomba, C. A., & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass.

# Chapter 12: Using Focus Groups

*Focus groups provide an excellent opportunity to listen to the voices of students, explore issues in depth, and obtain insights that might not occur without the discussion they provide.*  
(Palomba & Banta, 1999, p.196)

## Definition of Focus Groups

Focus groups are discussions in which the moderator supplies the topics and monitors the discussion. The purpose is to gather information about a specific or focused topic in a group environment, allowing for discussion and interaction by the participants. Focus groups can be used as the sole source of data or as a complement to another research method such as a survey.

## Appropriate Use of Focus Groups

Focus groups should be used to:

- examine attitudes or opinions and why they are held.
- identify strengths and weaknesses of programs.
- interpret results from other assessment projects.
- provide information for designing surveys.

Focus groups should not be used:

- for assessment that requires statistical projections or statistically representative data.
- for subjects that are emotionally charged.
- when participants are not comfortable with each other.

## Advantages and Disadvantages of Focus Groups

### Advantages

- Focus groups can be relatively low cost and provide quick results. The actual time and cost for planning, conducting, and analyzing data may be relatively small when compared to alternatives such as survey projects and individual interviews.
- Focus groups are a flexible assessment tool. Interactions between the moderator and participants allow the moderator to probe issues in depth, address new issues as they arise, and to ask participants to elaborate on their responses.
- Participants may be more comfortable talking in a group than in an individual interview. Interactions can generate more discussion and, therefore, more information.
- The data are in the respondents' own words. It is easily understood and will provide insights into how respondents think about the topic.

## Disadvantages

- Groups can be difficult to assemble.
- The group setting can influence the responses of individuals, which is problematic when a dominant member affects the outcomes.
- The small numbers in focus groups can limit the extent to which the results can and should be generalized.
- The quality and quantity of focus group data is dependent on the ability of the moderator, making it essential that the moderator is carefully trained and skillful.
- The qualitative nature of focus group data can make it more difficult to summarize and interpret than more quantitative types.

## Planning and Conducting Focus Groups

### Planning Focus Group Questions

Questions should be concrete, specific, focused, simple, and open-ended, going from the more general to the more specific. They can also be ordered by their importance to the research project. Many researchers suggest using questions such as what prompted you, what influenced you, or what features in place of why.

Exercises can be used in place of questions to ensure that all focus group members have an opportunity to participate. Group members can be asked to write a word or phrase on an index card and then share their responses, to create lists or brainstorm ideas, to rate aspects of a program and then explain what led them to give that particular rating. Sentence completion exercises are also used to generate participation (e.g., "What I liked best about this program was..."). The openness of the focus group format allows for a multitude of activities that can guide or encourage discussion.

### Selecting a Good Focus Group Leader

someone who...

- understands the group process
- is...
  - aware
  - curious
  - diplomatic
  - empathetic
  - flexible
  - friendly with a sense of humor
  - good communicator
  - good listener
  - interested in people
  - open to new ideas
  - quick learner
- has...
  - an excellent memory
  - control over personal reactions
  - good time management

## Other Planning Issues

Researchers differ on the ideal size of a focus group, but most consist of 8 to 15 participants. Although the project objective will determine who is included in the focus group, the focus group participants should be comfortable talking to each other. A relatively homogenous group is useful, not only for the openness of participants, but also to allow for an easier interpretation of the outcomes. Researchers must decide if incentives and rewards will be used in recruiting participants. Incentives can be anything that draws or encourages participation. (Extra-credit, free food, or monetary rewards will probably appeal to students.) Researchers must ensure that they find participants who will get involved in the discussion, whether these or other means are used to encourage involvement.

Selecting an appropriate location where the focus group can meet is a very important planning decision. The room and seating arrangements should be comfortable for everyone involved and free from distractions such as noise or interruptions.

Recording or note taking decisions should be made in advance. Audio or video recordings can be used to document the group process, but they have the potential for stifling openness. Note taking might be the only form of record keeping appropriate in these circumstances. Written notes are also useful as a backup for equipment failure.

## Conducting a Focus Group

### Introduction

The moderator begins the focus group with a short introduction, which includes:

- a brief welcome.
- an overview of the topic.
- guidelines or ground rules.
- an opening question.

The welcome includes a thank you for participating and an introduction of the moderator(s). The overview is usually short and simple, explaining what the topic is and why the participants were chosen. Guidelines are used to lay ground rules such as speaking one at a time or using first names only. They also function to explain recording devices, confidentiality, and the role of the moderator. The opening question should serve as an ice-breaker that will give each participant an opportunity to speak.

## Moderating

Listening is important to moderating a focus group. The moderator should make a conscious effort to actively listen, focus on listening rather than talking, make eye contact with each participant as they speak, and be familiar with the questions and objectives of the project. Good time management is crucial. The moderator must weigh the length of discussion needed for each question with the time limits of the focus group. Finally, the moderator must probe for further information by observing nonverbal clues, drawing out information, and following up on ambiguous statements.

