

IV. Program Assessment

How do we know the program is having its intended impact on students?

What is program assessment?

What can program assessment help us accomplish?

What outcomes should we measure?

How should we measure them?

How can we best share assessment results?

1. Program Assessment Overview

What is Program Assessment?

Program assessment is simply a means of finding out systematically what we often know (or think we know) informally – what impact our programs are having on students, and whether our programs are achieving their desired outcomes. Unlike *evaluation*, which normally refers to a process used to make judgments (such as whether a program should be kept or discontinued), *assessment* refers to a process of gathering information for the purpose of improvement.

Program assessment involves five major steps:

- Figuring out what the program is intended to achieve – its desired outcomes
- Figuring out ways of measuring whether those outcomes are being achieved – assessment strategies
- Gathering, compiling, and analyzing assessment data
- Sharing, interpreting, and making sense of the assessment results
- Using this knowledge to improve the program

This process should be undertaken by the experts – faculty – in each program, related group of programs, or department, assisted by administrators and assessment experts.

What can Program Assessment do for you?

The best reason to implement a program assessment process is to be able to make decisions, design initiatives, and recommend changes in a manner that is based on the best information possible. Knowing what students are learning and why is critical to making effective decisions about program improvement. There are also many other benefits to using program assessment.

Accreditation and institutional effectiveness: Many institutions have asked departments to implement program assessment as part of a larger institutional effectiveness initiative, or in order to meet accreditation requirements. For example, The Southern Association of Colleges and Schools' *Principles of Accreditation: Foundations for Quality Enhancement* states as its first standard for educational programs:

“The institution demonstrates that each educational program for which academic credit is awarded...establishes and evaluates program and learning outcomes.”

SACS also requires that institutions demonstrate their use of program data for ongoing program improvement. Implementing a program assessment process will

Better data on outcomes: In Florida, the state gathers data on very specific program outcomes, like completions and placements. For the past several years, this data has been used to distribute funding to community colleges through a performance-based funding model. Although this model is likely to change, it will almost certainly retain some performance-based components, and completion and placement data will almost certainly continue to figure heavily in how funding is allocated to our institution. The institution itself also uses completion and placement data in the College Program Review (CPR) process.

There are two problems with relying solely on completion and placement data as measures of program effectiveness. First, we have limited control over whether a student decides to complete an entire program, and even less control over whether they are able to (or choose to) get a job in their field of study. Many students begin programs with no intent of completing the entire program. Whether they get a job is dependent upon the economy, their personal motivation and initiative, and many other factors that are beyond our control. This is not to say that we do not have a responsibility to help students graduate and get good jobs. However, if students are able to demonstrate their achievement of desired outcomes in some other way – for example, by passing a comprehensive exam – we have additional data that supports the program’s effectiveness and can put other data in perspective.

Second, quantitative outcomes data such as completions and placements tells us very little that we can use to actually improve programs. We may know that completions are low, that placements are down, but we don’t know why. We don’t even know if the reasons lie with the program itself or with some outside factor. If there are internal factors that are contributing to lower-than-desired outcome levels, we don’t know what to do about it. Without other forms of assessment data, we have no information on which to base decisions, formulate hypotheses, or otherwise come up with strategies to address problems. We may have an informal sense of what’s wrong, based on our own experiences or anecdotal information, but systematic program assessment can help us make better decisions and target our efforts more effectively.

Documentation of best practices: Faculty at this college have many opportunities to share their best practices with colleagues at this institution and others across the country – at professional meetings and conferences, in publications, as part of awards programs, and so forth. Being able to share their innovative teaching practices, student success initiatives, and other good ideas in a convincing and reputable manner requires assessment data that documents their effectiveness. Colleagues will be more interested in our ideas and more likely to adopt programs and initiatives developed here if there is evidence that they result in desired student learning outcomes.

Differences between program assessment and student or faculty evaluation

The College has processes in place for student evaluation and faculty evaluation. Program assessment is different from either of these and requires different methods. Individual faculty members can determine how they wish to evaluate and grade students, so that grading methods may be different even in different sections of the same course. Also, grades may be partly based on other factors such as attendance or class participation that do not reflect actual learning outcomes. Similarly, faculty evaluation is an individualized process that involves a variety of factors. Program assessment requires information about student learning that can be aggregated across an entire program to provide useful feedback about that program.

Any program assessment process we establish should be as useful as possible to all stakeholders, including faculty, staff, students, parents, employers, and community members. Assessment should be part of “the way we do business,” not something tacked on to satisfy accreditors or administrators. We will benefit and our students will benefit from the improved programs and services we will be able to provide.

