



**GUIDELINES FOR ACADEMIC PROGRAM ASSESSMENT
OF STUDENT LEARNING
AT THE AMERICAN UNIVERSITY OF ARMENIA**

Prepared by

Office of Institutional Research and Assessment

American University of Armenia

Yerevan, Republic of Armenia

2008

Table of Contents

Introduction.....	3
Principles of Academic Assessment at AUA	3
<i>What is assessment?</i>	3
<i>Assessment Ethics</i>	3
The AUA Program Assessment Process.....	4
<i>Identify Outcomes</i>	5
<i>Student Learning Objectives vs. Student Learning Outcomes</i>	5
<i>Tips for Writing Student Learning Outcomes</i>	5
Established Methodologies	6
<i>Direct vs. Indirect Assessment Methods</i>	6
Collecting and Analyzing Evidence	7
<i>Evidence</i>	8
<i>Using Rubrics</i>	8
Making Improvements.....	8
Useful tips.....	9
APPENDIX 1: Nine Principles of Good Practice for Assessing Student Learning	10
APPENDIX 2. GLOSSARY	13
APPENDIX 3: AUA TIMEFRAME FOR ASSESSMENT.....	14
APPENDIX 4: LINKS TO SELECTED ASSESSMENT WEB SITES	15
APPENDIX 5: OBJECTIVE-OUTCOME-PERFORMANCE CRITERIA RELATIONSHIP ...	17
APPENDIX 6: RUBRIC TEMPLATE	18
APPENDIX 7: EXAMPLE OF FILLED RUBRIC	18

Introduction

This manual is designed to provide academic programs with the basic information needed for developing and implementing effective assessment plans of student learning. Its purpose is to provide explanatory information on various academic assessment processes. It includes a brief definition of assessment and its purpose, information on student learning objectives and outcomes, information on selecting assessment methods, assessment tips, and a glossary of assessment-related terms (see Appendix 2). Appendix 3 presents the current timeframe for AUA assessment.

Any feedback on this manual and its contents is welcome and should be directed to the Office of Institutional Research and Assessment at ddanel@aua.am or 512516.

Throughout the assessment process, the academic programs will be assisted by the Office of Institutional Research and Assessment and the new Assessment Group. Appendix 4 provides a list of online resources on assessment of student learning.

Principles of Academic Assessment at AUA

What is assessment?

The tendency toward measurement of how well universities are serving their students - institutional effectiveness - is being felt in every area of higher education. Each institution is being called upon to demonstrate on a regular basis that students are acquiring the skills and knowledge stated in the objectives and expected outcomes of degree programs and that the institution is meeting its mission goals. (See Appendix 1.)

Assessment is an opportunity for AUA to engage in a reflective learning process for the purpose of improving institutional effectiveness and to demonstrate the desire to provide quality programs and services. Assessment activities are guided by the University's mission and seek to improve the educational experiences of all AUA students.

Academic assessment at AUA is a systematic and continuous process to collect, analyze and use information to improve student learning.

Assessment is a collaborative process that must include faculty, students, alumni and other stakeholders, which provides them with opportunities to investigate and reflect on important questions about student learning. Assessment results are to be used to support curricular, planning, and other decision making processes at AUA.

Assessment Ethics

Information collected through assessment activities must be treated confidentially. No information should be released publicly in such a way as to permit identification of students or other individuals. Assessment results including strengths and areas for improvement as well as limitations of the assessment methodology must be accurately and honestly reported.

The AUA Program Assessment Process

The primary purpose of program assessment is to improve the quality of educational programs by improving student learning. Assessment activities are focused on student learning outcomes. Outcomes assessment is a systematic process for improvement, not simply a system of measurement. It is an academic program's feedback system to better achieve program-level curricular goals.

Each academic program develops a set of student learning outcomes and maintains a four-year assessment plan ending in 2009 that ensures that all outcomes have been assessed. Deans report on assessment results to the Provost and Vice President and Office of Institutional Research on an annual basis. Assessment results are used by the University to support curricular, planning, and budgeting decision making processes.