## Facility Concerns

Facility problems usually involve distractions or recording equipment failure which can be prevented with a little planning. Examining a room ahead of time will alert a moderator to potential problems. Precautions such as closing doors or windows may be all that is needed to eliminate noise and other distractions. Sometimes it is necessary to select a different location, which is easier to do in advance than at the time of the focus group meeting. A moderator should always have a back-up plan for equipment failure, whether it is the use of a back-up tape recorder or skilled note taker.

## Participant Concerns

The tone of the focus group can be overly influenced by a dominant group member. This might be an expert or just someone who likes to talk. A skillful moderator will be able to draw out fewer vocal members by asking if they agree or disagree and soliciting their opinions. Quiet or shy group members can be encouraged by using eye contact, calling on them by name, and asking follow-up questions to generate useful responses from them.

## Analyzing Focus Group Data

Focus group data require qualitative analysis techniques. Therefore, the most important part of analyzing focus group data is to have a good understanding of the notes taken. First, summarize key ideas in the notes. Find the big ideas by examining the participants' choice of words, considering group context, and looking for consistency among groups and group members. Categories and themes should develop from the language of the notes.

## References

Palomba, C. A., & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass.

# Chapter 13: Relating to Other Campus Assessment Efforts and Using Available Resources

*This chapter discusses using institutional data and other assessment techniques for assessment, assistance available from the Office of Institutional Research and Effectiveness, and external assessment resources.*

## Using Institutional Data, Transcript Analysis, Curriculum Review, and Anecdotal Records

Use of Institutional Data - information that the University collects including data about students, courses, and programs

Use institutional data to:

- explore demographics, enrollment patterns, and degree statistics.
- examine longitudinal patterns related to the available data.
- supply additional information about participants of other types of assessment activities.
- gather information at the department or college level.

Institutional data are all-inclusive, meaning that the data has been gathered for all courses, all students, etc. The amount of data is large and extends over time. Institutional data can be linked with other assessment tools such as surveys to provide additional demographic information about respondents. It can also supply an assessment team with information about the extent to which survey respondents differ from all students. Institutional data is collected consistently over time allowing for longitudinal information that can be used to track issues such as enrollment trends over time.

Institutional data are most often available through a mainframe computer system or numerous databases and is limited in the topics it covers. Accessing and selecting the correct information may require computer programming experience, access to the computer systems or databases, and familiarity with the computer system and the data.

Transcript Analysis - using the student database to examine course-taking or grade patterns

Use transcript analysis to:

- obtain a snapshot of a group of students at a particular point in time.
- explore what classes students took and in what order.
- examine patterns in student grades.

Transcript analysis allows a department to obtain a more complete picture of its students. Are majors who follow a particular course-taking path more likely to succeed? Do department introductory courses attract students to the major program? What path through general education courses seems to be most effective for the department majors?

Review of Curriculum Materials - systematic review of course syllabi, textbooks, exams, and other materials

Use curriculum review to:

- clarify learning objectives.
- explore differences and similarities between sections of a course.
- assess the effectiveness of instructional materials.

A review of materials basic to classroom instruction provides information invaluable to enhancing any assessment effort.

Anecdotal Records, Logs, and Journals - maintaining records of classroom activities, student responses, or faculty impressions

Use anecdotal records to:

- examine how students and faculty react to specified instructional methods.
- pilot new textbooks or other materials.
- explore student perceptions of certain aspects of the course.

Assessment usually relies on a systematic collection of information, but more informal observations can often be just as useful. (What is going on in the classroom? What works and what does not?)

## Using Interviews and Unobtrusive Measures

Interviews - gathering information in a focused, one-on-one conversation

Use interviews to:

- obtain information on a deeper level than a survey would allow.
- explore issues of concern to the department.
- secure information to use in designing a survey.
- facilitate more personal contact with long-distance subjects than a survey would permit.

### Types of Interviews

- standardized interview with closed responses: A set of standardized questions is prepared and asked of each participant. The role of the interviewer is simply to ask the questions and record the responses. The only information that is gathered is that which is specifically requested, making the standardized interview simply a verbal version of the paper, web, or on-line survey.
- standardized interview with open responses: The interviewer uses a set of standardized questions to elicit open-ended responses. Participants are encouraged to talk at length on these items.
- non-standardized interview: This is essentially a conversation between the interviewer and the participant in which they agree to discuss the participant's views of the subject matter. No set of questions is asked. The interviewer merely probes the participant on his/her opinions or perceptions on a particular topic.

Unobtrusive Measures - observation or record keeping of student use of facilities and services (This form of assessment provides data that can be correlated with test scores and/or course grades.)

Use unobtrusive measures to:

- record observable behaviors.

While test scores and survey results can indicate how much students are learning and how they feel about the process, observing student behavior can tell a great deal about how they learn. What do students do outside the classroom? Which out-of-class behaviors and activities seem to lead to better in-class performance?

## Office of Institutional Research and Effectiveness as An Internal Assessment Resource

The Office of Institutional Research and Effectiveness can lend assistance in...

- developing effective learning goals.
- developing measures.
- providing data such as samples of enrolled student or alumni demographic data.
- analyzing quantitative and qualitative results.
- interpreting and reporting results.
- identifying examples from other departments (at Miami and beyond).

