

Program-level assessments at community colleges are particularly challenging because students often achieve their goals without completing a program or select an array of courses that suit their needs but do not fit within an officially recognized program of study.

Assessment at the Program Level

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Program-level assessment is a particularly challenging task in community colleges, yet one that accrediting agencies, many state governing or coordinating boards, and the public expect colleges to perform. The purpose of this chapter is to address issues of program-level assessment, with a focus on programs that do not have external accreditation criteria to meet, vendor or professional licensure or certification examinations, or generally accepted skill hierarchies such as those that exist in mathematics or composition.

According to Palomba and Banta (1999), programmatic assessment “helps determine whether students can integrate learning from individual courses into a coherent whole. It is interested in the cumulative effects of the educational process” (pp. 5-6). Program-level assessment may focus on the extent to which each student in a program acquires the knowledge, skills, beliefs and feelings specified as program outcomes. Program-level assessment may also focus on gauging the learning of a group of students, those in the program, rather than each student within it. When assessment concentrates on the individual student, feedback provides him with important information about the extent to which he has met program learning objectives. When assessment concentrates on the group of students in a program, outcomes information is of more value to the department or institution to use in improving courses, programs and services.

In community colleges, program-level assessment is easiest for programs with external accreditation or other requirements driving the curriculum and compelling students to complete the program before they can enter the field or take licensure or certifying examinations, or for programs that prepare students for vendor or industry certification examinations. Many programs in the health careers and selected technologies (e.g., Microsoft Certified Systems Engineer and Certified Novell Engineer) fit this model. Program-level assessment is far more challenging in other programs for a host of reasons described below.

What is a Program?

This seems like a simple, almost nonsensical, question. However, the definition of a “program” at community colleges is neither clear nor consistent. The multiplicity of activities referred to as “programs” have implications for the assessment of student learning outcomes as well. A program may consist of any of the following:

A sequence of prescribed courses, which may or may not include general education courses and/or electives, that leads to an officially recognized associate degree or certificate. Often a program of this nature will be referred to as a “curriculum.” For example, an Associate Degree in Nursing program is based on a structured sequence of courses; upon successfully completing the courses and meeting other college graduation requirements, a student will be awarded an

associate degree. A community college marketing or management program will probably have more variety in courses than will a nursing program, and students in marketing or management may be less interested in earning a degree because the associate degree is not typically a required credential to work in these fields.

When curricula are clearly prescribed, lead to a recognized degree or certificate, and have students identified as being “in” the program, assessment of program-level learning outcomes, while not simple, is easier than in cases where a program is more loosely or unofficially defined.

The general education component of an associate degree. General education is most often defined as a distribution of courses in liberal arts and sciences, though some schools permit selected vocational courses to satisfy general education requirements. Ordinarily associate degrees intended for transfer prescribe a higher number of general education credits than do associate degrees in vocational fields. Some certificates include a general education component, but more likely a certificate will prescribe or suggest just a few courses from general education. Depending on the school and the state, acceptable general education courses may be drawn from a relatively short list of acceptable courses or include a large number of courses in the eligible disciplines. In Illinois, for example, the Illinois Articulation Initiative, with which all public community colleges must comply, stipulates a minimum of 37 semester credits across a distribution of courses in communications, mathematics, science (physical and life sciences), humanities and fine arts, and social and behavioral sciences. Faculty panels for each area develop general course descriptions and then review course syllabi from each participating institution. Panelists certify courses from an institution they find to be equivalent to the IAI general course.

Assessing general education learning outcomes continues to be a challenge for most colleges, especially outside of composition or mathematics, which at the general education level tend to focus on more easily measurable skills than other general education areas. While a crucial aspect of assessment overall, the assessment of general education learning is not the subject of this chapter.

Courses in a specific discipline, usually a transfer discipline such as mathematics or psychology. This use of the term “program” overlaps with its use in referring to freshman-sophomore courses a student should take if he or she is planning to major in and earn a bachelor’s degree in the field; e.g., mathematics or psychology. What is a community college’s “mathematics program” or “psychology program?”

Among the challenges associated with assessing this type of program is identifying students who have taken whatever courses the college claims are in the program, whether these be in the discipline or in other subjects. Because community college students frequently depart from the institution or stop out for one or more semesters before completing a predetermined set of courses, it is difficult to target many who have come close to taking the set of courses but will not be available in subsequent terms for assessment activities. Thus assessment for these types of programs must often rely on college records such as transcripts or on student work completed in courses or practicums considered to be capstone or end-of-program learning experiences.

