
Assessment Clear and Simple
Practical Steps for Institutions, Departments, and General Education

Assessment Institute in Indianapolis

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Definition

Assessment of student learning is the systematic gathering of information about student learning and the factors that affect learning, undertaken with the resources, time, and expertise available, for the purpose of improving the learning.

The Three Basic Steps of Assessment

1. Articulate learning goals/objectives/outcomes (don't sweat the terminology)
“When students complete this [course, major, gen-ed program] we want them to be able to...” Include your highest goals.
2. Gather information about how well students are achieving the goals and why. Do not narrowly interpret "measureable" goals.
3. Use the information for improvement

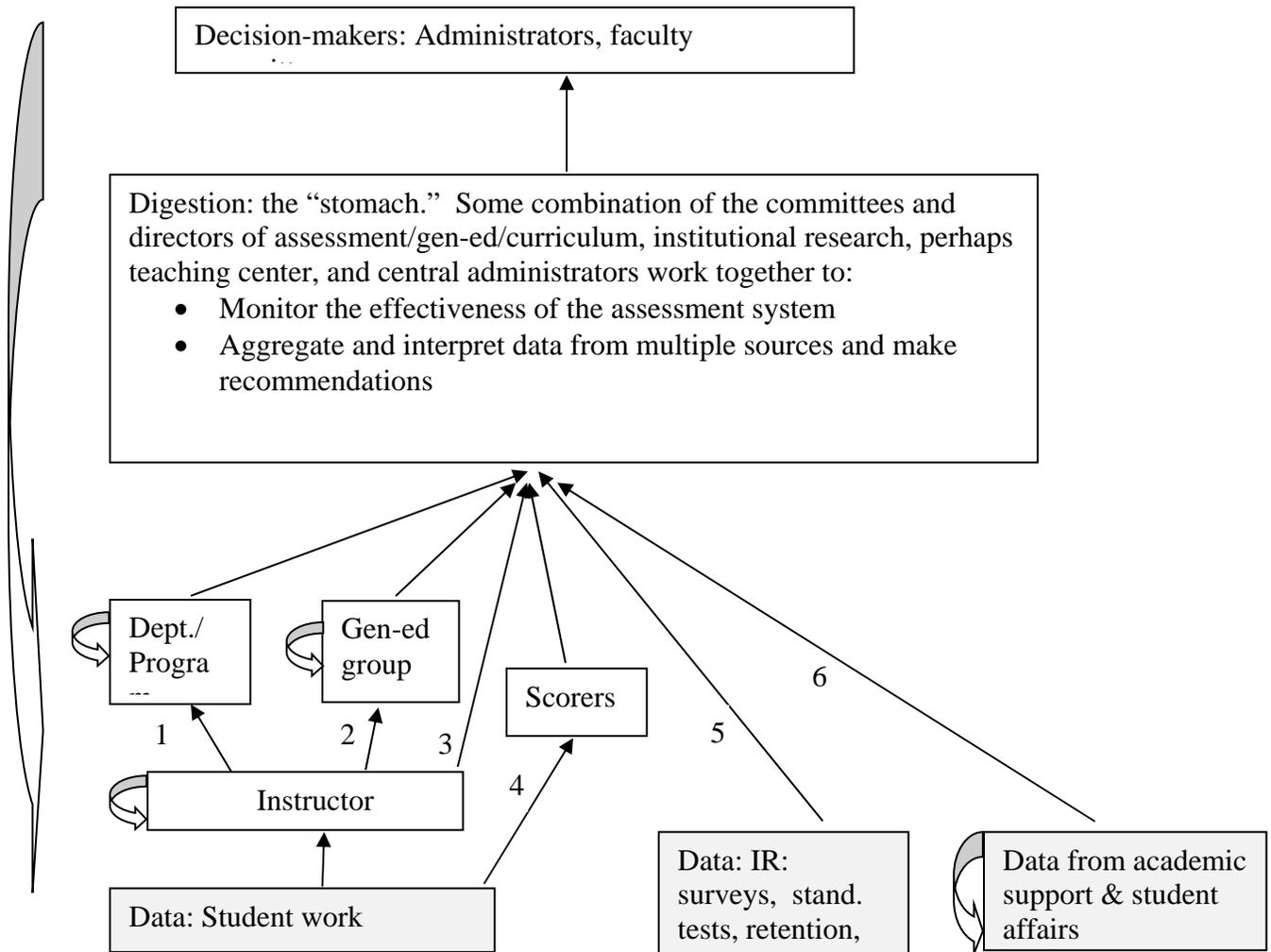
The End of Assessment is Action: The purpose of assessment is informed decision-making, including the use of information about student learning.

Components of a Report to Accreditors on Academic Assessment

- A website on which each program has a 2-page description of its assessment system (NEASC requires its own form: E.1.A or E.1.B.). Programs accredited by other external agencies that require assessment of learning can simply say who their accreditor is, date of last visit, what the accreditor said, and what the program is doing. In the text of your self-study, analyze these honestly, focusing on those not otherwise accredited.
- A sensible system of gen-ed assessment that includes assessment of individual gen-ed courses and a way of answering the question, "What have students learning when they complete all their gen-ed requirements?"
- An overall system of institution-wide assessment that uses assessment data to close the loop, informing action at every level: classroom, program, department, college/school, and institution
- Clear-eyed analysis of all this, including sections on challenges and future plans. Not excuses, not a history of how you have made progress through incredible difficulties, and not a PR piece.
- Tip: 1-2 years ahead of the due date for the self-study, write a "dummy draft" in present tense of what you hope to be able to say in your self-study. Then plan backwards, generating action plans and a timeline for making it happen.
- Tip: Be honest with faculty and staff about accreditation requirements. Do not pretend that accreditation is not the driving force here. Instead, challenge the institution to realize significant benefits from the required assessment and to conduct assessment according to appropriate values.
- Tip: Read the accreditors' suggestions from your last re-accreditation visit; you will be asked to address them this time.