### Office of Institutional Effectiveness Surveys That Can Be Mined for Assessment

- Beginning College Survey of Student Engagement
- National Survey of Student Engagement
- Graduation Survey
- First Destinations Survey

See <https://miamioh.edu/oir/surveys/student-surveys/index.html> for details. Appropriate procedures must be followed to ensure confidentiality.

# Chapter 14: Analyzing, Interpreting, Communicating, and Acting On Assessment Results

*The goal of assessment is information-based decision making. To put it another way, the end of assessment is action. Assessment helps the organization determine how well it is achieving its goals and suggests effective steps for improvement. (Walvoord, 2010, p. 4)*

## Reporting Assessment Results

Suskie (2009) lists five basic ways to summarize assessment results:

- tallies
- percentages
- averaging results into an overall score
- averaging results into sub-scores
- qualitative summaries (grouped listings, themes, examples)

Look at differences

- between groups
- over time
- with peers

## Ensuring the Quality of Your Data and the Utility of Your Analyses

### Quantitative Analyses

- reliability
- validity
- comparing participants/sample/population
- sampling error

Sample Size	Sampling Error
196	7%
264	6%
384	5%
600	4%
1,067	3%
2,401	2%
9,604	1%

- item difficulty, item discrimination

## Qualitative Analyses

- triangulation
- peer debriefing
- member check
- bracketing

## Sharing Assessment Results

Suskie suggests the following guidelines for sharing your assessment results

- Use good teaching practices to share assessment results.
- The briefer the assessment report is, the more likely it will be used.
- Three kinds of information are most important to share:
  - how you and your colleagues define a successful student
  - whether you are satisfied with your evidence of student success
  - what you are doing about unsatisfactory results
- Tables, charts, and other visuals may be more effective than traditional written reports.

## Honest, Balanced, Fair, and Useful Reporting of Assessment Results

Suskie recommends doing the following to ensure appropriate reporting:

- Share only aggregated results.
- Present results completely, fairly, and objectively.
- Provide appropriate attribution.
- Document the author, office, and date of assessment reports.
- Offer to make additional information available.

What will audiences for assessment results care most about?

- matters they can do something about
- interesting and unanticipated findings
- meaningful differences

## Venues for Sharing Assessment Results

Suskie gives the following examples of where to share your assessment results:

- web sites
- emails
- newsletters
- alumni magazines
- departmental memos
- brochures
- presentations
- posters or banners

## When People Feel Threatened by Assessment Results

If you find someone feels threatened by your assessment results, Suskie suggests that you:

- Consult with those who may feel threatened.
- Balance negatives with positives.
- Be gentle and sensitive.
- Provide corroborating information.
- Document the quality of your assessment methods.
- Acknowledge possible limitations in your assessment methods.
- Help identify possible solutions.

## Ways to Make Your Results Have the Most Impact

Suskie suggests that you do the following to ensure that your assessment results have the desired impact:

- Make sure everything you include tells an important, interesting part of your story.
- Use an engaging, meaningful title and headings.
- Open with something intriguing.
- Cascade from major points to details.
- Provide a context for results.
- Offer informed commentary.
- Keep it short.

## Using Assessment Results Effectively and Appropriately

You will want to use your assessment results effectively and appropriately. In order to do so, Suskie suggests that you:

- Focus on important learning goals.
- Assess processes as well as outcomes.
- Involve those with a stake in the results in designing, carrying out, and discussing assessments.
- Communicate findings widely and openly.
- Discourage others from making inappropriate interpretations.
- Don't hold people accountable for things they cannot control.
- Don't let assessment results alone dictate decisions.
- Use multiple sources of information when making decisions.
- Keep people informed on how assessment results have affected decisions.

### When Assessment Results Are Good

For those times when your assessment results are good, Suskie highly recommends that you:

- Celebrate!
- Reward!
- Share!
- Keep going!

### When Assessment Results Are Bad

Suskie suggests that you look at everything carefully.

- Do you have the right learning goals?
- Do you have too many learning goals?
- Take a hard look at your courses:
  - content and requirements
  - sequencing and prerequisites
  - admissions criteria
  - placement criteria
  - advising
  - tutoring
  - teaching methods
  - co-curricular activities
- Do you need to improve your assessment methods?
- Sometimes it really is the students' fault.
- Keep going.

## How We Can Make Better Meaning of Our Assessment Results

Frame student learning within Astin's (1993) Inputs-Environments-Outcomes assessment model that:

- Is predicated on the assumption that the principal means by which assessment can be used to improve educational practice is by enlightening the educator about the comparable effectiveness of different educational policies and practices.
- Highlights the role of student backgrounds (inputs, e.g., demographics, high school grades, test scores, values, attitudes, behaviors) and student experiences (environments, e.g., courses taken, teaching methods, employment, interactions with other students, interactions with faculty members, use of programs and services, participation in various activities) on student learning (outcomes).