Precollegiate or remedial courses, particularly in English and mathematics. Many institutions refer to “remedial programs.” These may be housed within a single remedial education department or be decentralized to the disciplines, be administered through academic or through student affairs areas, taught by faculty whose appointment is in the remedial program or by faculty in the disciplines who teach one or more remedial courses as part of their regular workloads, count toward financial aid or not, or accrue credits applicable to a degree or not. Moreover, a remedial program might include a cohort of students barred from taking other courses until they meet college-level skills requirements of the institution, or it may include all students taking a remedial course even if they enroll simultaneously in college-level courses. Clearly, then, remedial programs reflect a wide variety of alternatives in terms of administration, instruction, and their place in the college’s academic offerings.

Assessing student learning outcomes in remedial programs is relatively easy when programs consist of sequences of remedial courses leading to entry into college-level courses, especially when placement tests are used for course entry and exit decisions, course content is skill-based, as is the case in mathematics and composition, and remedial students are restricted from taking college-level courses. Assessment is more challenging where students take remedial courses voluntarily, placement is advisory rather than prescriptive, or students may take college-level courses simultaneously.

Special programs for selected students. Colleges often have programs for selected students who meet eligibility requirements or volunteer to be involved. Honors programs, TRIO programs, Service Learning programs, Perkins programs, and First-Year in College programs are examples. Students may take certain courses, receive support services, engage in specific activities, or simply meet threshold criteria to be counted. Sometimes program involvement is invisible for the student; how many students identify themselves as “Perkins students,” for example?

Some special programs already rely on performance indicators to assess student outcomes. In Illinois, for example, the Perkins programs use measures such as percentage of students who graduate, or percentage who obtain and retain employment, as indicators of program effectiveness and, indirectly if not directly, as indicators of student learning. Studies of students engaged in service learning are beginning to appear; certainly many institutions ask students involved in service learning projects whether and what they believe they have learned from these experiences. Special programs vary tremendously with respect to reporting requirements, ability with which program staff can and do identify and track students associated with the program, and extent to which program students comprise a discrete group or blend into the regular college population.

It is clear from the array of programs described above, that the term “program” is loosely used at community colleges. Additionally, the same student may well fit within several programs, thus further complicating the assessment of program-level learning outcomes. Did the student achieve these outcomes from the program under scrutiny alone, or from the interaction of experiences in several college programs? Which program should be credited (or blamed) for the outcomes?

Assessment Approaches

Many approaches are available for assessing student outcomes at the program-level, though some are more feasible than others.

- Capstone course. Some programs have a capstone course, a course required of students at the end of the program that integrates material covered earlier and to demonstrate their learning through various combinations of tests, papers, portfolios, simulations, team assignments, presentations and other methods for demonstrating learning. The instructor of record, several faculty members in the program, advisory committee or other industry practitioners, or a combination of these can evaluate student learning in capstone courses. Though technically assessment is occurring at the course level, the course is designed to approximate the totality of key learning expected of students completing the program. Therefore course learning outcomes are interpretable as program-level learning outcomes as well.
- Vendor or industry certification examination. Some fields, especially those in technologies, are experiencing a growth of certification examinations administered by vendors or professional/industry organizations. Certification is external validation that the student has learned knowledge and skills identified by the vendor or organization as essential for a particular job or credential. The examining body may not care where test takers obtained their knowledge, and may not even care whether this was achieved through coursework or self-study. Community colleges may develop programs intended to prepare students for these examinations, however, and use results as indicators of program-level learning.
- Standardized testing. In some fields standardized tests may be available. When administered to students near the end of their programs, test results provide indications to the student and the institution about the program-level learning that has occurred. In reality, standardized tests are often difficult to use in community colleges. They are not available in all areas and may be expensive with respect both to actual dollar outlays and the resources required to administer them under rigorous testing protocols. Standardized tests are often controversial, especially when faculty believe the standardized test doesn't align with program objectives. Moreover, unless test results directly impact graduation or grade point averages, students have little incentive to take the tests seriously, even if taking the test itself, rather than the score attained, is a graduation requirement.
- Satisfaction surveys. Student and alumni satisfaction surveys that include self-reported estimates of learning provide indirect evidence of student learning outcomes. Though most powerful when results are triangulated with more direct assessments of learning, satisfaction surveys can be especially helpful when respondents are currently working in the field and are providing feedback about whether what they believe they learned in the program has adequately prepared them for the workplace. Satisfaction surveys are available through a number of commercial providers, and may be institutionally developed as well.
- Institutional or departmental testing. This approach requires faculty to agree on one or more standardized or institutionally developed tests that touch on all or most essential elements of a program. The test would be administered to all students at the completion of the program,

