**Program SLOs & Assessment**

*Focus: Student learning and outcomes*

> **List expected student learning outcomes at the program level.**
> 
> o All program faculty are required to write a plan to assess each program outcome by May 2011. At least one PSLO must be assessed each year. All PSLOs must be assessed by May 2015.

  o The recommendation is to have 4 to 6 outcomes.

  o Program Student Learning Outcomes are broad measurable statements of the knowledge, skills, abilities, and attitudes a student will have attained upon completion of a course cluster constituting a program or discipline.

  o Program SLOs demonstrate that a student is competent and has integrated the knowledge, skills, abilities and attitudes learned throughout the program. Outcomes articulate a measurable level of expected student performance when leaving the program.

  o Some departments may have one set of PSLOs for the entire program. Others have separate PSLOs for degrees and certificates. If the latter is the case, name the degree or certificate within the stem. Examples:

    ▪ From the Deaf Studies Department:
      - Upon successful completion of the Intensive University Preparation Program (IUPP), the student will………
      - Upon successful completion of the English as a Second Language in ASL program, the student will………

    ▪ From the Biology Department:
      - Upon successful completion of the AS Degree in Biology, the student will………..
      - Upon successful completion of the General Biology Certificate of Completion, the student will………..
      - Upon successful completion of the Human Biology Certificate of Completion, the student will………..

    ▪ Some PSLOs may also be common to all degrees and certificates within a department.

  o Ohlone College Program Student Learning Outcome Examples:

    ▪ **Computer Science**: Given a specification, design an algorithm and implement the pseudocode to solve the problem.

    ▪ **ESL**: Demonstrate the confidence and listening/speaking skills necessary to participate successfully in spontaneous aural/oral exchanges with native speakers of English in a variety of personal, professional, and/or academic settings.

    ▪ **History and Political Science**: Develop effective communications skills by: (a) reading secondary and primary source material; (b) discussing course content with the instructor and among their classmates; (c) writing basic essay arguments using historical and social scientific evidence.

    ▪ **Speech Communication**: Demonstrate the ability to effectively communicate with diverse audiences in multiple contexts to meet the goals of the intended communication.
Other PSLO Examples:

- **Culture and Equity**: Analyze and describe the concepts of power relations, equity, and social justice and fine examples of each concept in the U.S. society and other societies. (Amy Driscoll; WASC, Assessment 1 Workshop, September 26, 2008)
- **Team Work**: Listens to, acknowledges, and builds on the ideas of others. (Amy Driscoll; WASC, Assessment 1 Workshop, September 26, 2008)

Outcomes are **not**:

- Descriptions of what faculty will do. The focus is on the student.
- Teacher activities.
- Class activities or assignments.
- Curriculum content.
- Program descriptions or qualities

**Assessment of each Program SLO**: The goal is to assess student learning and create cycles of improvement. Complete these five SLO Assessment questions.

- **Indicate program assessment strategies used.** Check the strategies you use or plan to use to assess each program student learning outcome. You may add "other" assessment strategies. Describe any "other" assessment strategies used.

**Check all that apply:**

- Rubrics
- Capstone course
- Portfolio
- Culminating project
- Performance assessment
- Skills assessment
- Department testing
- Placement tests used for course entry and exit decisions
- Vendor or industry certification examination
- Other (Describe)

- What is the difference between assessment and grades?
  - **Assessment** – Assesses the program; assesses the students’ (aggregate) ability to meet each learning outcome.
  - **Grades/Evaluation** – Assesses/evaluations the individual student.

- There are ways to **assess and grade at the same time**, e.g., use of a rubric. This is called **embedding assessment**. Embedding the assessment is effective and time efficient.

- Collection of evidence or assessment is divided into two categories: Direct and Indirect.
  - **Direct Assessment** is based on an analysis of student behaviors or products which demonstrate how well students have mastered learning
outcomes. (Mary J. Allen, WASC, Assessment 1 Workshop, September 26, 2008)

- Examples: Tests/questions, portfolios, performance evaluations, oral speech, debate, product creation, special reports, flow charts or diagrams, team project, etc. that target the selected SLO.
- ‘Embedded’ assignments, projects, and course activities are used for student evaluation as well as program assessment. An additional advantage is that this student work also provides immediate feedback on the pedagogy and student needs.
- It is preferable to use direct assessment. Ask students to “do” the outcome.