### Moving From Assessment Results to Action

You have completed your assessment. To ensure that you appropriately use your findings, Maki (2004) and Walvoord (2010) suggest that you:

- Determine what is most important in the results. In addition to discussion among themselves, faculty members can consult program accreditation bodies, alumni, employers, faculty members at other institutions, librarians, writing specialists, and student affairs staff members.
- Focus on the areas that show the greatest weaknesses.
- Determine what is feasible now and what might be addressed in the future. Consider what changes can be made within the department and what changes involve others. Investigate resources and available assistance.
- Keep good notes, both for your own follow-up and for reports that you might have to submit.

### Case Studies of Departmental Use of Assessment Activities

The following are based upon Walvoord and the experiences of staff members in the Office of Institutional Research and Effectiveness.

- A two-hour, annual faculty meeting is held in a department of political science where each faculty member who teaches seniors described strengths and weaknesses in research papers. Notes were kept. A vote was taken on one follow-up action to mitigate a weakness. The area identified was students' lack of ability to construct coherent research questions. Members of the department curriculum committee followed up to investigate in which earlier courses this skill was covered. They also administered a short survey to seniors that asked which courses helped them to construct research questions and what the faculty could do to help students to improve this skill. It was decided that two junior-level courses would cover constructing research questions in greater depth. A year later a similar meeting was held, and it was determined that students' ability to construct research questions had improved substantially. The faculty members then decided to follow up on another identified weakness.
- The faculty member who teaches the senior capstone biological research course for biology majors developed a simple scoring system or rubric to evaluate students' research papers. He shared the results at a department meeting. The results showed that designing experiments and controlling variables were the areas of greatest weakness. A small committee examined the curriculum and held a student focus group. They decided to institute a tutoring program that reinforces these areas.
- Faculty members in health sciences noticed that several students were providing incorrect answers to questions in the final exam of a first-year survey course that required interpretation of written material. They began to suspect that there was a relationship between reading skills and performance in the exam. A student survey and discussions with academic advisors confirmed this relationship. As a result the faculty emphasized the importance of reading skills in their first-year survey course, they strengthened a requirement that students who scored below a certain cutoff in a diagnostic reading test enroll in the institution's reading and study skills course, they asked experienced students to discuss with first-year students the importance of study time and effective study methods, and they provided professional development for faculty members in the department to recognize student reading problems early in their courses and to refer the students with such problems to the campus study skills center.
- Music faculty members reviewed student portfolios and determined that there was wide variation in entering students' knowledge of music theory. They developed a music theory diagnostic test that students took as part of their application process and created a first-semester basic music theory course for students who scored poorly on the test.
- Faculty members offering online MBA courses noticed that some students were not turning in assignments or using the online discussion board. They emailed students a link to a short survey and also asked the institution's IT staff to collect some statistics about students' use of tutorials that were provided to explain how to use the features of Canvas. It turns out that some students did not understand the basics of how to navigate Canvas, and they did not complete the tutorials. A new policy was instituted that students would be de-registered from their courses unless a usage report confirmed that they had completed the tutorials and scored at least 80% on a proficiency exam.

While the level of maturity of the assessment efforts outlined in these case studies varied, the commonality is that all of the departments took some action. They did not wait years until enormous amounts of data were collected. They were better off concentrating on a few simple concerns that matter than were departments that had large amounts of information collected but did not discuss the implications and did not make any changes.

## Frequently-Asked Questions

How can we ensure that results of assessment activities are used?

Faculty members, staff, and administrators who are involved in assessment planning will be more likely to use the results. Findings should be shared with department faculty members in a written report that could be used to generate discussions at faculty meetings or annual retreats. (What does the report tell you about your course or program? What possible changes are indicated? How could our department use these results to best advantage?) Additional reports or presentations can be prepared for different audiences, depending on their assessment needs.

In reporting results, do we report actual data or interpretation of the data?

This depends on the audience. Some constituents may request that the department report actual findings while others will prefer a summary that includes implications of assessment results.

Do we report everything?

The department will usually decide. It may find both expected and unexpected results to be useful. For example, an alumni survey may reveal that not only are graduates getting jobs, but the majority of graduates are securing jobs in one particular type of firm or company. This finding could be used to determine what job skills department graduates have that are making them so marketable with these companies. This information, while useful to the department, will probably not be of interest to accreditation teams or college curriculum committees.

How long should we keep assessment results?

It is advisable to keep assessment project results for at least 3 to 5 years (for ease in knowing what has been done before, for learning from past mistakes, or for doing longitudinal studies). Departments find it useful to do longitudinal studies of assessment projects to determine trends or patterns over time. Results of assessment activities may change with time along with the job market, the economy, technology, and even the department itself. Many assessment evaluations are on cycles and will necessitate the use of results from past years. (State commission or accreditation reviews may be every 5 to 10 years. Similarly, some departments do surveys annually, while others prefer to do them every 5 years.)

