

## Instructional Program Outcomes Assessment Process

### Overview

Instructional programs are more than a collection of random courses. Each program prepares students for a goal, such as transfer to a university or entering the workforce, with a definite set of skills, knowledge, and attitudes. Instructional program level student learning outcomes state these results in measurable terms.

Instructional 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 learning 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.

The history of assessment in higher education is longstanding and is rooted in the desire to understand and improve student learning. We now have better insight into how students learn: they do not passively receive what we transmit but rather participate in the construction of their knowledge. In that respect, assessment represents an opportunity. Here is a chance to understand how effective our programs are from the standpoint of the learner and, along the way, help our students demonstrate to us, themselves, and the rest of the world what they know and can do and how they perceive the world by the time they graduate or complete a program of study. For these reasons, outcomes assessment is a component of the program review process at Long Beach City College.

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

### Outcomes Assessment of Courses, Programs, and the College

It is instructive at this stage to differentiate among levels of outcomes assessment so as to clarify the focus on instructional program assessment.

At the **course level**, outcomes assessment examines the degree to which the student learning outcomes (SLOs) for a specific course are evidenced in student learning. Faculty engage in course assessment by evaluating student performance on assignments, projects, and exams and then fine-tuning some aspect in the course, when applicable, to achieve improved student learning.

At the **institution level**, outcomes assessment seeks to determine the degree to which broad institutional outcomes are being met. For example, to what extent

does LBCC support the intellectual, cultural, economic, and civic development of our diverse community (Mission Statement)? How well does LBCC provide workforce preparation program sand services (College Functions)? How well does LBCC succeed in educating its students to think critically, communicate effectively, and act responsibly within a context of personal and professional ethics (Institutional Learning Outcomes, 2009)?

Between the course and institution levels is **program level** outcomes assessment, which seeks to determine the degree to which programmatic learning outcomes are being met. These learning outcomes flow directly from the mission of the instructional program. A program mission is a holistic vision of the values and philosophy of the program. To accomplish this mission, students need to demonstrate certain learning outcomes: knowledge, skills, attitudes, and values expected in graduates or students upon completion of a program of study. Assessment seeks to determine the extent to which students in the program can demonstrate these learning outcomes.

It is often the case that the SLOs for individual courses include or overlap with learning outcomes for the overall program. The distinguishing feature of program level assessment is that it addresses learning outcomes that are accomplished across multiple courses in the program's core curriculum. This **cumulative learning** approaches outcomes assessment from a more holistic vantage point. Thus, at the conclusion of a program a higher level of mastery may be expected than may have been reached with course level learning.

### **What instructional program outcomes assessment can do**

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.

**Documentation of best practices:** Faculty have many opportunities to share their best practices with colleagues at this institution and others—at professional meetings and conferences, in publications, as part of awards programs, and so forth. Being able to share 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 ideas and more likely to adopt programs and initiatives developed if there is evidence that they result in desired student learning outcomes.

**Better data on outcomes:** The state uses data to distribute funding to community colleges through a performance-based funding model (ARCC). Completion and placement data will almost certainly continue to figure heavily in how funding is allocated to institutions. Relying solely on completion and placement data as measure of program effectiveness has difficulties.

First, the institution has 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 or transfer 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, transfer and get good jobs. However, if students are able to demonstrate their achievement of desired outcomes in some other way—program outcomes assessment—then the department has additional data that supports the program’s effectiveness and can put other data in perspective. The college itself also uses achievement and assessment data in the Program Review process.

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 concerns. We may have an informal sense of what’s amiss, based on our own experiences or anecdotal information, but systematic program assessment can help us make better decisions and target our efforts more effectively.

**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.

### **Differences between instructional program outcomes assessment and student or faculty evaluation**

LBCC 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 established should be as useful as possible to all stakeholders, including faculty, staff, students, 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.