Institution-wide System for Using Assessment Information

Begin reading at the bottom; thin, numbered arrows show pathways for data to flow into decision-making; fat arrows show how the loop is closed as action, resources, and policy decisions flow back into student learning.



Versions of this diagram also appears in my *Assessing and Improving Student Writing in College: A Guide for General Education, Departments, and Classrooms* (Jossey-Bass, 2014), p. 15, and p. 34 of my *Assessment C* 2nd ed. (2010).

Do You Need Special Software?

Tasks:

- Store student work, perhaps in searchable categories, so that samples can be drawn
- Store rubric scores; aggregate and analyze
- Store reports; aggregate and analyze

How to Do Assessment in Word or your CMS:

- Sample papers submitted by instructors OR samples drawn by programs or groups for analysis
- Rubric scores collected only at level of program. After that, only reports are sent forward.
- Two-page reports by fifty departments are analyzed in Word or CMS.

The Basic, No-Frills General-Education Assessment System

1. Gen-ed goals/outcomes ("Students will be able to..." at level of course, area, gen-ed total)
2. Student classroom work (you do not need all of these):
 - a. Student work from a random sample of gen-ed courses at one point in time, rubric-scored by faculty
 - b. Student work from key gen-ed courses (e.g. composition, math, learning communities) or from areas of gen-ed (e.g. all writing-intensive courses, all lab sciences), rubric-scored by faculty in that course
 - c. Portfolios: samples of students' work over time, rubric-scored by faculty
 - d. Senior student work in capstones, evaluated for gen-ed outcomes (e.g. writing, critical thinking) in those disciplinary contexts, as reported by departments
3. Students' evaluation of their learning and the factors that affect their learning (you do not need all of these)
 - a. Survey administered in gen-ed classes
 - b. Focus groups or interviews
 - c. National survey administered to all (or a sample of) students, e.g. NSSE
4. A meaningful forum in which to discuss findings and identify actions
 - a. Departments offering gen-ed courses
 - b. Gen-ed groups, e.g. learning communities, or writing-intensive courses
 - c. Gen-Ed Committee or other relevant faculty committees
5. A meaningful way of integrating information about student learning into decision-making and budgeting at all levels (see diagram of institution-wide assessment system)

Choices for Rubrics

	<i>Where is the rubric constructed?</i>		
National (e.g. VALUE Rubrics)	Institution	Department/program	Instructor

	<i>How broadly applicable is the rubric?</i>		
Multiple types of writing	Similar types of writing	Assignment-specific	

	<i>Applied to what writing task?</i>		
External Prompt	Common assignment within General-Education or Dept	Instructor's Own Assignment	

	<i>Who scores the work?</i>		
Team of scorers trained and normed	Committee or department	Instructor	

Greatest chance for inter-rater reliability and comparability of rubric scores across courses, departments, institutions

Greatest “fit” between the measure and what your faculty are teaching. Greatest chance of faculty engagement.

How to Collaborate with Students

- Surveys, interviews, focus groups. Separate from evaluation of instructor.
- Students on committee
- Enlist students as partners in the enterprise

What Gets Passed On?

- Rubric scores? Do you need institution-wide aggregation of rubric scores?
- Or a report of what the rubric scores showed, and what actions are being taken and recommended?
- Principle: Send forward only that data/information needed for decisions at the next level.

National Instruments for Assessing Student Work Present Various Levels of Service to the Institution

Item	Provide prompt	Provide rubric	Score the papers
CLA	X	X	X
CAT (TN Tech) Stein & Haynes, <i>Change</i> , March/April 2011.	X	X	They train/ norm your faculty scorers
CLAQWA (claqwa.com and Banta et al, <i>Occasional Paper #2</i> on learningoutcomesassessment.org)		X	Online resources help your faculty scorers
AACU Value (aacu.org)		X but suggest rubrics can be locally adapted	

Four Models for Assessing Classroom Work in Gen-Ed (see diagram, p. 3)

Model 1: Departments Assess their Gen-Ed Courses

- Raymond Walters College (2 year) of the University of Cincinnati

Each program/department holds an end-of-year meeting in which faculty each present one assignment that assesses “critical thinking” in that discipline/class, a rubric the faculty member has composed, rubric scores the faculty member has assigned, and actions the instructor is taking or plans to take. Departments/programs identify actions to take at the program/department level. Reports of the department meetings, using a common template, are submitted to the Academic Assessment Committee, which makes recommendations to the Chief Academic Officer about common needs and institution-wide actions. All record-keeping is done in Word. Walvoord, Bardes, and Denton in Banta, ed, 2007.

- University of Nebraska at Lincoln

Departments are responsible for gathering samples of student work in their gen-ed courses (called “ACE” courses) and using the information for improvement. Departments must demonstrate that they are doing this, both when a course is first approved, and at intervals thereafter. <http://ace.unl.edu/assessmentplanning.shtml>

Model 2: Instructors Discuss in Groups

- University of Cincinnati

Faculty teaching first-year composition—including adjuncts, graduate students, and regular faculty—are assigned to groups of 3. Everyone attends a general first meeting to be trained in the rubric and expectations. Then groups of 3 each meet once or twice a semester, at a time and place they arrange, to exchange student work, grade/score it, and submit a report. The same arrangement could be used in any combination of disciplines. Durst, R. K., Roemer, M., and Schultz, L. M. “Portfolio Negotiations: Acts in Speech.” In L. Black, D. A. Daiker, J. Sommers, and G. Stygall (eds.), *New Directions in Portfolio Assessment*. Portsmouth, NH: Boynton/Cook, 1994. Reprinted in B. Huot and P. O’Neill, *Assessing Writing: A Critical Sourcebook*. Boston: Bedford/St. Martin’s, in cooperation with the National Council of Teachers of English, 2009.