however completion may be operationally defined; e.g., end of a culminating course, prior to receiving a degree or certificate, or prerequisite for enrollment in a capstone course or practicum/seminar experience. Because students would take the test regardless of instructor and at or near the end of the curriculum, results may be interpreted as indicating acquisition of knowledge, skills and attitudes at the program-level.

- **Portfolio assessment.** Portfolios are collections of students' work that demonstrate learning and development. Work is carefully assessed by faculty or other content-area experts and typically evaluated holistically. Portfolios can consist of hard and/or electronic copies of students' work, and include artifacts such as student-written papers, projects, videotapes of presentations, resumes, sample letters of application for jobs, and other materials that give evidence of achievements. For program-level assessment, portfolios need to contain documentation of learning and development across the spectrum of program objectives.
- **Performance manuals.** A performance manual lists and briefly describes behaviors a student should be able to execute with competency at the conclusion of a program. Faculty evaluate students' abilities to perform these behaviors, regardless of whether they are observed in class, at clinical settings, through service-learning or other service or support activities, or elsewhere (Boland and Laidig, 2001).
- **Narratives.** Benner (1999) suggests a novel approach to assessment: having students recount their experiences through stories, with faculty then assessing learning by listening to and questioning students to determine whether the students demonstrate understanding of the context and content of situations being described. This approach requires students and faculty to engage in dialog; while it may provide rich insights into how and what each student has learned, translating information into summary form for program improvement may be challenging.
- **Culminating project.** A culminating project may be linked with a capstone course or internship experience or stand alone as a requirement for program completion. The project needs to be broadly defined and reflect student learning and ability to integrate information from across the curriculum. Projects may be graded by faculty, by outside experts or by a combination of internal and external evaluators. The project differs from a portfolio in that a portfolio is a collection of student work gathered throughout the student's time at the institution, whereas the project is a more focused work that addresses a particular situation or simulation. For example, students in fashion merchandising might be required to put together a marketing campaign, including sample ads, budgets, media schedules, and displays to promote a new line of sportswear targeted to young teens, and then to present the campaign to an audience of faculty, peers and industry representatives. In the performing arts, the concept "juried performance" is often used to identify student works evaluated by outside experts.
- **Transfer to and success in another institution, usually a four-year college or university.** Though community college transfer programs usually award an associate degree when a student completes the program, the primary purpose for these programs is to provide students with the first two years of undergraduate work and to give them the necessary knowledge and skills so they can succeed in upper division coursework. We assume, usually without verifying this, that when a student transfers the receiving institution has scrutinized the student's record at the

community college and positively evaluated the learning implied on that record. We also assume, again without verification, that most if not all the student's credits from the community college will transfer as well. Thus an indirect indicator of student learning is acceptance at and transfer to a four-year college or university. The National Student Clearinghouse EnrollmentSearch program enables participating institutions to learn if and where students transfer. The Clearinghouse claims to have data for some 80 percent of all students enrolled in postsecondary education in the United States. Names and birth dates are used to match student records.

Implementation Challenges

A number of challenges are inherent in assessing program-level student learning outcomes in community colleges. The first, suggested above, is simply defining, conceptually and operationally, what constitutes a "program."

A second major challenge in most programs is clearly identifying students who are at the end of a program, because so many students either leave a college without earning a certificate or degree or change programs by virtue of enrolling in different courses without having to officially notify the college of their changed objectives. Even where students are identified, obtaining their cooperation to take programmatic examinations or engage in other activities that are not specifically embedded within a course, or that don't affect grade point averages or graduation eligibility, is difficult. Students rarely see a direct benefit to them in participating in program-level assessments. Even students who are willing may not have the time or flexibility to participate in an assessment activity that occurs outside their normal course schedules.