### **What is an Instructional Program?**

An “educational program” is defined in Title 5, Section 55000(g) as “an organized sequence of courses leading to a defined objective, a degree, a certificate, a diploma, a license, or transfer to another institution of higher education.” There is no statewide model to define an instructional program at community colleges beyond this regulation as variations widely differ between community colleges. Title 5 regulations set a minimum, as too the state Academic Senate, defined as a cohesive set of courses that result in a certificate or degree. LBCC’s local interpretation for outcomes assessment and program review, endorsed by the Academic Council in summer 2009 is:

The organization of the college’s **curriculum guides** will define a program. **Precollegiate, noncredit, and stand-alone** courses align with the originating department, and the department will be defined as a program. **Hybrid** programs encompass student experiences delivered by instructional and service components within a department, and the department will be defined as a program. **Cross-curricular** programs encompass integrated student experiences that extend beyond the instructional component and across departments. Department heads and school deans are jointly responsible for each program’s review at their respective levels.

Encompassed within this “instructional programs” definition are the six (6) curriculum “defined objectives”. These are Associates Degree, Transfer, Major, Areas of Emphasis, Certificate, and Educational Pathway. These curricular objectives circumscribe all course offerings at the college. **Associates Degree** is composed of three parts: general education, a major or area of emphasis, and additional graduation requirements or electives, if necessary (Title 5, Section 55060-55064). The Associates Degree represents more than the accumulation of units as it embodies completion of a well-defined pattern of learning experiences that are designed to develop certain capabilities in students. (CCCCO Program & Course Approval Handbook, Third Edition, March 2009) An **Area of Emphasis** is considered to be a broader group of courses defined as 18 or more semester units in related fields intended to prepare the student for a specific academic or professional goal. (Title 5, Section 55063(a)) This may be similar to patterns of learning in the first two years at a university. (These areas of emphasis may be as broad as “social science” or designed as a theme-based area, e.g. Women’s Studies.) A **Major** is defined by the lower-division requirements of a specific major at the University of California or California State University or a minimum of 18 or more semester units in a field of study. (Title 5, Section 55063(a)) The requirements for a major consist of courses that all students are expected to complete for a specific number of units. (CCCCO

Program & Course Approval Handbook, Third Edition, March 2009) **Transfer** curriculum encompasses certified general education course requirements. Typically LBCC students may fulfill lower-division general education requirements by following the frameworks established by CSU General Education-Breadth pattern of course requirements or the Intersegmental General Education Transfer Curriculum (IGETC) pattern of courses. These are identified in the LBCC General Education Course Pattern as either Plan B or Plan C. LBCC offers a variety of **Certificates** in various fields of study. Certificates of Achievement are any credit certificates, which requires 18 or more semester units of degree-applicable coursework. These represent a well-defined pattern of learning experiences designed to develop certain capabilities that may be oriented to career or general education. (Title 5, Section 55070) Certificates of Accomplishment certify a competency in a given area and require less than 18 semester units. An **Educational Pathway** is an organized group of two or more connected courses leading to a defined educational goal.

### **Instructional Program Outcomes Assessment Plan**

Implementing instructional program outcomes assessment requires a plan that explains what will be measured, how it will be measured, when assessment will occur, who is responsible for assessment activities, and how the assessment information will be used. Having a written plan in place helps keep everyone 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 (licensing boards, state or federal agencies, and accrediting organizations).

An Instructional Program Outcomes Assessment Plan attains validity when faculty have a central role in its creation. Instructional programs/departments should identify a person with a professional or personal interest in outcomes assessment to coordinate the effort, but this person will also need to synthesize colleagues' thoughts and opinions into a consensus plan.

In higher education, unanimity is not a goal; diversity of opinion is welcomed and celebrated. However, the challenge is to find decisions that most people can live with. For example, the list of program learning outcomes should not consist of the sum total of all the outcomes identified by all faculty in the program; rather, it should only contain the minimum list of learning outcomes that most faculty agree on.

Discussion and consensus take time. If an outcomes assessment plan takes years to develop, it signifies an unsuccessful process. Aim for the program-level outcomes assessment plan to develop over the period of a semester; try to do it more quickly; don't be discouraged if it happens more slowly. Be advised that program level outcomes assessment is coordinated to the program review process. That process schedules each identified program for process

completion at least once every three years. Outcomes that extend beyond this timeframe must be explained thoroughly.

