

## Resources and References for Student Learning Outcomes Assessment

### ***Good Practices***

- [“An Assessment Manifesto”](#) by College of DuPage (IL) is an excellent values statement.
- [“9 Principles of Good Practice for Assessing Student Learning”](#) by the American Association of Higher Education are the foundational principles of assessment.
- [“Palomar College Statement of Principles on Assessment”](#) is a succinct two-page summary of assessment and how it is done at Palomar College (CA).
- [“Closing the Loop”](#) -- seven misperceptions of SLOs and responses to each by Tom Angelo.
- [“Five Myths of Assessment”](#) by David Clement, Monterey Peninsula College published in *Inside English* (Spring 2003) the newsletter of the English Council for California Two-Year Colleges ([www.ecctyc.org](http://www.ecctyc.org)). Expresses concern that SLOs will affect faculty evaluation, intrude on the classroom, diminish academic freedom, and lead to standards that are watered down and blandly uniform.
- [“The Case for Authentic Assessment”](#) by Grant Wiggins, presented at the California Assessment Institute. The paper addresses several questions: What is authentic assessment? Why do we need to invest in these labor-intensive forms of assessment? Won't authentic assessment be too expensive and time-consuming? Will the public have any faith in the objectivity and reliability of judgment-based scores?
- [“Is Accreditation Accountable? The Continuing Conversation Between Accreditation and the Federal Government”](#) by the Council for Higher Education Accreditation (2003) provides a thorough discussion of the tensions between the federal government's call for accountability for student learning and traditional process based peer review accreditation methods.

### ***Establishing the Student Learning Outcomes Process***

- [“Assessment Plan/Progress Report”](#) by Isothermal Community College (NC) explains the SLO process well.
- [“Developing an Assessment Plan to Learn about Student Learning”](#) by Peggy Maki of AAHE gives a tabular “Assessment Guide” which covers general steps in setting up a student learning outcome assessment process.
- [“Methods of Assessment of Student Learning”](#) classifies SLO methods as Direct, Indirect and Outputs.
- [“Assessment—An Institution-Wide Process to Improve and Support Student Learning”](#) by College of DuPage (IL) is a handbook which lays out the student learning outcomes process and roles in general terms.
- [“Defining and Assessing Learning: Exploring Competency-Based Initiatives”](#) a report of the National Postsecondary Education Cooperative Working Group on Competency-Based Initiatives in Postsecondary Education published by the National Center for Educational Statistics, September 2002. Section 4 on Principles of Strong Practice is particularly useful, giving twelve principles clustered in four areas: planning for competency-based education initiatives; selecting assessment methods; creating and ensuring that learning experiences lead to competencies; and reviewing assessment results to identify changes needed to strengthen student learning. The report concludes with eight case studies; of particular note are those of Sinclair Community College (OH) which has a flourishing competency-based initiative that “guarantees” competencies of graduates and Hagerstown Community College (MD) which uses a “career transcript” listing specific competencies.
- [“Assessment at the Program Level”](#) by Trudy H. Bers. Notable features: 1) summarizes ten approaches to program assessment, 2) discusses challenges to implementation, 3) describes good practices at six community colleges.

### ***Narratives of Faculty Experiences with Student Learning Outcomes***

[“Using Rubrics”](#) by Michelle Christopherson of the Modesto (CA) Junior College English Department

[“Course-Based Assessment in English at Riverside Community College”](#) by Arend Flick

[“Course Level Assessment Currently Being Used: Why Turn Towards Them?”](#) by Lisa Brewster of the San Diego Miramar College Speech Department

[“Does Assessment of Student Learning Outcomes Make a Difference? One Department’s Experience”](#) by Jerry Rudmann, Irvine Valley College

### ***Program Assessment***

[“Displaying Sociological Imagination”](#) at College of DuPage (IL) gives process and results for assessing sociology (and shows the need for inter-rater reliability).