Model 3: Instructors Submit Scores/Reports

- Prince George’s Community College

A special software system allows faculty to enter scores and grades on common rubrics that faculty have composed and that are used both for grading and for assessment. Faculty teaching the same course create one or more common key assignments and rubrics. Each faculty member uses the rubric to enter scores into the database. Each cell of the rubric is assigned a point value, so the same rubric can be used to calculate the student's grade. In the software program, each row of the rubric is connected to a course outcome, which is connected to program and gen-ed outcomes. Thus rubric scores can be aggregated to provide scores for each outcome.

<http://learningoutcomesassessment.org/Documents/Occasional%20Paper%20FINAL.pdf>.

- North Carolina State University

Use of commercially-available standardized tests of critical thinking were unsatisfactory to faculty and results were not used. So a system was launched in which faculty teaching gen-ed courses report to the Office of Assessment how they have assessed student work that addresses common gen-ed goals, and how they have used assessment information for changes in their own classes. Faculty teaching multiple-section courses are expected to collaborate in setting outcomes and assessment methods. In some cases, especially courses taught by grad students, the course director organizes this work. Reports from faculty can be aggregated to determine, for example, what goals faculty find most difficult for students, and what faculty are working on. In addition, the Office of Assessment conducts a few more focused studies: for example, it collects common exam questions in gen-ed math courses and tabulates the overall data to determine how well students have achieved the math gen-ed outcomes. Another focused study: the first year writing program uses a common rubric to evaluate a sample of first-year student writing. DuPont in Bresciani, ed., 2007

- St. Olaf College

An example of mission-driven, meaningful, manageable assessment is that of the general education (GE) requirements at St. Olaf. Faculty teaching a GE course over the past academic year were asked to assess one GE outcome for one GE requirement in one course. As stated on the institutional website, "The assessment approach is completely organic, relying on work students are already doing to complete course requirements. Instructors do not have to invent any surveys, rubrics, or other assessment instruments; instead, they will simply record how well students demonstrate the outcome of interest in whatever assignments the instructor believes are most germane to that outcome. Instructors will be asked to describe and reflect on their students' work in a brief General Education Student Learning Report, designed to be completed as soon as the instructor has graded the work."The reports prepared by individual instructors will be aggregated by requirement, so a composite picture of learning in the GE curriculum as a whole will emerge from the course-level data. <http://learningoutcomesassessment.org/CaseStudiesInstitutions.html>.

Composite of Models 1 and 3, Using Gen-Ed Area Committees

- A “Medium-sized public university”

The administration of the process is fairly simple. Every year, the Council identifies courses to be evaluated within each of the general education categories. Instructors for each course identified are sent letters that request submission of a packet containing a syllabus, course-embedded assessment data entered into a standard reporting form (see Appendix for examples), rubrics, sample work examined, and reflections on the data analysis results. The tables, consisting of raw data of numbers of students who “exceeded,” “met,” and “did not meet” outcomes, are then submitted to the appropriate General Education Area Committee. For the general education skills categories of composition and mathematics, a fourth category of “in progress” was added to present information of student progress towards “meeting expectations.” The Area Committees next review the materials and present their recommendations to the Council. Then, Department Chairs are informed of which courses continue to meet or no longer meet the general education criteria. (Pp. 142-143). Extensive faculty development supported this effort.

Gerretson, H. and Golson, E . Synopsis of the use of course embedded assessment in a medium sized public university’s general education program. *Journal of General Education*, 2005, 54, pp. 139-149.

www.learningoutcomesassessment.org/publications.html.

Model 4: Scoring Team

- Community College of Baltimore County.

The Community College of Baltimore County (CCBC) uses Common Graded Assignments (CGAs) to assess general education learning outcomes. Discipline teams known as GREATs (General Education Assessment Teams) design assignments approved by faculty that are incorporated into all sections of designated courses each semester. Detailed assignments require students to demonstrate their learning in a variety of ways, e.g., writing, graphic, and oral presentations; and/or creating a website. A random sample of students’ work is then graded by trained scorers according to an accompanying rubric. p. 8.

Nunley, Bers, and Manning. Learning Outcomes Assessment in Community Colleges. NILOA Occasional Paper # 10. July, 2011.

Learningoutcomesassessment.org/documents/CommunityCollege.pdf.

- Keene State College

Faculty identify one assignment that can be used to assess each of the common outcomes for the “Integrative Studies Program.” Students are required to submit work in Blackboard. Common rubrics for each outcome are created by faculty teams and shared with instructors whose student work is being analyzed. A random sample of the work is graded by 3-person faculty teams who are trained and normed. Scores and recommendations from the scoring teams are shared across the campus. .

Rancourt, A. “Assessing Academic/Intellectual Skills in Keene State College’s Integrative Studies Program.” *Journal of Assessment and Institutional Effectiveness* , 2010, 1(1), 1-57.

General Education Assessment Report Format

Department: _____ Course: _____ Semester: _____ # of sections: _____

Learning Outcome	Source of Outcome	How is Student Achievement of this Outcome Measured? (Assessment Strategy)
1.		
2.		
3.		

1. Complete the table above by providing the following:
 - a. The student learning outcomes being assessed within your general education course.
 - b. The source of this learning outcome - core competency (provided on the following page for your reference), Transfer Assurance Guide (TAG), Statewide Transfer Module, degree program requirement, or other. If other please provide a brief description.
 - c. The assignment(s) or performance observation(s) that will be used to address the corresponding student learning outcome. These assignments or performance observations should be common to each section of the general education course.