- **Indirect Assessment** is based on an analysis of reported perceptions about student mastery of learning outcomes. The perceptions may be self-reports by students, or they may be made by others, such as alumni, fieldwork supervisors, or faculty. (Mary J. Allen, WASC, Assessment 1 Workshop, September 26, 2008)
  - Examples: Satisfaction, perception, or exit surveys completed by students, graduates, alumnae, employers or others; reflective self-assessment essay; interviews; focus groups
  - Assessment may be collected throughout the program (formative) and/or at end of the program (summative).

- **Formative Assessment** generates useful feedback for development and improvement. The purpose is to provide an opportunity to perform and receive guidance (such as in class assignments, quizzes, discussion, lab activities, etc.) that will improve or shape a final performance. This stands in contrast to summative assessment where the final result is a verdict and the participant may never receive feedback for improvement such as on a standardized test or licensing exam or a final exam. (California Academic Senate, 2009)

- **Summative Assessment** is a final determination of knowledge, skill, and abilities. This could be exemplified by exit or licensing exams, senior recitals, or any final evaluation which is not created to provide feedback for improvement, but is used for finals judgments. (California Academic Senate, 2009)

- How do you promote student learning?

  ➢ **Describe the criteria and standards used to appraise student work.**
  
  *(Performance standards for student work)*
  
  - How do you know if your students have met the selected outcome at a proficient level? Are the students learning what you want them to learn? Most programs
have best practices or performance standards, based on peer reviewed research, to use as a guide.

- **Process**: Set the performance standards for desired student work. What are the qualities desired in student work to show that they have “learned”? Consider how will you collect the data to measure how the students are meeting these standards?
- **Performance Standard Examples:**
  - Many programs attach rubrics to show performance standards.
  - Consider how will you collect the data to measure how the students are meeting these standards?
  - **Math example for ‘Accuracy’ in work:**
    - **Satisfactory**: Contains few errors and those errors do not significantly undermine the quality of the work. Considers and uses data, models, tools or processes that reasonably and effectively address issues or problems.
    - **Unsatisfactory**: One or more error that significantly undermine the quality of the work. Uses data, models, tools or processes in inappropriate or ineffective ways.
  - **Ethics** example for ‘Complexity’ (broad, multifaceted, interconnected) and ‘Conscious Awareness’.
    - **Standards for Excellent**: Consistently views sophisticated and significant dilemmas and issues with a broad focus and from multiple perspectives.
    - **Standard for satisfactory**: Usually views sophisticated and significant dilemmas and issues with a broad focus, but may sometimes use a more narrow focus and may use fewer perspectives.
    - **Standard for Unsatisfactory**: Mainly views issues and dilemmas in simple terms and usually does so with a limited focus and minimal perspectives.” (Amy Driscoll; WASC, Assessment 1 Workshop, September 26, 2008)

Another approach is to describe how SLOs and assessment relate to best practices. What is working? Would you recommend any changes? Example: The California Basic Skills Initiative distributed best practices for Basic Skills. All California Community Colleges did an assessment of their basic skills programs as compared to these best practices. Plans were made for improvement based on the findings with the goal of improving student learning and outcomes.

- **Enter assessment results and analyze student success in achieving this program SLO.**
  - Assess selected PSLO using the data you have collected as “evidence” to determine how successful students have been in meeting the PSLO. Collect your data and enter the results. Analyze discrepancies between outcomes and performance levels.
Assessment is a collaborative activity conducted among the members of a program/department. Assessment is the first step in the "Closing the Loop" process. This process includes assessment, determining impact, and using data for program improvement.

How do you know students have been successful in meeting the PSLO? Analyze discrepancies between outcomes and performance levels. Look at trends over time. Are there any improvements you want to implement in the future?

- **Examples:**
  - **Ethics**
    - Ethics paper completed by all students taking Ethics 101 (in all sections). Compilation of rubric results showed 30% of students met the standards for excellence, 65% were satisfactory, and 5% were unsatisfactory.
    - Analysis: Glad most students are at a satisfactory or excellent level in meeting this outcome. We want to find a way to have more students meet the standards for excellence. (Note planned improvements are described in the "Future Action" section.
  - **Math**
    - 76% of the students in all sections of Math 101 were able to use arithmetical and algebraic methods to solve problems at a satisfactory level. 24% were unsatisfactory in meeting accuracy criteria.
    - Analysis: We feel that 24% of students not meeting this standard is too high and will discuss methods of improvement.