A preliminary step for instructional programs may be the development of a program mission statement and department goals. In order to think about the learning outcomes that an instructional program is meant to achieve, one needs to understand the purpose to which these learning outcomes are serving. Without a mission statement and goals, faculty in the program may have different ideas of the purpose of the instructional program and therefore be unable to reach consensus on the learning outcomes for that program. The validity and degree to which a mission statement and goals have meaning among faculty is obtained by developing a consensus in their development. Start by looking for mission statements in the program's professional organization and in similar programs. Bring some examples to a faculty meeting for discussion. If the group does not reach a conclusion in a single meeting, a few volunteers (consider asking the most vocal critics) should work outside the larger group and develop a working draft to be circulated by e-mail. Aim for the process to be completed in one meeting and some follow-up e-mails. One method for department goal development might be the creation of "starting questions" to brainstorm this program planning process. For example, "What would your ideal program look like?" "If you could change two to three aspects about your program, which are feasible and would make significant improvement in student success, what would they be?" A department evaluates its progress in achieving its goals, once developed and agreed upon, by analyzing its student learning outcomes assessment results and student achievement results.

Students in the program may have ideas about the purpose of a program that differ from the actual mission of the program; the student's willingness to absorb important concepts may be lessened if the big ideas are not mutually understood or agreed upon.

*An important part of outcomes assessment is sharing the program mission and learning outcomes with students.* This helps students have a better understanding of the direction of their education and be more engaged in the learning process. Inclusion of the program's mission and learning outcomes should be included on curriculum guides, program websites, and other official materials.

The following outline provides the key components of an instructional program outcomes assessment plan. The process is intentionally shown as circulatory, in order to evoke the idea of continual improvement.

### **Instructional Program Outcomes Assessment Plan Loop**

1. **Outcomes:** Describe what students must know, do and value at the conclusion of the program.

2. **Assessment:** Indicate how the department will determine whether learning outcomes have been met, including methods, who is responsible for the assessment, and when the data will be collected.
3. **Criteria:** Establish the expected achievement of success (based on previous data if possible), target groups, and how will the program faculty will determine if that outcome is successful or if change is required to improve student learning.
4. **Results:** Indicate who, when, where, and how the results will be collected, aggregated, analyzed, reported (actual results, key findings, and supportable conclusions).
5. **Actions:** Describe the changes made to the program based on this information, provisions for sharing the plan with internal and external audiences; what new support mechanisms were required, if any, and the time frame when these actions will be re-evaluated in the future.

Using assessment results to improve student learning through collegial dialogue informed by the results of the learning outcome assessment is called “closing the loop”. It is part of the continuous cycle of collecting assessment results, evaluating them, using the evaluations to identify actions that will improve student learning, implementing those actions, and then cycling back to collecting assessment results, etc.

## 1. Instructional Program Level Learning Outcomes

Instructional program learning outcomes are typically broader than those at the course level. In addition, they tend to emphasize integrating skills into an interrelated set and often put more stress on real world applications that provide a bridge to the student’s next experience on the job or in upper division study.

Most academic programs and departments operate as though they have learning outcomes even if they have not formally articulated them. The existence of curriculum guides and defined programs on the college’s organizational chart suggest that learning outcomes not only exist in the minds of department and program faculty but that there might be some agreement on them, as well. Articulating instructional program learning outcomes makes those implicit goals explicit. These will need to be described on the program’s curriculum guide for students, program-level outcomes assessment plan, and program review documentation.

### Process Considerations

The two questions that faculty in instructional programs must answer are the same that they address when identifying student learning outcomes for their courses: what do I want students to know and what do I want them to be able to do when they successfully complete a program’s curriculum?