## References

- Astin, A.W. (1993). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. Phoenix, AZ: American Council on Education and the Oryx Press.
- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Suskie, L. A. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco: Jossey-Bass.
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

# Chapter 15: Making the Assessment Process More Manageable

*This chapter provides practical advice for improving the efficiency and effectiveness of assessment activities.*

## Tangible Suggestions for Making Assessment More Manageable

Maki (2004) suggests doing the following in order to ensure your assessment is more manageable:

- Develop and maintain an assessment plan so that everyone knows what's coming.
- Pick one learning goal per year for assessment and follow-up discussion and action.
- Embed assessment into existing courses wherever possible.
- Establish departmental assessment day to concentrate efforts.
- Collect data from a sample of students rather than all of them, if you have sufficient numbers of majors.
- Make submission of work into a student portfolio a requirement for students.
- Identify opportunities such as internships, field experiences, undergraduate research opportunities, and study abroad that provide opportunities to collect evidence of student learning.
- Employ a graduate student to help do the front-line work of analysis and interpretation.

## Setting Priorities for Assessment

Suskie (2009) suggests that in setting your priorities you should:

- Start small.
- Start by focusing on important goals.
- Start with easier assessments.
- Focus on approaches that yield the greatest dividends for the time and resources invested.
- Work with samples rather than whole populations of students, where possible.
- Stagger assessment activities.
- Take advantage of existing resources.

## Examples of Assessment Information That May Already Be On Hand

Suskie lists the following that may already be available to you for your assessment needs:

- scores on published tests (ACT, placement, certification/licensure)
- ratings of students by internship/practicum/field experience supervisors
- assessment information assembled to meet disciplinary accreditation requirements
- scores and scoring criteria for locally-developed tests and assignments
- retention and graduation rates
- information on employment and subsequent education
- surveys of students and alumni

- information on student course-taking
- information on student participation in internships/practica/field experiences, study abroad, Immersive Learning Virginia Ball Center projects, living-learning communities, undergraduate research, etc.
- information on students' use of technology (Blackboard, library resources)

## Using Samples of Student Work for Assessment

Walvoord (2010) reports on the advantages and disadvantages of using samples of student work for assessment:

### Advantages

- Information is already available.
- There are no student motivation problems, since students must complete the work for a grade.
- There is no direct cost.
- This work reflects what faculty members actually teach, not what is included on standardized tests; so, faculty members are more motivated.

### Disadvantages

- Evidence is not comparable across institutions.
- Everyone evaluates differently, so common standards or rubrics and training are needed.
- Information is in multiple parts and multiple formats, so it needs to be collected in portfolios.
- There is quite a bit of work, especially at the beginning.

## The Basic No-Frills Department Assessment System

Walvoord recommends that the following be included in a basic department assessment system:

- learning goals for each degree program, co-curricular program, etc.
- two measures of how well your students are achieving this goal
  - One direct measure (e.g., student work samples near the time of graduation)
  - One indirect measure (e.g., surveys, interviews, or focus groups that ask students how well they feel they achieved each of the learning goals, what aspects of their program helped them achieve those goals, and what the department might do differently that would help students to learn more effectively)
- one two-hour department meeting per year in which assessment results are discussed, at least one follow-up action to improve student learning is agreed upon, and for which meeting notes are kept

## Developing and Using Rubrics

The University of Virginia (n.d.) offers the following suggestions for developing and using rubrics:

### Developing Rubrics

- Clearly define the assignment including the topic, the process that students will work through, and the product they are expected to produce.
- Brainstorm a list of what you expect to see in the student work that demonstrates the particular learning outcome(s) you are assessing.
- Keep the list manageable (3-8 items) and focus on the most important abilities, knowledge, or attitudes expected.
- Edit the list so that each component is specific and concrete (for instance, what you mean by coherence); use action verbs when possible and descriptive, meaningful adjectives (e.g., not adequate or appropriate but correctly or carefully).
- Establish clear and detailed standards for performance for each component. Avoid relying on comparative language when distinguishing among performance levels. For instance, do not define the highest level as thorough and the medium level as less thorough. Find descriptors that are unique to each level.
- Develop a scoring scale.
- Test the rubric with more than one rater by scoring a small sample of student work. Are your expectations too high or too low? Are some items difficult to rate and in need of revision?

### Using Rubrics

- Evaluators should meet together for a training/norming session.
- A sample of student work should be examined and scored.
- More than one faculty member should score the student work. Check to see if raters are applying the standards consistently.
- If two faculty members disagree significantly (e.g., more than 1 point on a 4-point scale), a third person should score the work.
- If frequent disagreements arise about a particular item, the item may need to be refined or removed.

### Available Rubric Libraries

Assessment Commons: <http://assessmentcommons.org/view-all-resources/>.

Association of American Colleges and Universities: <https://www.aacu.org/value-rubrics>.

Fresno State University: <http://www.fresnostate.edu/academics/oie/assessment/rubric.html>.

University of Delaware: <https://ctal.udel.edu/resources-2/rubrics/>.

## References

- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Suskie, L. A. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco: Jossey-Bass.
- University of Virginia, Office of Institutional Assessment & Studies. (n.d.). *Planning assessments*.
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

## Chapter 16: Motivating Colleagues to Participate in Assessment

*The movement to assess student learning in higher education has been around for roughly a quarter of a century. Why, then, is there still resistance to assessment on so many campuses? Marilee Bresciani (2006) suggests two underlying reasons: the value and importance of assessment are not understood, and assessment activities are not supported with appropriate resources. A third reason may be added to these: fear of and resistance to change.*  
(Suskie, 2009, pp. 69-70)

What are some sources of resistance to change?