[“Guide to Outcomes Assessment of Student Learning”](#) at CSU Fresno is a “how to” guide.

[“Undergraduate Program Assessment Plan for Anthropology at CSU Fresno.”](#) Methods: pre/post test, writing rubric, embedded exam questions, student survey.

[“Outcomes Assessment Plan” for Math](#) at CSU San Bernardino. Method: embedded exam questions.

[“Outcomes Assessment Status Report” for Communications](#) at CSU San Bernardino. Methods: portfolio, intern job performance.

[“Outcomes Assessment Status Report” for Nursing](#) at CSU San Bernardino. Methods: clinical supervisor evaluations, exit survey (commercial vendor), embedded full tests (commercial vendor).

Parkland College Academic Program Assessments: 1) [Theatre](#), Methods: performance assessment and grad surveys; 2) [Accounting](#), Methods: college-produced end-of-course exams and performance assessment, grad surveys.

The Geneva College (PA) [“Program Guide”](#) has a good example of a program audit.

North Carolina State’s document [“Data for Program Outcomes Assessment”](#) gives Engineering program competencies and assessment.

### ***General Education Assessment***

[“General Education Assessment Pilot Project”](#) by Coconino Community College (FL) wrote general education learning outcomes and identified which courses covered them. They also describe how the college gave CAAP exams in reading and writing, with a SWOT analysis.

In the [“Assessment Plan/Progress Report”](#) Isothermal Community College (NC) established student learning outcomes in 1) Communications (reading, writing, speaking, listening), 2) Information Literacy, 3) Problem Solving, 4) Interpersonal Skills, 5) Quantitative Skills, and 6) Cognitive Skills. (MJC Institute Exercise: Write observables for these SLOs.) Each of the Isothermal GE skills areas has a rubric with a 1-4 scale (but not observables for each level except for Quantitative Skills).

[“Summary of Two Years of CAAP Assessment”](#) at College of DuPage (IL) gives comparisons to national norms on 6 tests (writing, reading, math, critical thinking, science reasoning, essay). Students self-reported on progress in three other general education areas: understanding and appreciating culture, understanding and appreciating environment, developing a system of personal values.

[“Benchmarks for Core Skills”](#) at Palomar College (CA) gives six general education competency sets: Communication, Cognition, Information Competency, Social Interaction, Aesthetic Responsiveness, Personal Development and Responsibility. The document has Demonstrated Competencies in three categories: Beginner, Developing, and Accomplished.

[General Education Core-Audit Grid](#) from the University of West Virginia Community and Technical College. Each of the college's eight general education skills are identified on a matrix that lists all courses within the five categories of GE courses, coding the level of mastery as either I for Introduces, E for Emphasizes, R for Reinforces, or A for Applies.

["Assessment of General Education Learning Outcomes: An 'Institutional Portfolio' Approach to Assessment of General Education Learning Outcomes"](#) Johnson County Community College. This document defines the "institutional portfolio," gives the logistics of implementation, and then lists six GE outcome statements, each with detailed competencies, rubrics and standards.

[Summary of Results from Student Outcomes Assessment](#) - Spring 2002 and 2003, Mesa (AZ) Community College Office of Research and Planning. Mesa CC uses a student test sampling approach to SLO assessment. This document details their GE outcome statements in seven areas and summarizes the testing results.

### ***Writing Measurable Outcomes***

The Geneva College (PA) ["Program Guide"](#) has good examples of writing measurable outcomes.

The ["Assessment Primer" by the FLAG Project](#) stresses deep learning by connecting Curriculum, Instruction and Assessment (CIA). Particularly strong on matching goal with assessment tool.

["Learning Outcomes: Learning Achieved by the End of a Course or Program: Knowledge – Skills – Attitudes"](#) By [Shirley Lesch](#), George Brown Toronto City College. The ABC's of learning outcomes in nine easy-to-read pages.