A third major challenge is to obtain faculty concurrence on what key learning outcomes should be assessed and what level of ability or knowledge students should attain to reflect adequate or excellent learning—the standards a student must meet. When faculty agree in theory, they may still find it difficult to settle on specific assessment approaches or details of implementation.

A fourth major challenge is meeting resource requirements to implement some assessments. Use of commercial or standardized instruments can easily cost thousands of dollars; for example, the ACT Alumni Survey for 2-year colleges, including the most basic reporting, will cost over \$600 for 500 students not counting postage.

A fifth major challenge is sporadic or missing feedback on external certification or licensure examinations. Though community colleges may identify student success on these external measures as important indicators of student learning outcomes, the companies or agencies administering the tests may be unwilling or unable to provide information back to colleges about their students' results. Schools may be dependent on students voluntarily reporting their results; self-reports are prone to inaccuracy, incompleteness, or students simply not bothering. Issues of privacy and compliance with the Family Education Rights and Privacy Act further complicate attempts to systematically obtain results for individual students.

Another challenge is sustaining the articulation effort across multiple years. Eliciting faculty support when external incentives, especially a forthcoming accreditation visit, are strong is not

always easy, but getting support when the motivation has to come from within the institution is even more difficult. Assessment may be perceived as threatening, as diverting energy from teaching per se, and as gathering data and information that is not fed back into the decision-making processes. While none of these views of assessment is necessarily true, the fact remains that despite growing emphasis over the past decade on assessing learning outcomes and being more accountable for student learning, many faculty continue to question the validity of assessment and their responsibilities to assess beyond what they do within their individual classes.

Good Practices

In preparing this chapter, I searched the literature and used a number of listservs to request examples of good practices of program-level assessments in community colleges. In keeping with the focus of this chapter, I emphasized my interest in examples drawn from disciplines other than mathematics or composition and from programs other than those in health careers or with external certification or licensure examinations. Responses to my search were, in and of themselves, instructive.

My search elicited a number of requests that I share information with other community college practitioners seeking ideas about how to conduct program-level assessments. Clearly there is interest. My search elicited examples of program review processes, plans for assessments, and course-level assessments. My search elicited examples of program-level assessments for nursing graduates and for students taking industry or professional certification examinations in automotive services, Novell, Microsoft and other vendor-specific subjects. My search did not, however, elicit many examples of program-level assessments in other kinds of programs, assessments that are actually being done rather than just being planned, or assessments that have generated results used by the institution for improving or sustaining program quality.

Despite my disappointment, I did identify a number of interesting assessments; they are described below.

At Rappahannock Community College in Virginia, business faculty developed a portfolio approach to assessing student outcomes (Smith and Crowther, 1996). Members of the program's Citizen's Advisory Committee reviewed and returned comments on students' portfolios and the professionalism of their projects. Portfolios included a program-specific culminating project, resume, and cover letter written to a specific job advertisement. Comments were returned to students before they left the college. The project provided immediate, concrete feedback to each student, fostered closer ties between Advisory Committee members and the institution, and gave the faculty insights to keep courses and curricula current. The portfolio project is now longer being used, though faculty have added a new course, BUS 236: Communication in Management, that includes interviewing, job readiness skills, cover letters and resumes.

At Owens Community College in Ohio, the Transportation Technologies department has developed assessments with corporate partners such as Ford and Caterpillar. Programs are designed to meet corporate expectations, with each program designed for a specific corporate partner, and students are systematically and regularly assessed by faculty and by supervisors in

their field experiences. Students completing programs have, by virtue of their course-embedded assessments, demonstrated learning at the program-level (Devier, 2002).