2. Developing a Program Assessment Plan

Implementing program assessment requires a plan that tells what will be measured, how it will be measured, who is responsible for assessment activities, and how the assessment information will be used. Having a written plan in place helps keep everyone is on the same page, ensures that the program can be continued if a key individual leaves, and documents the nature of the assessment program for outside agencies (administration, state agencies, and accrediting organizations). The following outline provides the key components of an assessment plan. It is adapted from Palomba and Banta's (1999) *Assessment Essentials*, an excellent resource that provides more detail on each of the components. Two major components, determining the learning outcomes to be assessed and choosing assessment methods, are explained in more detail below.

Program Assessment Plan Outline

1. *Departmental Goals*: Describe what the department intends to accomplish, how the department's goals relate to campus mission, and purposes for assessment
2. *Learning Outcomes*: Describe what students must know, do, and value
3. *Techniques and Target Groups*: Indicate how you will determine whether learning objectives have been met, including methods, target groups, and any impact on students
4. *Timeline*: Indicate when data will be collected and analyzed, when reports will be available, and when recommendations will be made
5. *Provisions for Administration*: Indicate who has responsibility for seeing the plan is carried out, who will collect and analyze the data, and who will summarize and report results.
6. *Use of Information*: Describe provisions for sharing information with internal and external audiences, and for making recommendations and decisions.
7. *Assessment Evaluation*: Indicate how the assessment program itself will be evaluated.

Source: *Assessment Essentials: Planning, Implementing, and Improving Assessment in Higher Education*. Catherine Palomba and Trudy Banta, 1999, Jossey-Bass.

Step 1: Determine the learning outcomes to be assessed

The objective in this first step is to choose student learning outcomes that all department members can agree are important. Particularly when starting out on a new program assessment effort, try to keep it simple, and focus on a few key outcomes that touch on a range of knowledge, skills, and attitudes that represent what faculty, employers, students, and other stakeholders will value. It is almost impossible to measure everything – it is better to gather data on a limited set of outcomes that everyone agrees is important.

Faculty members can brainstorm goals and objectives from scratch, or they can begin with a list of options. It often helps to start with at least a framework or set of categories; for example, one useful way to categorize goals and objectives is in terms of knowledge and skills, and attitudes or values. Student learning objectives or outcomes can be formulated in each of the categories using a variety of sources.

Knowledge and skills

That curriculum you painstakingly developed using a DACUM or PCAL? The list of student performance standards should serve as the foundation for assessment of the knowledge and skills students should be expected to gain from the program. In addition, you may want to include other learning objectives that faculty may wish to achieve based on their professional experience, input from advisory committee members, student interest, or other sources.

Knowledge and skills are so interdependent that it may make little sense to distinguish them, particularly in terms of assessment. Having students demonstrate that they have mastered a certain skill can also allow us to infer that they possess the required knowledge to perform that skill. Also, remember that skills can include technical, hands-on skills with particular equipment or processes; and interpersonal skills; problem-solving, critical thinking, and decision-making skills.

Knowledge and skills can be characterized using a variety of typologies; two examples are:

Declarative, procedural, and conditional knowledge: Declarative knowledge is the “what,” procedural is the “how,” and conditional is the “when and why.” Declarative knowledge is generally what we think of as facts and concepts, the underlying “subject matter” of a field. Procedural knowledge is what we often think of as technical skills – how to perform an operation or a task. Conditional knowledge involves judgment – knowing under what conditions to apply a particular procedure or body of knowledge.

Bloom’s taxonomy of cognitive objectives: Benjamin Bloom developed a taxonomy of “cognitive” objectives that is organized hierarchically from simplest to most complex: knowledge, understanding, application, analysis, synthesis, and evaluation. “Knowledge” is simply memorized facts, while “understanding” is being able to recognize facts and concepts in context. “Application” is just what it says, being able to apply knowledge in solving problems. “Analysis” is being able to break down a problem into its constituent parts so that it may be understood and solved, while “synthesis” is combining seemingly unrelated knowledge into a coherent whole. Finally, “evaluation” is being able to make judgments about the quality and value of different problem solutions.

These typologies can help us see how important it is to address the range of objectives related to knowledge and skills, and not just teach or assess the lowest levels of factual knowledge, but at the same time points out the importance of a sound conceptual foundation to even the most sophisticated problem-solving or analytical skills.

Attitudes and values

While curriculum frameworks are typically great at specifying required knowledge and skills, they are generally less useful when it comes to attitudes and values. Yet few of us in higher education would deny that we expect students to gain certain attitudes, values, beliefs, or perspectives on the world. When employers talk about “soft skills” this is often what they mean – having a strong work ethic, caring about the job one does, valuing quality, not settling for “adequate” or “average.” Educators disagree about whether it is desirable, or even possible, to attempt to teach certain attitudes and values, and certainly the ways in which one would go about “teaching” attitudes and values is likely to be different than the way in which one goes about teaching knowledge and skills. The barriers to learning are also likely to be

different – students may come to us with little prior knowledge of a field, but with very definite attitudes about work and life that may interfere with whatever we try to “teach” them. Nevertheless, in workforce education employers expect us to address these issues and do what we can to help students acquire attitudes and values that will serve them well in the workplace.