2. Answer the following questions:
 - a. Use the assessment results to identify the strengths of your students.
 - b. Use the assessment results to identify the weaknesses of your students.
 - c. Based on your results, what action(s) will the department take in the next academic year?

- d. If your department reported information from question 2c last year, summarize how your department addressed the action item(s) from the previous year. What were your results?
 - e. Based on your results, what action item(s) do you recommend the institution address in the next academic year?
3. Please attach a copy of the syllabus for this general education course.

Sample Application from a Department for a Gen Ed Course

Department: English Course Title: Introduction to Literature

1. Learning objectives and assessment evidence for this course, related to Gen-Ed learning goals

Gen-ed Learning Goal	Course Objectives	What Evidence is Gathered BY THE DEPARTMENT about student achievement of these objectives?
#1 Students will think critically and analytically about an issue, idea, or problem	Students will write an essay using literary critical techniques to establish and defend an interpretation of literature, and will address counter-interpretations.	Students in all sections will write at least one literary-critical essay that requires these qualities.
#2 Students will communicate effectively orally and in writing to various audiences	Students will express their ideas about literature in written essays. The writing will be well-organized, clear, and consonant with Edited Standard Written English (ESWE)	Essays, as above.
“	Students will participate effectively in class discussion of literature	Faculty will evaluate student oral work.
#5 Students will follow ethical principles for academic work	Students will appropriately cite sources for their work. They will avoid plagiarism.	Essays, as above.
#6 Students will demonstrate appreciation for cultures different from their own	Students’ interpretations of literature will demonstrate appreciation for the cultures, contexts, and literary conventions from which the literature arises.	Essays, as above.

2. How will classroom evaluations be used for classroom decision-making?

Departmental?

Each year, faculty teaching general-education courses will submit to the department a report on students’ strengths and students’ difficulties in meeting these objectives, the

efforts the faculty member has taken to address challenges, and the instructor's recommendation about aspects the department as a whole could work on. [OR: each year, a departmental committee will evaluate a sample of essays from multiple sections of the course and will administer a student survey to gen-ed students in multiple sections. The committee will report these data to the department.] The department [or the undergraduate studies committee] will meet annually to review these data and to take actions intended to improve student learning. The department will keep minutes of these meetings and records of its actions.

3. If more than one faculty member is teaching the course, how does the department assure that all sections follow the guidelines explained above?

Annually, the department distributes to all its gen-ed faculty a copy of the objectives and guidelines for assessment. Samples of student work are taken from multiple sections. An orientation meeting for all new instructors helps them understand the assessment expectations.

4. Will the department be willing to submit an annual report to the General Education Committee reporting (in the aggregate) its faculty's findings about students' strengths and weaknesses, and its own actions? Yes

The Basic, No-Frills Department/Program Assessment System

1. Learning goals (at the end of the program, students will be able to...)
2. Two measures:
 - a. One direct measure (direct means student performance is directly evaluated, as in tests, exams, projects, interactions with clients, etc.). **A direct measure must be included; surveys and other indirect measures alone will not be sufficient.**
 - i. Review of end-point senior or grad student work by faculty. **Grades will not suffice as a measure.** Describe the student work that was analyzed and the criteria that were used.
 - ii. If students take a licensure or certification exam, this will be added as a second direct measure
 - b. One indirect measure (indirect means an intervening step, such as asking students what they thought they learned, or tracking their career or their acceptance into further education)
 - i. My preference: student survey, interviews, and/or focus groups asking three questions:
 1. How well did you achieve each of the following departmental learning goals [use scale such as "extremely well, very well, adequately well, not very well, not at all"]
[list each department goal, with scoring scale for each]
 2. What aspects of your education in this department helped you with your learning, and why were they helpful?
 3. What might the department do differently that would help you learn more effectively, and why would these actions help?
 - ii. Second choice: Alumni surveys

iii. In some fields, job placement rates will be important

3. ACTION.

- a. I suggest an annual meeting: set aside at least 2 hours to discuss ONE of your degree programs.
- b. Put the annual meeting in place NOW, without waiting for the perfect data.
- c. At the meeting, consider whatever data you have about learning, no matter how incomplete or inadequate.
- d. Outcomes of the meeting:
 - i. ONE action item to improve student learning, with a timeline and assignment of responsibility
 - ii. ONE action item to improve the quality of data, if needed, with a timeline and assignment of responsibility
- e. Keep minutes of the meeting
 - i. To serve as your own record and reminder
 - ii. To document for accreditors that assessment is taking place

Tips:

- Do not ask for more information than you will use.
- Keep annual assessment reports to 2 pages per program, but insist that programs give specific, genuine information so the reader knows there is substance behind the words.
- If you have a required form (e.g. NEASC) for department and gen-ed assessment, ask departments and programs to fill it out themselves. Do not ask them to submit information on a different form and then have your own staff copy the information.
- Fold annual assessment reports into program review, planning, and budgeting
- Hold a "do-it-now" workshop of 3 hours for department teams, walking them through the entire assessment process. Then use individual conferences to follow up with departments.
- Do not stage the assessment process over multiple years (year 1 we articulate learning outcomes; year 2 we gather data; year 3 we take action). This assumes that assessment is brand new. Instead, assume that departments already have at least some components of assessment. Have them complete their annual report reflecting their current assessment. Then ask them to generate plans for improvement of the assessment system if needed.
- Central administration must require assessment of learning as a basis for any budgeting request.
- Think carefully about special software. Assessment can be done in Word or in your regular course management software, or with free programs online. Who needs to examine what? How will it be collected, stored, aggregated, and disseminated? You do not necessarily need to aggregate rubric scores at the institutional or gen-ed level. You can work from reports based on analysis of student work in classrooms and departments.
- Something important has to happen because a department conducted good assessment.
- Allow programs that are accredited by other agencies to piggy-back on that assessment (for an example, see NEASC form E.1.B at <http://cihe.neasc.org/institutional-reports-resources/institutional-data-forms>, and choose "E Series.")
- For regional accreditation, focus on the programs that are not otherwise accredited. Do not fill up your self-study with glowing descriptions of assessment in nursing or education--tell them about philosophy and sociology.