At Mesa Community College in Arizona, the faculty has developed an interdisciplinary approach to assessing general education learning outcomes that can be adapted to assess learning outcomes at the program-level in arts and sciences, provided that faculty identify program-level learning objectives. A brief description of one component in Mesa's multi-faceted assessment approach gives insights into what they do. In arts and humanities one area assessed is visual art. Students view a multi-media presentation of a controversial work of art. They are asked to describe their immediate personal response to the exhibit. Then they are shown the name of the artist and when the work was done, and are asked to describe how this information might affect perceptions of the work. Third, students are asked to identify elements in the exhibit that qualify it to be considered art. Next, students are asked to imagine and describe possible historical, political, and/or economic contexts (circumstances) in which this exhibit might have been created. Finally, they are asked to consider the creator's message, and describe two or more differing experiences or reactions other observers might carry away. This activity takes place during a designated Assessment Week in the spring. Students perform this exercise during regularly scheduled class times, with faculty having volunteered classes to participate. Students' performances on the general education assessment do not count in their course grades, though the majority of faculty give extra credit or count students' work as an ungraded class assignment. Eligible classes are those that enroll large numbers of students likely to be at the beginning of their general education experience (e.g., English 101) and at the end of their general education experience (e.g., an advanced class in Japanese). In this way the College obtains student work from two cohorts, students beginning and students completing the general education curriculum. Faculty use rubrics to score students' work, with each work read by two different faculty members. Data analyses are done for students who meet the cohort criteria, though all students in the chosen classes actually complete the exercise. Key aspects of the Mesa approach relevant to program-level assessment include the faculty's identification of learning objectives, the use of a multi-media prompt and questions that cover multiple disciplines rather than a single subject, and the possibility of using this approach to assess learning over an array of courses defined, by the institution, as "a program." The Mesa assessment approach is described in detail on the college's website, <http://www.mc.maricopa.edu/organizations/employee/orp/assessment/>.

At LaGuardia Community College in New York and Seattle Central Community College in Seattle, external researchers examined the academic and social behavior and persistence of new students in learning communities (Tinto, 2000). Vincent Tinto and his colleagues used institutional, survey, interview and observational data to compare students in learning communities with similar students in similar courses. Findings indicated learning community students were more likely to form self-supporting groups that went beyond the classroom, were more actively engaged in learning even outside the classroom, perceived that the learning community enhanced the quality of their learning, were more likely to persist, and found value in collaboration. For the purposes of this chapter, the multiple methods of assessment employed by Tinto et. al. demonstrate the importance of triangulating quantitative and qualitative data and to listen to students' stories about their experiences in a program such as a learning community. Learning outcomes clearly extended beyond course subject matter alone.

At Austin Community College in Texas, graduating students in visual communication design (VCD) submit a portfolio containing 8 to 15 examples showing their proficiency in design, illustration, and production art. The College expects that 85 percent of the portfolios must be judged at a level of “competency” for entry-level employment in the field. The student must achieve a 70% to be considered competent. All graduating students are required to attend a pre-portfolio screening with a committee of faculty from the VCD department. Faculty give suggestions about how to improve on presentation and projects in each individual portfolio. Each student is then required to meet with an assigned faculty member to ensure all changes have been completed prior to the Professional Portfolio Review. Professionals from the local visual communication industry review and evaluate students’ portfolios based on eight areas identified as most essential for employment success: Design, Illustration, Computer Production, Web Page Design, Two-Dimensional Images, 3-Dimensional Modeling, 2-Dimensional Animation, and 3-Dimensional Animation. Points are awarded based on established numerical criteria; each portfolio’s final score can range from 0-100 percent. Assessments are conducted annually. In 2000-01, the overall averages of the portfolios, combining and averaging all of the assessors’ scores, was 90.8 percent in the area of Graphic Design and 73.6 percent in the area of Multi Media, for an average of 82.2 percent overall. All but one student achieved a score of competent (fair) or better. Based on results, the department established stricter grading criteria for all classes in Visual Communication Design to assure that students are better prepared and meet selected qualifications before enrolling in the portfolio development course.

At Oakton Community College in Des Plaines, Illinois, National Student Clearinghouse data were used to explore the transfer of students who had earned at least 12 credits in a transfer curriculum and did not report already having a bachelor’s degree. The College found that 47.9 percent of students transferred (Bers, 2001).

Conclusion

Program-level assessment at community colleges is still in its infancy. Few doubt its importance, yet few appear to have constructed ongoing assessment approaches that address learning outcomes at the multicourse or programmatic level. Issues of defining programs in a meaningful way for assessment, of identifying students who have completed enough of a program to be reasonably defined as “completers,” of convincing students to take seriously assessment tests or performances that don’t count for grades or graduation, of sustaining the energy and resource commitments essential for implementing assessment, and of creating assessment approaches that are credible and whose results will be used for program improvement, continue to perplex assessment champions.

This chapter may seem unduly pessimistic. My intent is otherwise. It is to present some realities about program-level assessment, to pique interest in and adoption of a variety of good practices, and to remind readers that program-level assessment can take place in many ways and need not be perfect.

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