Steps in the process include:

1. Creation of the departmental assessment plans
 - a. identify outcomes being tested
 - b. set timeline
 - c. chose methods of assessment
 - d. state expected results
2. Collection of evidence
3. Analysis and interpretation of the evidence
4. Report submission
5. Identification of strengths and areas for improvement
6. Implementation of changes for improvement
7. Reiteration of the assessment process



Identify Outcomes

The initial step in assessment of student learning outcomes is for each academic department to identify the expected outcomes, usually no more than five to seven, for each degree program. These outcomes specify what a graduate should know, be able to do, or value after completing the degree program. All academic programs identified learning objectives that were reviewed and approved by the Curriculum Committee of the Faculty Senate during the 2006 audit.

Student Learning Objectives vs. Student Learning Outcomes

Some institutions require academic programs to identify student learning objectives while others insist on student learning outcomes. What is the difference between the two?

The difference is between what we intend students to learn and what students actually do learn. An educational objective would signify what faculty intend students to learn and the outcome would be what students actually did learn.

As defined by ABET:¹

- Program educational **objectives** are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.
- Program **outcomes** are statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

Student learning outcomes refer to the knowledge, abilities, and attitudes students demonstrate at the successful completion of the academic program.² They focus on the outputs, not on the inputs or processes.

In addition to the five or six objectives and outcomes of the academic programs, all AUA academic programs have identified also specific learning objectives and outcomes for each course in the curriculum.

Tips for Writing Student Learning Outcomes

- Outcomes should be specific to your academic program and should be stated in clear and definitive terms.
- Outcomes should be a reasonable statement of what the program can contribute in terms of student skills, knowledge and abilities.
- Outcomes should be clearly stated in terms of what exactly a student should know, be able to do, or value.

¹ Accreditation Board for Engineering and Technology (ABET). (2006). *2007-2008 Criteria for Accrediting Engineering Programs*. Retrieved May 15, 2007 from <http://ee.stanford.edu/abetcriteria.html>.

² http://www.wcu.edu/assessment/documents/AssessmentHandbook_Sept06.pdf

- Outcomes should be framed in such a way that they can be measured within a time period over which the program has some control.

Outcomes must be stated in terms that are clearly measurable either quantitatively or qualitatively - **performance criteria**, which are “specific, measurable statements identifying the performance(s) required to meet the outcome” (ABET).

When developing performance criteria, keep in mind two essential parts:

1. Subject content that is the focus of instruction (e.g., steps of the design process, chemical reaction, scientific method) and
2. Action verb that direct students to a specific performance (e.g., “list,” “analyze,” “apply”)

When preparing a rubric to assess the learning outcome, performance criteria developed for that outcome will be your evaluation criteria. See Appendices 5, 6, and 7 for more information on relation of objectives-outcomes-performance criteria and rubric development.

Established Methodologies

There is a wide variety of methods for determining whether or not a student has demonstrated learning of a particular outcome.

The most important selection criteria is whether the method will provide useful information that indicates if students are learning what we said they would learn by successful completion of the program. Assessment methods must be linked to educational objectives that support the program mission.

Direct vs. Indirect Assessment Methods

Assessment methods include both direct and indirect methods.

Direct assessment involves looking at actual samples of student work. Direct methods demonstrate what students have actually learned. Examples of such measures include but are not limited to:

- Quantitative and qualitative analyses of the capstone experience or other written work
- External review of capstone projects or presentations
- External evaluation of performance during internships based on stated program objectives
- Student work portfolios
- Performance on professional licensure or certification exams (if applicable)

Indirect assessment is gathering information through means other than looking at actual samples of student work. Indirect methods reflect on student learning rather than demonstrate it. Indirect methods can give information quickly, but may not provide real evidence of student learning. For example, during focus groups students may express that they learned well, but that does not mean that their perceptions are correct.

Examples of such measures include but are not limited to:

- Surveys
- Exit interviews and focus groups
- Retention and graduation rates
- Job placement data
- Feedback from students, graduates, or employers
- Honors, awards, and scholarships earned by students and alumni

... when I first go to a doctor, I am handed a form to fill out with my name, address, insurance provider, and answers to various questions, such as: Has anyone in my family ever had cancer? Am I taking various medications, such as? Am I allergic to anything? Have I ever had a major operation, and if so, for what purpose?

That's a survey, an *indirect* assessment.