> **Describe revisions in curriculum or teaching strategies used to promote student success.**

- The goal is to assess student learning and create cycles of improvement to promote student success.
- What changes in curriculum or teaching strategies have you made since the last program review?
- Questions to consider:
  - Evaluate relevance, appropriateness, and currency of SLOs being reviewed.
  - Discuss how course outcomes, assignments, and standards for sequenced courses relate to program student learning outcomes, program success and GE outcomes (if applicable). Refer to SLO matrix.
• Assess previous changes made in teaching/learning methodologies and classroom assessment techniques. What worked? Any revisions needed?
• Assess need for curriculum revisions. Include examples of curriculum revisions made.
• Indicate any revisions made based on the review of best practices or performance standards in your area. Have these revisions been successful?
• Indicate the change(s) faculty have implemented to promote student success.
  o Example: Math faculty will discuss effective teaching strategies and work together to create a more descriptive rubric indicating the expected standards of work. The rubric will be implemented next semester in all sections, including sections taught by adjunct faculty. Student work will be reevaluated.

➢ Future Action (Improvements)
  o Select one:
    o Current level of student learning maintained.
      ▪ Select if the current SLO is effective as confirmed by assessment.
      ▪ Celebrate successes! Share examples of classroom and teaching/learning strategies that lead to student success with others!
    o Strategies to promote improved student learning. Describe the improvements planned.
      ▪ Select if determined that the current SLO or 'Student Impact' needs revision or new strategies for improvement.
      ▪ Describe the improvements you want to implement in the future?

➢ If you have NOT assessed this outcomes, include information on future plans to assess this outcome. The assessment plan should include the following information: how, who is responsible, and timetable for completion.

➢ All PSLOs must have an assessment plan by Spring 2011.
➢ All PSLOs must be assessed by Spring 2015.

➢ Questions to ponder:
  • Are there any improvements your want to implement in the future? These are learning opportunities.
  • Evaluate the current curriculum. Does it offer sufficient breadth and depth of learning?
  • Does the curriculum content align with course and program SLOs?
  • How does your program compare to similar programs at other colleges?
• Do you want to change the sequence of courses?
• Do you want to redesign a learning experience? If yes, how might you do that?
• Would you like to try a new teaching methodology? Give an example or two.
• Should the number of students allowed within a course section be reviewed?

➢ Ohlone College Examples:
  o A direct assessment that worked well – Written Essay - Business Administration Program – Submitted by Christine Bolt
    ▪ **Outcome:** Students will demonstrate the ability to explain the current economic conditions in the United States and to identify appropriate fiscal and monetary policy options in relation to the US economy.
    ▪ **Assessment strategies used:** Performance Assessment-Written essay
    ▪ **Criteria and standards used to appraise student work:** Criteria for grading in syllabus.
    ▪ **Assessment results and analysis of student success:** This learning outcome was assessed in the Fall 2008 semester. Since the economic situation in the United States at that time was so tumultuous, it seemed the perfect opportunity to assess students’ understanding of current economic events. Explaining the economic situation as of December 2008 and the possible corrective actions would require that students understand all the major concepts related to macroeconomics. In mid-December 2008 macroeconomics students were asked to write essay-type responses to the following questions:
      ▪ Name the current economic state, define it, and tell what measures economists have used to determine it.
      ▪ What types of actions can the Federal Government and the Federal Reserve take to improve the current economic situation?
    ▪ Students’ written responses showed that 100% correctly identified the state of the economy as being in a recession, with 86% able to discuss at least one of more factors that are indicative of recession.
    ▪ In analyzing the second question, 88% of the students were able to identify one or more appropriate actions by the government or the Federal Reserve to improve the economic situation and lessen the severity and duration of the recession.
    ▪ **Revisions in curriculum or teaching strategies used to promote student success:** Several student learning outcomes listed in the previous program review have been eliminated. They were considered to be either too narrow in scope, included already in another student learning outcome, or not measurable as listed. Will continue using this new approach.
Direct Assessment that Worked Well – Test Questions - Computer Science Program – Submitted by Jon Degallier and Dave Topham