Appendix A: Sample Reports from Programs

Sample: Political Science (completed by Walvoord as an example, using NEASC 1)

CATEGORY	(1) Have formal learning outcomes been developed?	(2) Where are these learning outcomes published? (please specify) Include URLs where appropriate.	(3) Other than GPA, what data/evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(4) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(5) What changes made as a result of the data/evidence?
List each degree program: 1. Undergraduate	Yes	xxx.xx.edu	1. Faculty review of senior student research projects 2. Annual survey of seniors asking about their learning, the factors that helped them, and suggestions for change.	Undergraduate Studies Committee meets annually to review evidence and take action or make recommendations to the department	Last year, evidence indicated student learning was weak in ability to construct a research question. Courses in sophomore and junior years were amended to address this practice and provide feedback.
2. Ph.D.	Yes	xxx.xx.edu	1. Faculty review of qualifying exams and dissertation 2. Graduate school conducts exit exams and report to department 3. Graduate school survey on job placement	Graduate studies committee meets as above.	Graduate studies committee prepared and provided resources for students to explore options outside of college/university teaching.

Example: Chemistry Major (Completed by Walvoord as an example)

CATEGORY	(1) Have formal learning outcomes been developed?	(2) Where are these learning outcomes published? (please specify) Include URLs where appropriate.	(3) Other than GPA, what data/evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(4) Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	(5) What changes have been made as a result of using the data/evidence?	(6) Date of most recent program review (for general education and each degree program)
List each degree program: 1. Undergraduate	Yes	xxx.xx.edu	1. American Chemical Society standardized test administered to all majors. 2. Faculty review of senior student research projects 3. Annual survey of seniors asking about their learning, the factors that helped them, and suggestions for change.	Undergraduate Studies Committee meets annually to review evidence and take action or make recommendations to the department	Last year, ACS exam showed weakness in two areas. One course was changed to emphasize those 2 areas more strongly.	2012

Example: Theater Majors

1. Learning Goals:

All theater majors should be able to:

1. Apply fundamental critical thinking skills to the analysis and interpretation of dramatic literature with particular attention to acting, designing, or technical production. Such skills to include close reading of dramatic texts, analysis of genre, written and verbal presentations, and cross-cultural and cross-period research and analysis. Students must use both verbal and non-verbal aspects of communication in the presentation of resulting creative works.
2. Select and use, with safety and efficiency, the tools and equipment basic to theatre production technology including those required for both set and costume construction.
3. Communicate to an audience through at least one of the components of theatrical art: acting, designing, stage managing, or technical production.
4. Function effectively as a member of a theatre production team in the preparation of regularly scheduled public productions.

2. Gathering and Using Information about Student Achievement of the Goals

Measure	Goal	Use
Capstone Senior Project. Every senior student makes 10-12-minute presentation of work in his/her area (e.g. acting, design/production) before the entire faculty.	1, 3	Following each round of senior project presentations, faculty each complete evaluation in his/her own discipline, shared with other faculty and with the student. Faculty award grades. When significant number of student fail to pass or overall quality is low, faculty hold separate meeting to identify causes and take action.
Student Acting Auditions presented by each acting- emphasis student before members of acting faculty.	1, 3	Acting faculty meet following the auditions to consider quality of student work and make needed changes.
Production and Design Gateway Assessment through final exams in Scenography and Costume.	1, 2, 3	Faculty in Production/Design track student performance on these exams and make adjustments as needed
Performance Gateway Assessment through performance at middle and end of first two semesters.	1, 3	Faculty in Performance view the assessment and take notes, guided by competencies stated in the acting curriculum documents. When a significant number of students are found to be unprepared for

Measure	Goal	Use
		promotion through these gateway courses, faculty consider causes and takes action.
Theatre Productions. Each major participates in at least one production of a live theatre performance for the public. Students are evaluated by faculty in their discipline at the end of each scheduled production on their ability to work effectively as a team member and communicate with the audience through their chosen medium. Faculty in all the disciplines collaborate to reach composite understanding of the student's overall performance and the performance of the students as a group.	1, 2, 3, 4	When a negative pattern emerges, faculty meet to diagnose any problems in curriculum, course sequencing, and/or instruction methods.
Exit Surveys and Interview. All graduating seniors are encouraged to meet with the chair for an exit interview. Students are asked to share their general impressions about the program.	1, 2, 3, 4	Results from interviews are shared with full time faculty at each annual faculty retreat.

3.Examples of Change Based on Assessment Information

- Acting faculty concluded that many seniors were failing to organize their senior projects to best reflect their actual skills. Faculty reconstructed the course so that it is now under the guidance of a single instructor (as opposed to individual academic advisors), and guided by a more detailed syllabus with progressive deadlines to keep students on track.
- In the acting auditions, in 2008, faculty noted that many first year students were performing poorly in the area of audience communication, referred to as “poise, clarity and brevity of introduction.” The following year, the instructors for Craft of Acting I adjusted their lesson plans to include exercises addressing this specific issue at the end of the semester prior to auditions. Acting faculty have since noted a substantial improvement in first year students’ auditions in this area.
- In 2007, in evaluating the student productions, design/production faculty pointed out that otherwise strong student designers sometimes failed to act as good team members because they had varying notions of their duties and expectations. Faculty responded by researching other university theatre department guidelines for student designers and developing their own. These universal guidelines have greatly improved communication and resulted in much better teamwork among production/design students.