Step 2: Choose assessment methods

Once decisions have been made about what to measure, the next issue is how to measure it. Since we cannot crack open our students’ heads and directly observe their knowledge, we need to use more indirect measures that will provide *indicators* of students’ performance with respect to the learning objectives. Such indicators include exam scores, faculty assessment of student work, employer ratings of student job performance, and student feedback. Our next task is to select or design assessment methods and tools that will provide useful assessment data and serve as indicators of students’ learning with respect to our chosen learning objectives.

Assessment methods can be categorized as follows:

Performance vs. self-reporting: Assessment methods that fall into the performance category require students to actually demonstrate their learning and show how they meet particular learning objectives. Self-reporting methods ask students to describe what they have learned, comment upon it, and evaluate it from their personal perspective.

Limited-response vs. open-ended: Limited-response assessment methods are those in which the instructor or assessment designer limits the types of responses students can provide, such as in a multiple-choice test or survey form. Open-ended assessment methods provide more latitude for students to formulate their own responses, as in papers, projects, hands-on performance tasks, essay tests, and interviews or focus groups. A common rubric or coding scheme can enable instructors in different course sections to generate data that can be aggregated.

In actually employing assessment methods to gather data on student outcomes, there are two major approaches: *course-embedded* and *programmatic*. Course-embedded approaches gather data from student work in individual courses, while programmatic approaches are conducted outside of regular courses, for example, periodically during students’ programs or at the end of their program. Examples of each include:

Course-embedded	Programmatic
Exams and quizzes	Student exit surveys
Papers and projects	Focus groups
Performance tasks	“Core competency” exams
In-class surveys	Certification or licensure tests
	Portfolios
	Employer surveys

The “performance task” category is a large one, and may include everything from hands-on demonstrations of skills in the classroom to internships or clinical experience. Course-embedded assessment that occurs in a capstone course, internship or clinical, or other end-of-program learning experience may also serve as programmatic assessment, in that it can measure what the student has gained from the entire program.

The chart on the next page provides a sample framework for selecting assessment methods for various types of learning outcomes. This is followed by several sample assessment plans that may provide useful models for you as you develop a program assessment plan.

Workforce Program Assessment Strategies

Assessment target (outcomes)	Possible assessment methods	
	Limited-response (quantitative)	Open-ended (qualitative)
Student competencies required for successful program completion	<p>Standardized final exams in required program courses</p> <p>Single “core competencies” exam taken after completion of all required program courses</p> <p>Professional licensure or certification exam pass rates</p>	<p>Exams that require hands-on demonstration of performance</p> <p>Capstone project</p> <p>Portfolio</p>
Student workplace readiness	Evaluation during internship or clinical experience (rubric-scored)	Evaluation during internship or clinical experience (narrative)
Student satisfaction with program and services; perception of learning achieved; value attributed to their education at FCCJ	<p>Mid- and end-of-term course evaluations</p> <p>Exit survey</p> <p>Survey of program leavers</p>	<p>Midterm and end-of-term reflective writing assignments</p> <p>Focus groups/Quality Circles</p>
Employer validation of program; employer satisfaction with graduates’ skills	Employer survey	Program Advisory Committee evaluation