Answers to those questions may present some challenges, because they require the consensus of departmental or programmatic faculty, as well as consideration of disciplinary definitions and recommendations. Some state and national organizations endorse a set of learning outcomes for particular disciplines, which may be helpful resources. For example, the American Psychology Association's Board of Educational Affairs endorsed a set of learning goals for psychology majors in 2002 while the Federal Aviation Association has detailed learning objectives and expectations in Federal Aviation Regulation 147. Multiple perspectives on learning may also be useful. In addition to faculty, students in the major, colleagues from the discipline, alumni, or professionals/practitioners in the field might also be involved in the discussion about program learning outcomes. Most importantly, conversations about the program's learning outcomes should engage, as broadly as possible, other people invested in the success of the instructional program's students.

Because the cultures and practices of departments vary quite a bit, there is no single template for determining instructional program student learning outcomes. Program or department faculty may choose to begin this consideration with:

- the mission statement for the program;
- learning outcomes published through their professional organizations;
- the required courses in the major;
- a capstone course in the program's curricular sequence;
- areas of concentration within the program;
- all courses within a program;
- a program's own curricular map.

However, a general rule to follow is that program-level learning outcomes should have the approval of most of the faculty teaching in the department. In addition, they should be connected in meaningful ways with the required curriculum of the program particularly with the student learning outcomes of the *core, required courses* offered. Moreover, learning outcomes for instructional programs must align with the outcomes of the institution.

Particularly when starting out on a new program assessment effort, try to keep it simple and focus on a few key learning outcomes that touch on a range of knowledge, skills and attitudes that represent what faculty, employers, students, and other stakeholders will value and consider to be essential. It is almost impossible to measure everything—it is better to gather data on a limited set of outcomes that everyone agrees is important. *The local recommendation is approximately 2-5 program-level outcomes.*

Faculty members can brainstorm program outcomes from scratch, or they can begin with a list of options. It is often helpful to start with at least a framework or set of categories: for example, in terms of knowledge and skills, and attitudes or values. Program learning outcomes can be formulated in each of these categories using a variety of sources.

*Knowledge and Skills:* 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 program outcomes that faculty may wish to achieve based on their professional experience, input from advisory committees, 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:

1. 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 task. Conditional knowledge involves judgment—knowing under what conditions to apply a particular procedure or body of knowledge.

2. Cognitive knowledge: Bloom developed a taxonomy that is organized hierarchically from simplest to most complex. It is important for college-level credit programs to not just teach or assess the lowest levels of factual knowledge, but to emphasize develop in students 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 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 use 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, at educated workforce and civil society expects us to address these issues and do what we can to assist students in acquiring attitudes and values that will serve them well in the workplace and society.

## 2. Assessment Methods

Just as processes for articulating instructional program learning outcomes are influenced by departmental practices and culture, assessment methods should be influenced by individual departmental approaches.

Usually the first assessment step a department takes after articulating its learning outcomes is mapping the courses to those program outcomes. Curricular maps illustrate where program-level outcomes are being addressed across the program's courses. This allows programs to identify where there are gaps in the curricular offerings and in asking students to obtain specific student learning outcomes, which allows faculty to better identify curricular needs and resource priorities. In the case of learning outcomes that are developmental, the level of achievement that is expected in each course can also be indicated as low, medium, or high or other such descriptors. This would show how student achievement is expected to develop during their progress through the program's curriculum.

Another required assessment of program level learning outcomes is that of the student's exit knowledge and skills as the culmination of the program's series of courses. There are a variety of methods for assessing learning outcomes at the program level and just as many ways to categorize these assessments.

*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 outcomes. Self-reporting methods ask students to describe what they have learned, comment upon it, and evaluate it from their subjective experience.

*Limited-response vs. open-ended:* Limited-response assessment methods are those in which the instructor or evaluator limits the types of responses students can provide, such as an exam 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, essays, interviews, or focus groups. A common rubric can enable instructors in different course sections to generate data that can be aggregated.

*Course-embedded and programmatic:* These are the two major approaches in actually employing assessment methods to gather data on instructional program learning outcomes. Course-embedded approaches gather data from student work in individual courses or in the capstone course in a sequence, while programmatic approaches are conducted outside of regular courses, for example, periodically during or at the end of a student's program.