Suskie (2009) highlights a few of the sources:

- Some people are satisfied with the status quo.
- Some people don't see the relevance of an initiative to them and, therefore, try to ignore it.
- Some old-timers have seen many initiatives come and go over the years; this too shall pass.
- Some people think they will need to learn and use new skills that are difficult to master.
- Some people feel threatened by a new initiative.
- Some people have misconceptions about a new initiative.
- The prospect of change means the prospect of more work.

What are some tangible actions to promote faculty participation in assessment?

Walvoord (2010) suggests doing the following to encourage your faculty members' participation in assessment:

- Devote at least two hours in one or more faculty meetings each year to discuss what faculty members in each program expect students to be able to do when they graduate, how you know whether or not students have achieved this, and what you could try to address weaknesses.
- Ask each faculty member who regularly teaches the same courses to bring copies of one of his or her syllabi to share with colleagues. Discuss what expectations the faculty member has for the course, what weaknesses he or she sees in student preparation, and how this course fits in with others in the curriculum.
- Adapt faculty performance expectations (or recognize them if they are already there) to explicitly acknowledge participation in assessment of student learning.
- Recognize the scholarship of teaching and learning as a legitimate and important part of research in the department. Reward faculty members who receive grant funding (OIRE supplies this!), who make conference presentations, and who publish concerning teaching and learning in the discipline. (See the list of journals that publish on the scholarship of teaching and learning at the end of this chapter.)

What are the benefits of assessment?

In general, benefits include getting faculty members, within and across disciplines, talking about their goals for student learning, seeing how courses fit together, making expectations more clear to students, and sharing detailed feedback with students. (Suskie, 2009; University of Delaware, n.d.; Wolvoord, 2010)

In general, assessment:

- increases our confidence that we are putting our time and resources into activities that we value as an institution.
- increases our confidence that we are allocating resources to areas that are producing the outcomes we value.
- gathers and uses data that will enable us to make decisions that lead to improved instruction, stronger curriculums, and effective and efficient policies.
- strengthens our ability to say that our graduates are well-prepared to succeed in their future endeavors.
- has ready access to data that will satisfy the requirements of accrediting agencies and funding agencies, and will inform various accountability driven conversations.
- gathers and uses data that will strengthen arguments for increased funding and/or resource allocations to areas that are producing valued outcomes.
- increases the effectiveness of our communications about the value of a university education.

Has assessment really improved student learning?

Yes, according to Suskie and Walvoord. There is an abundance of literature about how assessment has improved student learning within specific disciplines and within specific institutions. For example, see Banta, Jones, and Black (2009); Bresciani (2006); Maki (2010); Peterson and Einarson (2001) in addition to journals listed at the end of this chapter and issues of Assessment Update <https://www.wiley.com/en-us/Assessment+Update-p-9780999903360>.

How can we assess complex student learning? Isn't assessment just about the lowest common denominator? How can we capture the ineffable?

Walvoord says that we should be spending our time in assessment concentrating on what really matters most. This is not easy, but it is not impossible. We need to figure out how to effectively evaluate what students do that reflect our goals for them. Many people have been thinking about this, both within and across disciplines. Is your national disciplinary professional association talking about this? An excellent resource for assessment of cross-disciplinary, liberal education college student learning is the Association of American Colleges and Universities (AAC&U) LEAP (Liberal Education and America's Promise) and VALUE (Valid Assessment of Learning in Undergraduate Education) projects. (See <http://www.aacu.org/LEAP> and <http://www.aacu.org/value>.)

Does assessment violate academic freedom?

The Association of American Colleges and Universities' Board of Directors Statement on Academic Freedom and Educational Responsibility (2006) directly addresses this question:

There is, however, an additional dimension of academic freedom that was not well developed in the original principles, and that has to do with the responsibilities of faculty members for educational programs. Faculty members are responsible for establishing educational goals for student learning, for designing and implementing programs of general education and specialized study that intentionally cultivate the intended learning, and for assessing student achievement. In these matters, faculty members must work collaboratively with colleagues in their departments, schools, and institutions as well as with relevant administrators. Academic freedom is necessary not just so faculty members can conduct their individual research and teach their own courses, but so they can enable students—through whole college programs of study—to acquire the learning they need to contribute to society.

Are there factors beyond our control that affect student learning?

Walvoord says that of course there are! Acknowledge factors that you cannot control, such as students' incoming skill levels or the number of hours they spend in their jobs, to establish beginning points for student assessment and to provide a context for learning.

Why are grades not enough?

Suskie and Walvoord list the following reasons:

- Course grades usually tell us something about how an individual student knows relative to other students in the same course section, but provide no details about exactly what that student actually knows or doesn't know.
- If grades reflect attendance, this does not tell us much about student learning.
- If multiple sections of a class are offered and taught by different people, are the content and grading criteria exactly the same?
- Grades for individual assignments are typically not available to anyone else besides the instructor and the student.
- A degree program should be more than a set of disparate courses. Are there things we want students to know and be able to do that span multiple courses? Do we really know how each course fits into a coherent curriculum?