Sample Program Assessment Plan

Computer-Integrated Manufacturing Technology
Program Assessment Plan

Outcome	Indicator	Data/collection method	Criteria for success
Technically and pedagogically sound curriculum congruent with AIM Center approach	Consensus on quality of adapted curriculum among partners (FCCJ, AIM Center, FAMU, schools)	<ul style="list-style-type: none"> ▪ External evaluator site visits ▪ Review of completed curriculum by all partners 	Consensus achieved
Technically sound curriculum aligned with workforce needs	Employer satisfaction with program offerings and curriculum	<ul style="list-style-type: none"> ▪ Advisory Committee reviews of project materials and activities 	Employer consensus achieved
Programs that provide effective education and training	Improved student participation and progress in targeted programs, including students from underrepresented groups	<ul style="list-style-type: none"> ▪ Enrollments ▪ Results of competency-based assessments 	20% growth in enrollments annually 80% of students successfully complete assessments on first attempt
	Higher placement rates for students who complete targeted programs	<ul style="list-style-type: none"> ▪ Placement rates obtained from employers and FETPIP 	90% placement rate for program completers
	Employer satisfaction with program graduates' skills and competencies	<ul style="list-style-type: none"> ▪ Employer surveys/focus groups 	90% employer satisfaction rankings/comments
	Student satisfaction with program processes and outcomes	<ul style="list-style-type: none"> ▪ Student surveys/focus groups ▪ Student self-evaluation (as part of capstone or internship) 	90% student satisfaction rankings/comments 90% generally "successful" self-evaluations
Increase capacity to meet educational need by increasing professional development for full time and adjunct faculty	Faculty use best practices in class and additional adjunct faculty teach in area of expertise.	<ul style="list-style-type: none"> ▪ Faculty workloads and class assignments ▪ Faculty development activities ▪ Adjunct recruitment numbers ▪ Adjunct development activities 	90% of students prepared for the workplace. Best Practices used in the classroom 99% of faculty develop a professional development plan
Improve Articulation agreements	Seamless movement from high school to community college, from non-credit to credit, from community college to 4-year institution.	<ul style="list-style-type: none"> ▪ Articulation agreements between high schools and community colleges ▪ Non-credit to credit articulation ▪ AS to BS articulation with university partners 	Increased enrollment for high schools Increased number of non-credit students entering credit programs Increased students articulating to four-year institutes.
Dissemination of model curriculum to community colleges in Florida.	Implementation of curriculum in Florida community college system	<ul style="list-style-type: none"> ▪ Approved courses at Florida Community Colleges ▪ Web site for FCCJ project developed ▪ Presentation of project results to national and regional conferences 	Programs expanded into the Florida CC system Web site visited frequently Minimum of three presentations made by staff in years two and three

Polytechnic Adult High School

Program Assessment Plan

I. Project Objectives

The major objectives of the Polytechnic Adult High School (Tech Prep Demonstration Project at Downtown Campus) to be evaluated are:

- Improve students' academic achievement
- Increase students' acquisition of career/technical skills and workforce readiness
- Improve program outcomes – retention, program completion, transfer to postsecondary programs, job placement
- Provide effective learning experiences, in a range of learning environments (classroom, workplace, etc)

II. Evaluation Design

When possible, outcomes for students in the Polytechnic Adult High School (PAHS) will be compared with outcomes for students in the adult high school programs on other campuses. Comparisons will be made between groups of students with similar entrance and demographic characteristics. Students will be matched based on the following variables:

- Entrance test scores
- Age
- Gender
- Ethnicity
- Parent/family situation
- Current employment status and working hours
- Total household income

The Adult Studies Tracking Form will be used to gather this information from each student at the beginning of Fall term and each new student entering in Spring and Summer terms. The tracking form includes identifying information so that data from the form can be paired with other student data (test scores, course grades, etc) and a complete student database generated that includes all data available for each student. This database will be kept strictly confidential, and all results will be reported in aggregate, with no student identifying information included.

III. Data Collection

The table below summarizes project objectives, indicators and data to be gathered for each, and whether data will be gathered only on PAHS students or on all AHS students collegewide, allowing for comparison between the two groups.

Objective	Indicator	Data	Population
Student academic achievement	Improvement in students' basic skills levels	Test of Adult Basic Education (TABE) pre- and post-test scores	All AHS students
	Students' ability to meet established high school/high school equivalent academic standards	High School Completion Test/Florida Comprehensive Assessment Test scores* GED test scores**	All AHS students (who take one of the tests listed)
	Student success in specific courses	End-of-course standard exams	All AHS students
	Student success in specific learning experiences	Major course projects Capstone Projects	PAHS students only
	Students' assessment of their own academic achievement	Student surveys/portfolio summaries	PAHS students only
Student technical skill achievement and workforce readiness	Standardized skill assessments linked to workplace skill requirements	WorkKeys scores	PAHS students only
	Student technical course completion	Course grades	PAHS students only
	Students' assessment of their own skill achievement/workforce readiness	Student surveys/portfolio summaries	PAHS students only
	Employer assessment	Employer surveys	PAHS students only
Program outcomes	Program completion	AHS graduation rate Occupational Completion Points*** Degrees and certificates awarded	All AHS students PAHS students only
	Student retention	Retention rate	All AHS students
	Postsecondary transfer, and student success in subsequent college courses	Postsecondary enrollment Course grades	All AHS students
	Job placement	Supplemental placement data forms	All AHS students
Effectiveness of learning experiences	Instructors' assessment of individual activities or courses	Instructor compilation of student performance on key activities	PAHS students only
	Students' assessment of the program's effectiveness in meeting their needs	Student surveys/portfolio summaries	PAHS students only
	Internship success rate	Internship surveys/checklists	PAHS students only
	Employer satisfaction	Employer surveys	PAHS students only

*Some students will have already completed the required test prior to entering the AHS program, these will be excluded. The FCAT is given in 10th grade.

**Upon approval of GED exit option for AHS students

***In Florida, Occupational Completion Points (OCPs) are points within a vocational program at which students could be expected to have marketable job skills, even if they left the program early. The final OCP in a program represents full program completion.