It may also ask me why I am seeing the doctor and what my symptoms are? That, too, is a survey, and my answers are my perceptions of my condition. I may or may not be correct. It is an *indirect* assessment of my health. Then, I go in to the doctor, and he says to me, "How are you feeling?" I always answer, "Fine." I always answer "fine" regardless of how I'm feeling: I don't want to reveal anything too personal. My wife tells me I'm stupid. The doctor has just conducted an interview: an *indirect* assessment. He still doesn't know whether I'm healthy or not.

So then he listens to my heart, he thumps my knee (nothing), and he looks in my ears and eyes. Then he has me leave a urine sample. He has a nurse take some blood samples.

Those are all *direct* assessments.

In short, his indirect assessments gave him some indications, but no evidence. He had to actually look at or listen to physical evidence to have a direct assessment.

So it is with our assessment of the curriculum. Students may have certain perceptions about what they've learned or not, but, until we look at the evidence—actual samples of their work—we really can't be sure."

[http://www.skidmore.edu/administration/assessment/Direct vs. Indirect.htm](http://www.skidmore.edu/administration/assessment/Direct_vs_Indirect.htm)

Using a combination of direct and indirect measures is advisable because they offer complementary information.

Collecting and Analyzing Evidence

Collecting and analyzing evidence of the departmental progress in assessment is essential for improving academic programs continuously.

Evidence

According to WASC, the term evidence means “substance of what is advanced to support a claim that something is true. Its characteristics include:

- Evidence is intentional and purposeful
- Evidence entails interpretation and reflection
- Evidence is integrated and holistic
- Evidence can be both quantitative and qualitative
- Evidence can be either direct or indirect.”³

Evidence is not simply a pile of data. At its best, it should answer the burning questions of the department's faculty and staff.

Using Rubrics

Collected evidence must be analyzed. However, measurement of complex matters tends to be subjective as different individuals often have different ideas about what is being measured. This is where rubrics can help.

Rubrics are systematic scoring methods that use pre-determined criteria. They are “assessment tools for assessing parameters of learning that tend to be complex and subjective.”⁴ Rubrics help to make subjective measurements as objective, clear, and consistent as possible by defining the criteria on which performance should be judged. A valid rubric measures what it is intended to measure and increases the objectivity and reliability of scoring.

You might like exploring an online [introduction to rubrics](#) and articles about developing and using rubrics. Or you may want to see some sample rubrics at <http://www.winona.edu/AIR/rubrics.htm>.

Making Improvements

The assessment should result in a determination of the extent to which program objectives have been met. The whole purpose of assessment activities is to improve student learning. If outcomes are lower than the performance expectations, changes may be needed in curriculum such as:

- Revision of content of existing courses
- Modification of delivery methods
- Modification of learning activities
- Addition or elimination of courses
- Sequencing courses differently

³ Western Association Of Schools and Colleges. (January 2002) “A Guide to Using Evidence in the Accreditation Process: A Resource to Support Institutions and Evaluation Teams.”

⁴ TUTORIAL ON WRITING RUBRICS. <http://edtech.tennessee.edu/~itce/5rubrics/rubrics.htm>

If student outcomes meet or exceed performance expectations, faculty may need to re-evaluate the learning objectives, assessment measures, or performance standards to ensure that they are appropriate. Results of assessment also should be integrated into the planning processes including identifying and allocating resources needed to improve student learning.

Useful tips

- Assessment should be an ongoing process, but do not try to assess all objectives at once! Plan to assess all your program's objectives over a four-year cycle.
- Use both direct and indirect methods of assessment.
- Focus your major assessment efforts on the key concerns or questions the faculty have about the academic program.
- Build your assessment plan to provide the best data that your department can use. New measures are not always necessary. Use existing data whenever possible -- the use of assignments that are part of the existing curriculum is probably the easiest way to do so.
- Assessment plans will improve over time; if new questions arise after an assessment, go ahead and modify the plan.
- Encourage some faculty to use assessment research for their scholarship.

APPENDIX 1: Nine Principles of Good Practice for Assessing Student Learning

From the *American Association for Higher Education* Assessment Forum. This page can be retrieved from <http://www.iuk.edu/%7Ekoctla/assessment/9principles.shtml>.