What are the most common misconceptions about program assessment?

The University of Central Florida (2008, pp. i-11) lists seven:

Misconception 1: The results of assessment will be used to evaluate faculty performance.

Nothing could be further from the truth. Faculty awareness, participation, and ownership are essential for successful program assessment, but assessment results should never be used to evaluate or judge individual faculty members' performance. The results of program assessment are used to improve programs.

Misconception 2: Our program is working well; our students are learning; we don't need to bother with assessment.

The primary purpose of program assessment is to improve the quality of educational programs by improving student learning. Even if you feel that the quality of your program is good, there is always room for improvement. In addition, various accrediting bodies mandate conducting student outcomes assessment. Not to conduct assessment is not an option.

Misconception 3: We will assign a single faculty member to conduct the assessment. Too many opinions would only delay and hinder the process.

While it is a good idea to have one or two faculty members head the assessment process for the department, it is really important and beneficial to have all faculty members involved. Each person brings to the table different perspectives and ideas for improving the academic program. Also, it is important that all faculty members understand and agree to the mission (i.e., purpose) and goals of the academic program.

Misconception 4: The administration might use the results to eliminate some of the department's programs.

There are two types of evaluation processes: summative and formative. The purpose of summative program evaluation is to judge the quality and worth of a program. On the other hand, the purpose of formative program evaluation is to provide feedback to help improve and modify a program. Program assessment is intended as a formative evaluation and not a summative evaluation. The results of program assessment will not be used to eliminate programs.

Misconception 5: Assessment is a waste of time and does not benefit the students.

The primary purpose of assessment is to identify the important objectives and learning outcomes for your program with the purpose of improving student learning. Anything that enhances and improves the learning, knowledge, and growth of your students cannot be considered a waste of time.

Misconception 6: We will come up with an assessment plan for this year and use it every year thereafter.

For program assessment to be successful, it must be an ongoing and continuous process. Just as your program should be improving, so should your assessment plan and measurement methods. Each academic department must look at its programs and its learning outcomes on a continual basis and determine if there are better ways to measure student learning and other program outcomes. Your assessment plan should be continuously reviewed and improved.

Misconception 7: Program assessment sounds like a good idea, but it is time-consuming and complex.

It is impossible to “get something for nothing.” Effective program assessment will take some time and effort, but there are steps that you can follow that can help you to develop an assessment plan that will lead to improving student learning.

What are the most common actions resulting from assessment?

According to Walvoord, you can expect the following actions from your assessment:

- Changes to the curriculum, requirements, programmatic structures, or other aspects of students' course of study
- Changes to the policies, funding, and planning that support learning
- Faculty development

What journals publish scholarship on assessment of college student learning?

Suskie provides the following lists of journals that cover topics of general interest in higher education and teaching in the specific disciplines.

## General Interest Higher Education Publications

*American Educational Research Journal*  
*American Journal of Evaluation*  
*Applied Measurement in Education*  
*Assessment and Evaluation in Higher Education*  
*Assessment in Education: Principles, Policy and Practice*  
*Assessment Update*  
*Change*  
*College Teaching*  
*Community College Journal of Research and Practice*  
*Computer Supported Cooperative Work: The Journal of Collaborative Computing*  
*Educational Action Research*  
*Educational Evaluation and Policy Analysis*  
*Educational Policy Analysis Archives*  
*Educational Research*  
*Innovations in Education and Teaching*  
*International Innovative Higher Education*  
*Interactive Learning Research*  
*International Journal for the Scholarship of Teaching and Learning*  
*Journal of College Student Retention*  
*Journal of Educational Measurement*  
*Journal of Excellence in College Teaching*  
*Journal of Graduate Teaching Assistant Development*  
*Journal of Higher Education*  
*Journal of Student-Centered Learning*  
*Liberal Education*  
*National Teaching and Learning Forum*  
*New Directions for Higher Education*  
*New Directions for Program Evaluation*  
*New Directions for Teaching and Learning*  
*Peer Review*  
*Practical Assessment, Research, and Evaluation*  
*Research in Higher Education*  
*Teaching Excellence*  
*Teaching Professor*

## Journals on Teaching in Specific Disciplines

*American Biology Teacher*  
*Biochemical Education*  
*Chemical Engineering Education*  
*College Composition and Communication*  
*College Mathematics Journal*  
*Communication Education*  
*History Teacher*  
*Journal of Accounting Education*  
*Journal of Agricultural Education*  
*Journal of Chemical Education*  
*Journal of College Science Teaching*  
*Journal of Criminal Justice Education*  
*Journal of Economic Education*  
*Journal of Engineering Education*  
*Journal of Environmental Education*  
*Journal of Geography in Higher Education*  
*Journal of Geoscience Education*  
*Journal of Health Education*  
*Journal of Management Education*  
*Journal of Marketing Education*  
*Journal of Nursing Education*  
*Journal of Social Work Education*  
*Journal of Teaching in Physical Education*  
*Journal of Teaching in Social Work*  
*Journal of Teaching Writing*  
*Journalism and Mass Communication Educator*  
*Mathematics and Computer Education*  
*Mathematics Teacher*  
*Physics Teacher*  
*Research in Collegiate Mathematics Education*  
*Research on Science Teaching*  
*Research Strategies: A Journal of Library Concepts and Instruction*  
*Scholar: A Journal of Leisure Studies and Recreation Education*  
*Studies in Higher Education*  
*Teaching English in the Two-Year College*  
*Teaching in Higher Education*  
*Teaching of Psychology*  
*Teaching Philosophy*  
*Teaching Sociology*  
*Trends and Issues in Postsecondary English Studies*