- **Outcome:** Given a specification, design an algorithm and implement the pseudocode to solve the problem.
- **Assessment Strategies Used:** Rubric, Performance Assessment, Department Testing
- **Criteria and standards used to appraise student work:** We chose one test question out of three, which we hope will give meaningful data as to how SLO #1 is attained. The criteria for the questions follows: (1) The student will have to have understood the problem and pseudocode solution in order to complete one function out of three (the other two being already solved). (2) It will be efficient for the instructor (full time or adjunct) to check the answer, because it is only 5/6 lines of code. (3) This question should work well in an online test of the type 'fill in the blank'. (4) There are 4 rubrics, with examples to guide the instructor with evaluation.
- **Assessment results and analysis of student success:**

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- Based on the data, we have students on both sides of the spectrum, showing that either students get it or they don't, with little in the middle. This is an expected trend in programming.
- **Revisions in curriculum or teaching strategies used to promote student success:**
  - The CS instructors collecting the data have become aware of the problem (data above) and are talking about ways to incorporate the concept of pseudocode within our programming exercises more than we have before.
- **Future Actions – Additional Strategies to improve student learning:** As said above, instructors are discussing ways to build in (more formally) the creation of pseudocode before coding - adjuncts are part of this discussion.

A Direct Assessment that Worked Well: Portfolio Assessment - Photography Program – Submitted by Paul Mueller

- **Outcome:** Complete an extended photographic project.
- **Assessment strategies used:** Portfolio; Culminating project; Skills Assessment
  - Portfolios will undergo numerous critiques while in progress and once completed. Portfolios will also be assigned a letter grade.
Data will be collected and saved on numbers of students completing objective.

- **Criteria and standards used to appraise student work:** Student portfolios will be appraised for: their technical quality; evidence of a student's unique voice and style apparent in the approach, scope, and presentation of the work; and cohesiveness with regard to form, content, and meaning.

- **Assessment results and analyze student success:**
  - The First Annual Earth Day Photo Contest was an unprecedented success!
    - Some 75 images were submitted. The quality of work made it difficult to decide the winners but in the end we selected wonderful images by the following 4 photographers: Congratulations to: 1st Place - Juan Sanchez; 2nd Place - Ann Tung; 3rd Place - Kimhak Em; Honorable Mention - Erik Brown
    - The 4 winning photos were placed on display in the lobby of the Newark Campus near the Learning Resource Center and later mod to Fremont LRC (once the Newarkians have had time to both ooh and aah.)
  - Light The Way: A Photo Book about Ohlone - A class project under the guidance of Assistant Professor Paul Mueller
    - "It's the coolest thing ever made on the Ohlone Campus!" - Jeff O'Connell
    - As a group project my digital photography students made a book about the Ohlone Fremont Campus. They've self-published it and today donated a beautiful hardcover 12"X12" copy to the Fremont Campus Library collection where you can take a look.
    - They've also made a smaller softcover version, which like the larger hardcover, is available for sale on blurb.com. All profits from sales will go to the Ohlone Photography program.
    - You can buy it here for $38.95: http://www.blurb.com/bookstore/detail/1363577
    - Even if you don't buy it, please consider helping our sales by following the Blurb link and choosing the option to share the information through Facebook.
    - "Light the Way is a collection of photographs taken by the on-campus Digital Photography Students of Ohlone College. The focus of the project was to capture how light plays off of the structural design of Ohlone College. Our objective was to bring light to life. While photography is an individual task, this project taught us to come together to create something as a group. As you will see, everyone has a different point of view, some looked up while others
looked down. Some were inspired by the structures while others were inspired by landscape. Some gazed at the light while others gazed at the shadows. A simple directive turned into a complex expression of creativity.

- Dedicated by the authors to Ohlone College Fremont Library on May 19, 2010.