1. **The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only **what** we choose to assess but also **how** we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.
2. **Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.
3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations--these derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.
4. **Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way--about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.
5. **Assessment works best when it is ongoing, not episodic.** Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement over time is best fostered when assessment entails a linked series of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after

- semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.
6. **Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.
 7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.
 8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.
 9. **Through assessment, educators meet responsibilities to students and to the public.** There is a compelling public stake in education. As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation--to ourselves, our students, and society--is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

These principles were developed under the auspices of the AAHE Assessment Forum with support from the Fund for the Improvement of Postsecondary Education with

additional support for publication and dissemination from the Exxon Education Foundation. Copies may be made without restriction. The authors are Alexander W. Astin, Trudy W. Banta, K. Patricia Cross, Elaine El-Khawas, Peter T. Ewell, Pat Hutchings, Theodore J. Marchese, Kay M. McClenney, Marcia Mentkowski, Margaret A. Miller, E. Thomas Moran, and Barbara D. Wright.

APPENDIX 2. GLOSSARY

Assessment: Academic assessment is a systematic and continuous process to collect, analyze and use information to improve student learning.

Direct Assessment: Direct assessment involves looking at actual samples of student work and demonstrates what students have actually learned.

Indirect Assessment: Indirect assessment is gathering information through means other than looking at actual samples of student work. Indirect methods reflect on student learning rather than demonstrate it.

Student Learning Outcomes: Student learning outcomes refer to the knowledge, abilities, and attitudes students demonstrate at the successful completion of their academic programs.

Program Educational Objectives: A statement of what a program intends to achieve or accomplish through certain activities or experiences; i.e., what a program provides or accomplishes for its students, faculty/staff or institution.

Program Assessment: A combination of assessments techniques, data collection and analysis about student achievement for learning outcomes at the classroom and course levels, and leading to improvements of the academic program.

Rubric: Rubric is a tool that helps to make subjective measurements as objective, clear, and consistent as possible by defining the criteria on which performance should be judged.

Assessment Plan: A document that outlines what will be assessed and how and when the assessment will occur. Assessment plans contain the program outcomes, timeline, assessment methods, and expected results.

Assessment Report: A document that summarizes the results of assessments during a specified period and outlines what actions will be taken as a result of those assessments. An assessment report contains the outcomes assessed, a summary of assessment results, a summary of how the results were disseminated and the proposed improvements for the program or curriculum.

APPENDIX 3: AUA TIMEFRAME FOR ASSESSMENT OF STUDENT LEARNING

2006

The academic programs completed the first studies of student learning using direct evidence.

The 2006 audit process reviewed both direct evidence studies (conference-like papers) and indirect evidence (e.g., surveys, focus groups, in-depth interviews, employment statistics) collected and analyzed during the self-study process of 2003-2005.

2007

June 1: Academic programs submitted four year assessment plans

July 1: Academic programs submitted proposals for 2007 assessment activity

December 1: Academic programs submitted report on 2007 assessment activity

2008

April 1: Academic programs submit proposals for 2008 assessment activity

December 1: Academic programs submit report on 2008 assessment activity

2009

April 1: Academic programs submit proposals for 2009 assessment activity

December 1: Academic programs submit report on 2009 assessment activity

APPENDIX 4: LINKS TO SELECTED ASSESSMENT WEB SITES

ABET on-line - <http://www.abet.org/assessment.shtml>

American Colleges and Universities Publications - <http://aacu-secure.nisgroup.com/publications/index.cfm>

American Psychological Association's Assessment CyberGuide – http://www.apa.org/ed/guide_outline.html

Assessment at Truman State University - <http://assessment.truman.edu/index.htm>

Assessment Methods: A Close-Up Look, Barbara D. Wright – <http://www.apsanet.org/imgtest/Methodscloseup2.doc>

Association of Institutional Research Resource Page - <http://www.airweb.org/links>

California State University Website on Assessment and Student Learning Outcomes - <http://www.calstate.edu/AcadAff/SLOA/>

Classroom Assessment Techniques, Diane M. Enerson, Kathryn M. Plank, and R. Neill Johnson – http://www.schreyerstitute.psu.edu/Resources/class_assessment.asp