*Direct vs. indirect:* The most common differentiation of assessment methods is by direct or indirect approach to ascertaining if and how instructional program

learning outcomes were achieved. Direct assessment provides data that measures the exact value while indirect assessment provides data that measures a variable related to the intended value.

## Examples of Direct Assessment Methods

**Capstone Course Evaluation:** Capstone courses integrate knowledge, concepts, and skills associated with an entire sequence of study in a program. This method of assessment is unique because the courses themselves become the instruments for assessing student learning. Evaluation of students' work in these courses is used as a means of assessing program level student learning outcomes (SLOs). For academic programs where a single capstone course is not feasible or desirable, a department may designate a small group of courses where competencies of completing majors will be measured.

- **Collective Portfolios:** Students assemble samples of specified work from various classes and present this “collective” portfolio of learning to discipline faculty to assess specific program student learning outcomes (SLOs).
- **Commercially Produced or Standardized Tests (licensure, certification, or subject area tests):** Commercially generated or standardized tests are used to measure student competencies under controlled conditions. Tests are developed and measured nationally to determine the level of learning that students have acquired in specific fields of study. For example, nationally standardized multiple-choice tests are widely used and assist departments in determining programmatic strengths and weaknesses when compared to other programs and national data.
- **Embedded Questions on Assignments or Exams:** Questions related to program learning outcomes can be embedded within course assignments or exams. For example, all sections of “advanced courses” could include a question or set of questions relating to the instructional program’s SLOs. Faculty grade the exams as usual and then separate exam questions that are linked to the program SLOs for analysis. The findings are reported as an aggregate.
- **Locally Developed Final Exams:** Faculty can create an objective exam for graduating students that is aligned with the program SLOs. Performance expectations should be delineated prior to obtaining results.
- **Pre-Test/Post-Test Evaluations:** Pre-test/post test assessment is a method used by academic programs where locally developed tests and examinations are administered at the beginning and at the end of sequential academic programs. These test results enable faculty to monitor student progression and learning throughout prescribed periods of time. The results are often useful for determining where skills and knowledge deficiencies exist and most frequently develop.

- **Capstone Student Presentations (projects, theses, exhibits, or performances):** Observations of any behavior such as performance, projects, or artwork can be used for assessment. These presentations or performances can be evaluated using a narrative or in a structured format, such as a rubric.
- **Scoring Rubrics:** Rubrics can be used to score any product or performance such as essays, portfolios, recitals, oral exams, etc. A detailed scoring rubric that delineates criteria used to discriminate among levels is developed and used for scoring. Generally two raters are used to review each product and a third rater is used to resolve discrepancies. Typically this can be discipline faculty but in some instances employer and internship supervisor ratings of student performance could be included.
- **Videotape or Audiotape Evaluations:** Videotapes and audiotapes have been used by faculty as a kind of pre-test/post-test assessment of student skills and knowledge within an academic discipline. Another approach could be to evaluate a capstone performance via video or audio as it relates to the program's SLOs. Disciplines, such as theatre, music, art, and communication, which have experienced difficulty in using some of the other assessment methods have had significant success in utilizing videotapes and audio tapes as assessment tools.

## Examples of Indirect Methods of Assessment

- **Alumni Surveys:** Surveying of alumni is a useful assessment tool for generating data about student preparation for professional work, transfer, program satisfaction, and curriculum relevancy. As an assessment supplement, alumni surveying provides departments with a variety of information that can highlight program areas that need to be expanded or enhanced.
- **Employer Surveys:** Employer surveys can provide information about the curriculum, programs, and students that other forms of assessment cannot produce. Through surveys, departments traditionally seek employer satisfaction levels with the abilities and skills of recent graduates. Employers also assess programmatic characteristics by addressing the success of students in a continuously evolving job market.
- **External Reviewers:** Peer review of academic programs is a widely accepted method for assessing curricular sequences, course development and delivery, and the effectiveness of faculty. Using external reviewers is a useful way of analyzing whether student achievement correlates appropriately with program outcomes and mission.
- **Student Exit Interviews/Surveys:** Students leaving the college are interviewed or surveyed to obtain feedback. Data obtained can address strengths and weaknesses of the program and/or assess relevant concepts, theories or skills.