- A Direct Assessment that Worked Well: Oral Speeches assessed by Rubric – Speech Communication – Submitted by Brenda Ahntholz, Kay Harrison, and Teresa Massimo
  - **Outcome:** Demonstrate the ability to effectively communicate with diverse audiences in multiple contexts to meet the goals of the intended communication.
  - **Assessment strategy used:** Rubrics
  - Rubrics are used both in the classroom and at speech and debate tournaments.
  - Forensic team members generally enter three events at each tournament and speak in at least nine rounds of competition. Each receives feedback from a variety of judges. These evaluations are used to improve the student's performance for the next competition.
  - **Criteria and standards used to appraise student work:**
    - Speech 101 – PUBLIC SPEAKING Rubric
    - Instructor: □ K. Harrison
      □ T. Massimo
      □ B. Ahntholz
    - Speaking Assignment: □ First/Introductory Speech
      □ Informative Speech
      □ Persuasive Speech

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Assessment results and analysis of student success:

- Classroom – to be completed
- Forensics team members won twenty awards at intercollegiate tournaments during 2009-2010 including: first places in impromptu, informative, extemporaneous and debate.

Revisions in curriculum or teaching strategies used to promote student success:

- We will encourage students to use the Speech Lab for both practice for classroom presentations and forensic competition.

An Indirect Assessment that Worked Well: Survey - Learning Resource Center and Library – Submitted by Barbara Duggal, KG Greenstein, Kathy Sparling

Outcome: Students who receive library instruction or use library services and collections will, in accordance with their level of contact with the library, demonstrate one or more core information competencies. They will:

- Access needed information effectively and efficiently.
- Evaluate information and its sources critically.
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

Assessment strategies used: Skills Assessment; Faculty and student surveys

Criteria and standards used to appraise student work: LS-101 (Steps to Successful Research) and LS-151 (Internet for Research) explicitly teach and assess progress in mastering information competency concepts. The course outlines for LS 101 and 151 include student learning outcomes directly related to information competency. By definition then, students who successfully complete these courses are achieving success with our program learning outcomes. Analyzing data from the California Community College Chancellor’s Office Datamart system reveals positive trends in the numbers of students we are reaching through Library Science course work, in their retention in these classes, and in successful course completion rates. Program assessments for non-credit library instruction include surveys eliciting qualitative data from instructors with whom library faculty have collaborated and provided customized instruction. Recently piloted is a program of pre- and post-tests that assess knowledge and skills acquired within these customized instructional sessions delivered by library faculty. Student surveys have collected qualitative data assessing the full-range of library services.

Assessment results and analysis: In this section, we discuss assessment of non-credit library instruction sessions taught by librarians. In fall 2009, we surveyed faculty for whom librarians provided customized library instruction. 100% of faculty respondents reported improvement on several measures of information competency including locating and evaluating a
variety of information resources, resulting in an improved ability to deliver papers/projects/assignments. Preliminary results from the Pre- and Post tests administered for non-credit library faculty-taught instructional sessions demonstrate that SLOs designated for the sessions are being achieved by a significant percentage of students attending, thus increasing their acquisition of research skills and information.

- **Revisions in curriculum or teaching strategies used to promote student success:** The previous Library Program Review outlined the need to collaborate with faculty in other departments to infuse information competencies into curriculum. To that end, librarians developed the online English 101A Research Skills lab during the Fall 2009 semester in partnership with English faculty. Ongoing assessments of the effectiveness of the Lab are underway. In part dependent on an increase in library staffing, efforts to expand the infusion of information competencies across the curriculum are ongoing.

- **An Indirect Assessment that Worked Well: Self Assessments through Surveys - Study Abroad – Submitted by Kay Harrison and Eddie West**
  - **Outcome:** Appreciation of Other Cultures: As one consequence of participating in a Study Abroad program, the student will be encouraged to develop appreciation of visual, cultural, historical and culinary aspects of other cultures.
  - **Assessment strategies used:** Students will complete pre and post-trip self surveys of their knowledge of the visual, cultural, historical and culinary aspects of the host culture.
  - **Criteria and standards used to appraise student work:** Pre and post-trip self surveys of the host culture(s) will be collected and documented by the lead instructor.
  - **Assessment results and analysis:** Pre and post-trip survey results are attached to Program Review. The pre-trip surveys revealed limited knowledge of the history, art, architecture and cuisine of the destination country.
  - **Revisions in curriculum or teaching strategies:** This section is in development.