### ***Tools of Assessment***

#### Overview

["Advantages and Disadvantages of Assessment Techniques"](#) by Barbara Wright (8/15/02, presented at a California Assessment Institute workshop). Covers plusses and minuses of portfolios, capstone courses and projects, performance assessments, embedded assessment, classroom research and assessment, locally developed tests and commercial standard tests.

#### Rubrics: How-To Guides

["The Use of Scoring Rubrics for Assessment and Teaching"](#) by Mary Allen of CSU's Institute for Teaching and Learning is a three-page summary of what they are, how to create them, and how to use them. An example is included on assessment of oral presentations. She also has a six-page version entitled ["Developing and Applying Rubrics"](#) which has considerably more detail.

["Primary Trait Analysis: Anchoring Assessment in the Classroom"](#) by Ruth Benander, Janice Denton, Deborah Page and Charlotte Skinner, Raymond Walters College (OH), from [JGE: Journal of General Education](#), Vol. 49, No.4, 2000.

#### Rubrics: Examples

["Map Rubric"](#) is a scoring tool for the Online Map Creation web site ([www.aquarius.geomar.de/omc](http://www.aquarius.geomar.de/omc)).

["Grading Standards: Written Work for 'The Living Environment' BIOL 111"](#) is a rubric for writing in Biology (A-F scales with definitions) at Southern Illinois University.

["Student Participation Assessment and Evaluation"](#) is a rubric with 4-point scales: frequently, occasionally, seldom, almost never, used at Southern Illinois University.

["Assessing Modeling Projects in Calculus and Precalculus"](#) by C. E. Emenaker of the University of Cincinnati gives a math project problem with two scoring rubrics: analytic and holistic.

[“Scientific Report Rubric”](#) and [“Collaboration Rubric”](#) developed for the Cabrillo Tidepool Study.

[“Rubric For Evaluating Web Sites”](#) originally developed by John Pilgrim, Horace Mann Academic Middle School, San Francisco

“Secondary Assessment Tools” is a web site with links to several dozen simple Performance Assessment rubrics ([http://www.bcps.org/offices/lis/models/tips/assess\\_sec.html](http://www.bcps.org/offices/lis/models/tips/assess_sec.html))

“Student Learning Outcomes in the California State University” is a web site that gives links to about 50 scoring rubrics (<http://www.calstate.edu/AcadAff/SLOA/links/rubrics.shtml>). Examples include the [Scoring Guide for the CSU English Placement Test \(EPT\)](#) and CSU Fresno rubrics on Critical Thinking, Integrative Science, and Writing.

### Portfolios

[“Individual Student Tracking Project”](#) gives a brief explanation of what portfolios are and how to use them. From Palomar College (CA).

### Classroom Assessment Techniques

[“Classroom Assessment: A Manual for Faculty Developers”](#) by the National Council for Staff, Program and Organizational Development (NBCSPOP) is a step-by-step manual for putting on a CATs workshop.

### Embedded Assessment

The Journal of Chemical Education produces a [“Chemical Concepts Inventory”](#) which is a 22 question nationally normed multiple-choice test on basic chemistry concepts.

The [“Field-tested Learning Assessment Guide”](#) (FLAG Project) has good examples (problems, tests, surveys) in science, math, engineering and technology (copy of this list is provided).

[“Course Embedded Assessment Process”](#) developed by Larry Kelley at University of Louisiana Monroe gives a summary of course embedded assessment, examples of ten program assessment plans, lays out the basics of rubrics, and gives several rubric templates.

### ***Local California Community College Training and Resource Materials***

Modesto Junior College (CA) held training institute in the summer of 2003 for 36 faculty and staff entitled [“Measuring Student Learning Outcomes.”](#) The document includes activities for writing measurable objectives, writing student learning outcomes starting with existing course objectives, how to embed assessment in a course, the basics of rubric writing, and how to construct a program assessment plan. MJC is also holding a summer training institute in 2004 with an activity and resource guide entitled “Student Learning Outcomes—A Focus on Results.”