For transfer students, typically several areas are included in one such survey to avoid respondent fatigue and to maintain valid responses. Student satisfaction surveys, while qualitative, may be useful to ascertain program themes and concerns.

- **Focus group interviews:** Typically this type of interaction is developed and conducted by the Office of Institutional Effectiveness. The interview material is developed in conjunction with the discipline faculty based on the purpose or goals of such an interview. The Office of Institutional Effectiveness, based on parameters set by the academic program, aggregates the results. The discipline faculty utilizes these results for discussion, analysis, and program improvement.

- **Evaluation of student performance on a case study or problem analysis:** The program samples a representative student for assessment of skill performance that will be representative of all students in the cohort. Random selection of this student is necessary to avoid invalid results. Tape the performance and use a rubric to standardize the process.

- **Analysis of proportion and types of major courses relative to the same program at other institutions:** Analysis of regional colleges, public and private, can provide information as to course offerings and emphasis within a major or area of emphasis. Trends and program uniqueness can be studied for effectiveness and appropriateness.

- **Analysis of college or departmental records:** The following types of data are referred to at LBCC as “achievement results”. These are not direct measures of student learning outcomes. Rather, this information can inform achievement of department goals.

- Job placement rates
- Retention studies
- Transfer rates
- Graduation rates
- Performance indicators disaggregated by diversity
- Course success rates
- Registration or course enrollment data (sequential)
- Program review data (which may include any or all of the statistics identified above)

- **Academic performance after transfer:** Follow-up of transfer students’ academic achievement and engagement in upper-division course work at a university may be a way to ascertain major or area of emphasis preparation information for an instructional program.

- **Pass rates or scores on licensure, certification, or subject area tests:** State or federal examinations provide aggregated and disaggregated feedback of student preparation. This, in turn, may be indicative of program strengths and

weaknesses in regards to student preparation for employment.

The resources required to carry out an assessment plan should be considered in total and then proposed to the administration. Include the following categories:

- Cost of standardized tests, including the purchase of the tests and the cost of processing the results. Organizations such as ETS will supply both of these steps as a service, for a fee.
- Cost of surveys, including the design of the survey, mailings, web-based postings, e-mail, and compilation of the results. If large numbers of students are being surveyed, a bubble form suitable for scanning is probably most appropriate; the Office of Institutional Effectiveness is the college's resource here, but the availability of this service is limited. Commercial services provide online survey development, posting, and data collection, for a fee. LBCC's Information Technology department can also build web-based surveys and compile the results (with skill, you can construct your own web-based forms and have the results sent to you by e-mail. As a public institution, however, all such communications soliciting students must be ADA compliant.
- Time and cost of collecting and evaluating student work. A rough estimate of the time required for faculty to score student writing is one hour for 20 pages of writing. This estimate applies to faculty who have become adept at applying rubrics to evidence from portfolios, course-embedded assignments, or capstone courses.
- Training for faculty evaluators. If the assessment tool involves scoring student work or conducting interviews, faculty may need to be trained to do this work so that it is consistent among all of the evaluators. Training would involve practice scoring the same work and normalizing the outcomes.
- Assessment coordinator. For large programs requiring complex assessment tools, it may be necessary to assign a faculty member the ongoing task of outcomes assessment liaison.

### **3. Criteria and Expectations**

Along with the determination of the assessment tool or task for each program-level learning outcome, the assessment criteria, expectations for success, and who will be assessed must be defined in the outcomes assessment plan. Consideration of meaningfulness and manageability of the data should be paramount. It is recommended that a program "start small" when developing assessment standards for evaluation. How do you expect the students to fare? Establish a minimum score for success in conjunction with the assessment tool being used. Thus, this information will vary according to the assessment utilized; this could be a descriptor or perhaps a number. Moreover, indicate the number (% , fraction, actual number) of students who are expected to meet this minimum score. If you have conducted this assessment in the past, do you have any previous data to use as a marker for comparison? If so, base your projections on previous assessment findings so that realistic expectations may be established

for the program. The final portion of this section is to identify who will be assessed. Consider the course(s), class sections, activity, workshop, term, etc. For small programs, these questions may be relatively easy, since it might be feasible or even necessary to assess every student in the program. For large programs, you will need to consider: how many students will have their work sampled, and from which courses or tests will evidence be extracted?