Contributing to the Pursuit of Educational Excellence: Assessment Guidelines for Willamette University – <http://www.willamette.edu/dept/ir/assess/toc.htm>

Designing Rubrics for Assessment. <http://edtech.tennessee.edu/~itce/5rubrics/rubrics.htm>

Designing Scoring Rubrics for Your Classroom, Craig A. Mertle, Bowling Green State University. <http://pareonline.net/getvn.asp?v=7&n=25>

Do Grades Make the Grade for Program Assessment? Assessment Tips With Gloria Rogers – www.abet.org/Linked%20Documents-UPDATE/Assessment/Assessment%20Tips4.pdf

Holistic Critical Thinking Scoring Rubric, Academic Press. http://66.132.144.88/pdf_files/rubric.pdf

General Education Critical Thinking Rubric, Northeastern Illinois University. <http://www.neiu.edu/~neassess/pdf/CriThinkRoger-long.pdf>

Guidelines for Good Assessment of Student Learning at the Department or Program Level – www.apsanet.org/imgtest/GuidelinesforGoodAssessment.doc

Major Categories in the Taxonomy of Educational Objectives -

<http://faculty.washington.edu/krumme/guides/bloom.html>

North Carolina State University : Internet Resources for Higher Education Outcomes Assessment - <http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>

Portland State University 's Center for Academic Excellence. Assessment Step-by-Step. http://www.pdx.edu/cae/assessment_steps.html

Scoring Rubrics, California State University-Sacramento.
<http://www.csus.edu/acaf/Assessment/scorubrics.htm>

Scoring Rubrics: What, When and How? Barbara M. Moskal, Associate Director of the Center for Engineering Education, Assistant Professor of Mathematical and Computer Sciences, Colorado School of Mines. <http://pareonline.net/getvn.asp?v=7&n=3>

Statement of Mutual Responsibilities for Student Learning Outcomes: Accreditation, Institutions, and Programs, Council for Higher Education Accreditation –
<http://www.chea.org/pdf/StmntStudentLearningOutcomes9-03.pdf>

The Critical Thinking Rubric, Washington State University.
<http://wsuctproject.wsu.edu/ctr.htm>

Thinking About Assessment, Vicki Golich -
<http://www.apsanet.org/imgtest/GolichThinkAssessment.pdf>