## References

- Association of American Colleges and Universities. (2006). *Board of Directors statement on academic freedom and educational responsibility*. Retrieved from [http://www.aacu.org/about/statements/academic\\_freedom.cfm](http://www.aacu.org/about/statements/academic_freedom.cfm)
- Banta, T. W., Jones, E. A., & Black, K. E. (2009). *Designing effective assessment: Principles and profiles of good practice*. San Francisco: Jossey-Bass.
- Bresciani, M. (2006). *Outcomes-based academic and co-curricular program review: A compilation of institutional good practices*. Sterling, VA: Stylus.
- Maki, P. L. (2010). *Coming to terms with student outcomes assessment: Faculty and administrators' journeys to integrating assessment in their work and institutional culture*. Sterling, VA: Stylus.
- Peterson, M. W., & Einarson, M. K. (2001). What are colleges doing about student assessment? Does it make a difference? *Journal of Higher Education*, 72(6), 629-669.
- Suskie, L. A. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco: Jossey-Bass.
- University of Central Florida, Office of Operational Excellence and Assessment Support. (2008). *Program Assessment Handbook*. Retrieved from [http://oeas.ucf.edu/doc/acad\\_assess\\_handbook.pdf](http://oeas.ucf.edu/doc/acad_assess_handbook.pdf)
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

# Chapter 17: Print and Online Assessment Resources and Assessment Conferences

## Recommended Print Resources

- Banta, T. W., Jones, E. A., & Black, K. E. (2009). *Designing effective assessment: Principles and profiles of good practice*. San Francisco: Jossey-Bass.
- Banta, T. W., & Palomba, C. A. (2014). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. John Wiley & Sons.
- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Maki, P. L. (2010). *Coming to terms with student outcomes assessment: Faculty and administrators' journeys to integrating assessment in their work and institutional culture*. Sterling, VA: Stylus.
- Suskie, L. (2018). *Assessing student learning: A common sense guide*. John Wiley & Sons.
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.

## Recommended Online Resources

- Assessment Commons.org: <http://assessmentcommons.org/>
- Australian Learning and Teaching Council. (2009). *Assessment 2020: Seven propositions for assessment reform in higher education*. Retrieved from [https://www.uts.edu.au/sites/default/files/Assessment-2020\\_propositions\\_final.pdf](https://www.uts.edu.au/sites/default/files/Assessment-2020_propositions_final.pdf).
- Fresno State University. Office of Institutional Effectiveness. (n.d.). *Assessment of learning*. Retrieved from <http://www.fresnostate.edu/academics/oie/assessment/>.
- Hutchings, P., Ewell, P., & Banta, T. (2012). *AAHE Principles of Good Practice: Aging nicely*. Retrieved from <http://www.learningoutcomesassessment.org/PrinciplesofAssessment.html>.
- Indiana University. History of Learning Project. (n.d.). *Principles of good assessment*. Retrieved from <http://www.iub.edu/~hlp/principles.html>.
- Miami University *Assessment Briefs*: <http://miamioh.edu/cte/assessment/briefs/index.html>
- National Institute for Learning Outcomes Assessment. (n.d.). *Assessment resource library*. Retrieved from <http://www.learningoutcomesassessment.org/publications.html>
- University of Central Florida, Office of Operational Excellence and Assessment Support. (2008). *Program Assessment Handbook*. Retrieved from [http://oeas.ucf.edu/doc/acad\\_assess\\_handbook.pdf](http://oeas.ucf.edu/doc/acad_assess_handbook.pdf)

University of Hawai'i, Assessment Office. (n.d.). *Curriculum mapping/curriculum matrix*. Retrieved from <http://manoa.hawaii.edu/assessment/howto/mapping.htm>

University of Rhode Island. Student Learning, Outcomes Assessment, and Accreditation. (n.d.). *Graduate program assessment planning forms and rubrics*. Retrieved from [https://web.uri.edu/assessment/g\\_planning\\_forms/](https://web.uri.edu/assessment/g_planning_forms/).

## Assessment Conferences and Organizations

### Conferences

- Assessment Institute in Indianapolis: <http://assessmentinstitute.iupui.edu/>
- AAC&U Conference <http://www.aacu.org/meetings/index.cfm>
- Higher Learning Commission workshops: <https://www.hlcommission.org/Programs-Events/workshops.html>

### Organizations

- Association for the Assessment of Learning in Higher Education: <https://www.aalhe.org>
- National Institute for Learning Outcomes Assessment: <http://www.learningoutcomeassessment.org>