The program faculty or department may decide to assess all students who complete the program requirements, all students who started the program, a truly random sample of students enrolled in the program (use student identification numbers and pick a certain amount), or a representative sampling of students. A program never needs to assess all students if a sample is representative of the population as possible.

A representative sample size should consider the:

- Total number of students enrolled in the program.
- Time of day when students enroll in the program's courses—day vs. night students.
- Type of load the students enrolled in the program are carrying—full-time vs. part-time students.
- Primary campus location, if applicable, of the program's students—LAC vs. PCC.

Program faculty or the identified outcomes assessment liaison/workgroup should make these decisions. Adjustments as the outcomes assessment process continues are expected and reasonable.

Cost and time are major issues. Be prepared to compromise on the sample size in order to attain feasibility in implementation. The more work collected for analysis, the greater is the cost of the implementation.

If the outcomes assessment is intended to look at student development, then the work of individual students has to be tracked over a period of time. That is different from, say, collecting a random sample at year 1 and another random sample at year 4. If students are selected to have their work tracked, the faculty will need to determine how the identity of those students will be safeguarded and how the students will be notified.

#### **4. Data Results and Analysis**

This step sounds easy but is the one where most assessment efforts stall. Many programs or departments are able to develop SLOs and accompanying assessment plans but have difficulty administering the assessment and collecting the data. The first assessment cycle is usually the hardest to continue and complete because it competes with many other responsibilities and priorities. It may help to discuss this challenge and brainstorm possible maneuvers during the formation of the assessment plan. Some suggested recommendations:

- Designate an individual faculty member or small work group to be the assessment liaison that is responsible for coordinating and processing data findings and feedback to facilitate this process within the program or department.
- Have program-level SLOs as a standing item on regularly scheduled department and/or school meeting agendas.
- Block time in your schedule to complete the outcomes assessment plan requirements as part of one's professional responsibilities to the program and college.
- Utilize FLEX Day time for assessment of student learning outcomes tasks, analyzes, and required documentation.
- E-mail communications or the normal department communication system.
- Create and use a departmental "share forum" to harness technology for this effort. Post anonymous assessment results and invite full- and part-time faculty to exchange information and results analysis.

Outcomes assessment results should address all key findings. However, they will often indicate an apparent shortcoming in the program. That is a useful result, since it helps faculty think about program improvement. But be prepared to question the basis of the data. It is a natural response to focus on the limitations of the assessment instrument or sampling method when results are negative, and sometimes this is rightfully so.

All assessment tools have shortcomings. Assessment validity is higher when there are multiple indicators giving the same message. For example, evidence of student work combined with feedback from exit interviews is more compelling than just one or the other. So if evidence points to a particular problem, be prepared to dig more deeply by enlisting another tool to elucidate the seriousness and sources of a concern.

## **5. Actions Taken**

Outcomes assessment results may lead to the realization of an incidental modification or significant change for an instructional program. Such actions can range from content realignment within a curricular sequence, attention to gaps in the curriculum, or adjustment of topic emphasis within the program to focused attention on refinement of specific preparatory knowledge and skills, requisite requirements, and reprioritization of identified discipline concepts and learned abilities.

The focus of such outcomes assessment actions is on improved program relevance for students as they prepare for their next step, whether that be transfer, workplace employment, graduation, or skill development. This is the crux of program refinement, which, in turn, leads to continuous re-evaluation of instructional programs, and that is the essential relevance of program review. Therefore, how one frames the actions based on the outcomes assessment results is critical and should be written in the past tense. Instructional program

outcomes assessment results should never be used as evidence toward a particular individual. In the spirit of instructional program outcomes assessment, one always needs to ask, "How can we do better?" Viewed this way, assessment is an opportunity to improve ourselves and do a better job for the students we serve. With continual improvement, we all succeed.