4.Recommendations for Changes to the Assessment Process

To make the interview data more clear and specific, we intend to begin asking standardized questions.

Example: Ph. D. Program

1. Goals

When students complete the Ph.D. they should be able to:

1. Conduct original, publishable research in the field.
2. Demonstrate a broad knowledge of theory and research across several sub-disciplines in the field.
3. Demonstrate in-depth knowledge of one area of expertise.
4. Follow ethical guidelines for work in the field.
5. Write and speak effectively to professional and lay audiences about issues in the field.
6. For those entering teaching: grade and comment effectively on undergraduate student work, lead discussion and recitation effectively for undergraduates, demonstrate familiarity with the literature on learning and pedagogy, write a thoughtful teaching philosophy, and plan an effective undergraduate course in the field.

2. Gathering and Using Information about Student Achievement of the Goals

Measures	Goals Addressed	Use of the Information
Each January the Graduate Committee reviews all theses and dissertations produced during the previous year for originality and cogency of the theoretical and empirical work, and clarity of the presentation. The committee produces a report of overall strengths and weaknesses, as well as recommendations for the program.	1, 2, 3, 4	The report is presented annually to the graduate faculty for discussion and action as appropriate. Summaries are presented for review and recommendations every 7-8 years as part of academic review.
The department tracks graduates' employment and placement for a period of 5 years.	1, 2, 3, 4	As above
The department tracks students' presentations and publications.	1,2,3,4	As above
The university's Graduate School conducts student exit interviews that ask students about their learning and the factors that influenced	all	As above

their learning. These are reported annually to the Director of Graduate Studies.		
For those entering teaching: Each faculty member with an assigned TA writes an annual report that evaluated the quality of work the TA has done. The instructor of the one-credit graduate teaching course analyzes strengths and weaknesses of students' written teaching-philosophy statements and their course plans.	5	As above. Reports by faculty with TA's and by the teaching course instructor are presented annually to the Graduate Director, who summarizes them in a report to the Grad Committee.

3. Examples of Changes Based on Assessment Information

- In 2001, an analysis of student publications and presentations, compared to those of peer departments, showed the number of publications was not as high as the department wished. We instituted a one-credit required seminar for all graduate students focusing on the production and placement of articles and presentations. Since then, the number of articles and presentations has risen 32%.
- Analysis of theses over several years raised faculty concerns about the quality of the writing. In response, the department hired a writing coach to work individually with each candidate on his/her writing.

4. Recommendations for Changes in the Assessment Process

- Faculty have requested more guidance in writing their reviews of TA work, and the Graduate Director has asked for more unanimity in those reports, to facilitate the work of analyzing them. A sub-committee has been formed to draft guidelines for students' work in grading papers and in leading discussion/recitation sections.

Example: Master's Degree

Student Learning Outcomes

Most graduate programs have versions of these three outcomes:

1. Conduct original work in the field (for master's with thesis) or complete a substantial project related to the field
2. Demonstrate ability to carry out professional responsibilities in an ethical manner
3. Master and be able to apply concepts, information, and methods in the field

Make these field-specific. For example, master's in marine science/oceanography: Students completing the M.S. Degree in Marine Science will demonstrate the ability to formulate a significant scientific problem, design an approach to solving the problem, and support the proposed research with appropriate and in-depth oceanographic or other scientific background. Students should integrate core interdisciplinary concepts of Marine Science/Oceanography into their research proposal.

Measure	Goal	Use
Student thesis or other substantial project, evaluated by the faculty who oversee the student's work. These faculty submit an analysis of strengths and weaknesses for the students under their supervision, using a set of criteria developed by the department.	1, 3	Aggregated results are presented to the department for action at the annual assessment meeting.
Internship or practicum supervisor reports, aggregated.	2, 3	As above
Graduate student exit interviews	1, 2, 3	As above

Example: Organization of Assessment Data for Economics Departmental Discussion

Measures

- Direct: **Analysis of the senior capstone research** projects (written papers plus oral presentations). Three faculty examined a sample of written papers and attended oral presentations for a sample of senior students. These faculty produced written analyses of the student work, using the learning goals as criteria. These analyses were submitted to the assistant chair.
- **Focus groups of current students**, who met for an hour with the assistant chair
- **Alumni Survey**, conducted by the department under the leadership of the assistant chair, asking alumni to
 - Rate how important each of the learning goals were to them in their careers. 5 = essential; 4 = very important; 3 = important; 2 = slightly important; 1 = not important
 - Rank how well they had achieved this goal during their major. 7th = highest; 1st = lowest.

Goals, Assessment Methods, and Findings

Goal: Critical thinking (analytical) and communication skills, to enable undergraduate students to think and communicate like economists (in other words, to become skilled in the logic and rhetoric of economics)

Sub-Goals/ Objectives	Alumni Survey: Importance (5 = Essential; 1 = not important)	Alumni Survey: Achieve- ment (7th = highest)	Analysis of Capstone Student Projects	Focus Groups Current Students
A. Mathematical Methods: The use of mathematical methods to represent economic concepts and to analyze economic issues	4.33 Very important	2 nd of 7 objectives. Low	None included math.	Amount of math varies among classes. Maybe calculus should be required.
B. Theoretical Models: To represent economic relationships in terms of theoretical models	4.33 Very important	3rd of 7 objectives. Low	Models used in papers and presentations with reasonable success.	Achievement is enhanced by having TA sessions. Theory course is good foundation if taken before other courses.
C. Gather Data: To	4.17	5th of 7	Students	Library research used in a few