Bakersfield College (CA) has assisted the majority of its faculty in writing student learning outcomes for their courses. Faculty leaders Janet Fulks and Kate Pluta have put together a resources manual entitled [“Assessing Student Learning”](#) that guides faculty through the process of writing SLOs, including definitions, criteria, good and bad examples, and SLOs from their own courses. The document also covers how to include all three learning domains: cognitive, psychomotor, and affective. The document concludes with the story of how the college ramped up the SLO process, a summary of achievements to date, a philosophy statement on SLOs adopted by the Academic Senate, and a listing of web resources.

### ***State and National Standards on Academic & Vocational Competencies***

Welding Codes & Standards ([www.aws.org/cgi-bin/shop](http://www.aws.org/cgi-bin/shop)) “AWS is recognized worldwide for the development of consensus-based American National Standards. Over 170

standards -- as codes, recommended practices, guides and specifications. Certification is offered in seven different welding processes.”

Business Education Standards ([www.nbea.org/curfbes.html](http://www.nbea.org/curfbes.html)) “Using the concepts described in these standards, business teachers introduce students to the basics of personal finance, the decision-making techniques needed to be wise consumers, the economic principles of an increasingly international marketplace, and the processes by which businesses operate. In addition, these standards provide a solid educational foundation for students who want to successfully complete college programs in various business disciplines.”

California Code of Regulations, Title 16. Professional And Vocational Regulations §1443.5. Standards of Competent Performance (<http://www.calnurse.org/cna/np/brn/standard.html>) “A registered nurse shall be considered to be competent when he/she consistently demonstrates the ability to transfer scientific knowledge from social, biological and physical sciences in applying the nursing process in accord with the six enumerated standards.”

[“Undergraduate Psychology Learning Goals and Outcomes”](#) This document is the work of the Task Force on Undergraduate Psychology Major Competencies appointed by the American Psychological Association’s Board of Educational Affairs. The report provides details for 10 suggested goals and related learning outcomes for the undergraduate psychology major. These represent what the Task Force considers to be reasonable departmental expectations for the psychology major in United States' institutions of higher education.

[“Information Literacy Competency Standards for Higher Education”](#) by the Association of College and Research Libraries (ACRL). Each of the five standards come with detailed performance indicators.

### ***Assessment Plan Examples—Internet Sites***

North Carolina State University: <http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>.

Contains comprehensive list of links to national assessment forums, manuals & handbooks, student learning, & other institutions.

California State University, Fresno: <http://www.csufresno.edu/cetl/assessment/assmnt.html> & <http://www.csufresno.edu/cetl/assessment/status.html> . Contains links to program assessment plans.

Boise State University: <http://www2.boisestate.edu/iassess/outcomes/outcomes.htm> .

Contains links to program assessment plans organized by college.

Oklahoma State University:

[http://www.okstate.edu/assess/assessment\\_plans/assessment\\_plans.htm](http://www.okstate.edu/assess/assessment_plans/assessment_plans.htm) . Contains assessment method examples and assessment plan tips and checklist.

California State University at Sacramento: <http://www.csus.edu/acaf/assmnt.htm> . Contains listing of program assessment plan links.

San Jose State University: <http://www.sjsu.edu/ugs/assessment/as-main.html> . Contains program assessment plans organized by college and a page containing links to other institutions.

Southeast Missouri State University: <http://www2.semo.edu/provost/aspnhtm/busy.htm> . Busy chairperson's guide to assessment (table of contents).

Southern Illinois University: <http://www.siu.edu/~deder/assess/depts.html> . Contains program assessment plans.

Ohio University: [http://www.ohiou.edu/provost/OUTCOMES2000\\_2001.html](http://www.ohiou.edu/provost/OUTCOMES2000_2001.html) . Student learning outcomes assessment , 2000-2001.

Central Michigan University: <http://www.provost.cmich.edu/outcomes/> . Student learning outcomes by college for each major.