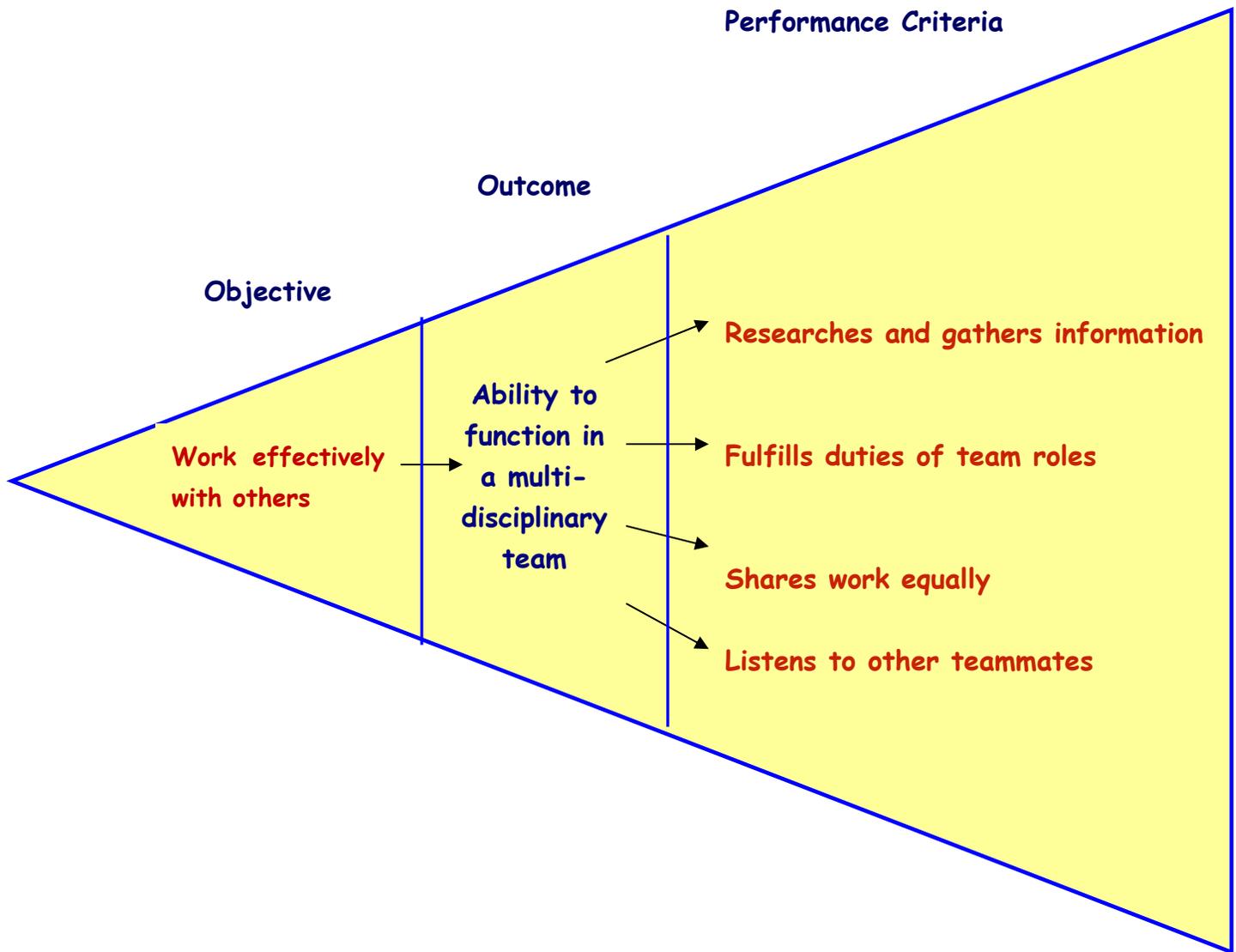
Using Portfolios to Assess Student's Learning at Flinders University -
<http://www.flinders.edu.au/teach/assess/resources/portfolios.ppt>

University of Alaska Fairbanks . A Step by Step Guide to Preparing an Outcomes Assessment Plan <http://www.uaf.edu/provost/outcomes/StepByStep.html>

University of Colorado 's Assessment Methods Used by Academic Departments and Programs <http://www.colorado.edu/pba/outcomes/ovview/mwithin.htm>

WASC Evidence Guide –
http://www.wascsenior.org/wasc/Doc_Lib/Evidence_Guide.pdf
[Student Learning at CalPoly](#)

**APPENDIX 5: OBJECTIVE-OUTCOME-PERFORMANCE CRITERIA
RELATIONSHIP (ABET)**



APPENDIX 6: RUBRIC TEMPLATE (ABET)

RUBRIC TEMPLATE

Student Outcome _____

	Scale (Numeric w/descriptor)	Scale (Numeric w/descriptor)	Scale (Numeric w/descriptor)	Scale (Numeric w/descriptor)	Scale (Numeric w/descriptor)
	Identifiable performance characteristics reflecting this level				
Performance Criteria #1					
Performance Criteria #2					
Performance Criteria #3					
Performance Criteria #4					
Performance Criteria #5					

APPENDIX 7: EXAMPLE OF FILLED RUBRIC

OBJECTIVE: Work effectively with others

STUDENT OUTCOME: Ability to function in a multi-disciplinary team

Performance Criteria	Unsatisfactory 1	Developing 2	Satisfactory 3	Exemplary 4	Score
Research & Gather Information	Does not collect any information that relates to the topic.	Collects very little information--some relates to the topic.	Collects some basic information--most relates to the topic.	Collects a great deal of information--all relates to the topic.	3
Fulfill Team Role's Duties	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties of assigned team role.	3
Share Equally	Always relies on others to do the work.	Rarely does the assigned work--often needs reminding.	Usually does the assigned work--rarely needs reminding.	Always does the assigned work without having to be reminded.	4
Listen to Other Teammates	Is always talking--never allows anyone else to speak.	Usually doing most of the talking--rarely allows others to speak.	Listens, but sometimes talks too much.	Listens and speaks a fair amount.	4
				Average score	3.5