Sub-Goals/ Objectives	Alumni Survey: Importance (5 = Essential; 1 = not important)	Alumni Survey: Achieve- ment (7th = highest)	Analysis of Capstone Student Projects	Focus Groups Current Students
gather economic data pertinent to economic theories in order to analyze economic questions	Very important.	objectives. High	showed an ability to collect data but over-relied on the web	classes only.
D. Statistics: To use statistical methods to analyze economic questions	3.83 Very important	6 th of 7 objectives. High	Little evidence of statistical methods	Limited exposure. Complaint about book used.
E. Software. To use statistical computer software to analyze economic issues	3.33 Important	7 th of 7 objectives. Highest	Little evidence of use	Concern that software used in career will be different
F. Writing. To express economic ideas succinctly and professionally in writing	4.17. Very important	4 th of 7 objectives. Medium	Writing skills of students generally acceptable, but not “very good” or “excellent”	Writing required more than speaking. In particular, research papers required in 588 and 575
G. Oral. To express economic ideas succinctly and professionally orally	4.5. Very important/ essential	1st of 7 objectives. Lowest.	Presentations revealed a lack of training in how to present, as well as nervousness.	Most courses do not involve oral communication, although it would be useful after graduation in the workforce. One idea was a sequence of courses in communication as part of the Arts and Sciences college requirements. More discussion and presentations were advised.

Appendix B: Rubrics

Example: Rubric for Senior Biology Scientific Report

by Virginia Johnson Anderson, Towson University, Towson, MD

Assignment: Semester-long assignment to design an original experiment, carry it out, and write it up in scientific report format. This is the major assignment in this course, titled “Scientific Research.” The course was instituted recently as a result of employer feedback that students were insufficiently prepared to really understand and carry out the scientific method. The goal of the course is to prepare students to conduct original scientific research and present it orally and in writing. There were no resources to make this a lab course, so the students had to conduct research outside the lab. Most student graduates will be working with commercial products in commercial labs in the area, e.g. Noxell. In the assignment, students are to determine which of two brands of a commercial product (e.g. two brands of popcorn) are “best.” They must base their judgment on at least four experimental factors (e.g. “% of kernels popped” is an experimental factor. Price is not, because it is written on the package).

Title

- 5 - Is appropriate in tone and structure to science journal; contains necessary descriptors, brand names, and allows reader to anticipate design.
- 4 - Is appropriate in tone and structure to science journal; most descriptors present; identifies function of experimentation, suggests design, but lacks brand names.
- 3 - Identifies function, brand name, but does not allow reader to anticipate design.
- 2 - Identifies function or brand name, but not both; lacks design information or is misleading
- 1 - Is patterned after another discipline or missing.

Introduction

- 5 - Clearly identifies the purpose of the research; identifies interested audiences(s); adopts an appropriate tone.
- 4 - Clearly identifies the purpose of the research; identifies interested audience(s).
- 3 - Clearly identifies the purpose of the research.
- 2 - Purpose present in Introduction, but must be identified by reader.
- 1 - Fails to identify the purpose of the research.

Scientific Format Demands

- 5 - All material placed in the correct sections; organized logically within each section; runs parallel among different sections.
- 4 - All material placed in correct sections; organized logically within sections, but may lack parallelism among sections.
- 3 - Material placed in right sections but not well organized within the sections; disregards parallelism.
- 2 - Some materials are placed in the wrong sections or are not adequately organized wherever they are placed.
- 1 - Material placed in wrong sections or not sectioned; poorly organized wherever placed.

Materials and Methods Section

- 5 - Contains effective, quantifiable, concisely-organized information that allows the experiment to be replicated; is written so that all information inherent to the document can be related back to this section; identifies sources of all data to be collected; identifies sequential information in an appropriate chronology; does not contain unnecessary, wordy descriptions of procedures.
- 4 - As above, but contains unnecessary information, and/or wordy descriptions within the section.
- 3 - Presents an experiment that is definitely replicable; all information in document may be related to this section; however, fails to identify some sources of data and/or presents sequential information in a disorganized, difficult pattern.
- 2 - Presents an experiment that is marginally replicable; parts of the basic design must be inferred by the reader; procedures not quantitatively described; some information in Results or Conclusions cannot be anticipated by reading the Methods and Materials section.
- 1 - Describes the experiment so poorly or in such a nonscientific way that it cannot be replicated.

Non-experimental Information

- 5 - Student researches and includes price and other non-experimental information that would be expected to be significant to the audience in determining the better product, or specifically states non-experimental factors excluded by design; interjects these at appropriate positions in text and/or develops a weighted rating scale; integrates non-experimental information in the Conclusions.
- 4 - Student acts as above, but is somewhat less effective in developing the significance of the non-experimental information.
- 3 - Student introduces price and other non-experimental information, but does not integrate them into Conclusions.
- 2 - Student researches and includes price effectively; does not include, or specifically excludes, other non-experimental information.
- 1 - Student considers price and/or other non-experimental variables as research variables; fails to identify the significance of these factors to the research.

Designing an Experiment

- 5 - Student selects experimental factors that are appropriate to the research purpose and audience; measures adequate aspects of these selected factors; establishes discrete subgroups for which data significance may vary; student demonstrates an ability to eliminate bias from the design and bias-ridden statements from the research; student selects appropriate sample size, equivalent groups, and statistics; student designs a superior experiment.
- 4 - As above, but student designs an adequate experiment.
- 3 - Student selects experimental factors that are appropriate to the research purpose and audience; measures adequate aspects of these selected factors; establishes discrete subgroups for which data significance may vary; research is weakened by bias OR by sample size of less than 10.
- 2 - As above, but research is weakened by bias AND inappropriate sample size
- 1 - Student designs a poor experiment.

Defining Operationally

- 5 - Student constructs a stated comprehensive operational definition and well-developed specific operational definitions.
- 4 - Student constructs an implied comprehensive operational definition and well-developed specific operational definitions.
- 3 - Student constructs an implied comprehensive operational definition (possible less clear) and some specific operational definitions.
- 2 - Student constructs specific operational definitions, but fails to construct a comprehensive definition.
- 1 - Student lacks understanding of operational definition.

Controlling Variables

- 5 - Student demonstrates, by written statement, the ability to control variables by experimental control and by randomization; student makes reference to, or implies, factors to be disregarded by reference to pilot or experience; superior overall control of variables.
- 4 - As above, but student demonstrates an adequate control of variables.
- 3 - Student demonstrates the ability to control important variables experimentally; Methods and Materials section does not indicate knowledge of randomization and/or selected disregard of variables.
- 2 - Student demonstrates the ability to control some, but not all, of the important variables experimentally.
- 1 - Student demonstrates a lack of understanding about controlling variables.

Collecting Data and Communicating Results

- 5 - Student selects quantifiable experimental factors and/or defines and establishes quantitative units of comparison; measures the quantifiable factors and/or units in appropriate quantities or intervals; student selects appropriate statistical information to be utilized in the results; when effective, student displays results in graphs with correctly labeled axes; data are presented to the reader in text as well as graphic forms; tables or graphs have self-contained headings.
- 4 - As 5 above, but the student did not prepare self-contained headings for tables or graphs.
- 3 - As 4 above, but data reported in graphs or tables contain materials that are irrelevant and/or not statistically appropriate.
- 2 - Student selects quantifiable experimental factors and/or defines and establishes quantitative units of comparison; fails to select appropriate quantities or intervals and/or fails to display information graphically when appropriate.
- 1 - Student does not select, collect, and/or communicate quantifiable results.

Interpreting Data: Drawing Conclusions/Implications

- 5 - Student summarizes the purpose and findings of the research; student draws inferences that are consistent with the data and scientific reasoning and relates these to interested audiences; student explains expected results and offers explanations and/or suggestions for further research for unexpected results; student presents data honestly, distinguishes between fact and implication, and avoids overgeneralizing; student organizes non-experimental information to support conclusion; student accepts or rejects the hypothesis.
- 4 - As 5 above, but student does not accept or reject the hypothesis.

- 3 - As 4 above, but the student overgeneralizes and/or fails to organize non-experimental information to support conclusions.
- 2 - Student summarizes the purpose and findings of the research; student explains expected results, but ignores unexpected results.
- 1 - Student may or may not summarize the results, but fails to interpret their significance to interested audiences.

Student Scores on Rubric for Science Reports

Trait	Year 1	Year 2
<u>Title</u>	<u>2.95</u>	<u>3.22</u>
<u>Introduction</u>	<u>3.18</u>	<u>3.64</u>
<u>Scientific Format</u>	<u>3.09</u>	<u>3.32</u>
<u>Methods and Materials</u>	<u>3.00</u>	<u>3.55</u>
<u>Non-Experimental Info</u>	<u>3.18</u>	<u>3.50</u>
<u>Designing the Experiment</u>	<u>2.68</u>	<u>3.32</u>
<u>Defining Operationally</u>	<u>2.68</u>	<u>3.50</u>
<u>Controlling Variables</u>	<u>2.73</u>	<u>3.18</u>
<u>Collecting Data</u>	<u>2.86</u>	<u>3.36</u>
<u>Interpreting Data</u>	<u>2.90</u>	<u>3.59</u>
<u>Overall</u>	<u>2.93</u>	<u>3.42</u>

(From Walvoord and Anderson, *Effective Grading: A Tool for Learning and Assessment*, 1998, pp. 197-201, 147).

Example: Rubric for Evaluating Student Literary-Critical Essays

Note: such a rubric may be developed for use by all faculty teaching the gen-ed literature course, or faculty may be free to develop their own rubrics, perhaps using this as a guideline, or faculty may be asked to incorporate one or two common items into their own rubric.

5	4	3	2	1
<p>Thesis: The thesis of the paper is clear, complex, and challenging. It does not merely state the obvious or exactly repeat others' viewpoints, but creatively and thoughtfully opens up our thinking about the work.</p>	<p>The thesis is both clear and reasonably complex.</p>	<p>The thesis of the paper is clear. It takes a stand on a debatable issue, though the thesis may be unimaginative, largely a recapitulation of readings and class discussion, and/or fairly obvious.</p>	<p>Thesis is relevant to the assignment. It is discernible, but the reader has to work to understand it.</p>	<p>Thesis is irrelevant to the assignment and/or not discernible.</p>
<p>Complexity and Originality: The essay is unusually thoughtful, deep, creative, and far-reaching in its analysis. The writer explores the subject from various points of view, acknowledges alternative interpretations, and recognizes the complexity of insider and outsider issues in literature and in life. Other works we have read and ideas we have discussed are integrated as relevant. The essay shows a curious mind at work.</p>	<p>The essay is thoughtful and extensive in its analysis. It acknowledges alternative interpretations and recognizes complexity in literature and in life. Some other works are integrated as relevant.</p>	<p>The writer goes somewhat beyond merely paraphrasing someone else's point of view or repeating what was discussed in class. AND/OR the essay does not integrate other relevant works we have read.</p>	<p>Writer moves only marginally beyond merely paraphrasing someone else's point of view or repeats what was discussed in class.</p>	<p>The paper is mere paraphrase or repetition.</p>
<p>Organization and Coherence: The reader feels that the writer is in control of the direction and organization of the essay. The essay follows a logical line of reasoning to support its thesis and to deal with</p>	<p>As for "5" but sub-points may not be fashioned to open up the topic in the most effective way.</p>	<p>The reader feels that the writer is in control of the direction and organization of the essay most of the time. The essay</p>	<p>The essay has some discernible main points.</p>	<p>The essay has no discernible plan of organization.</p>

5	4	3	2	1
counter-evidence and alternative viewpoints. Sub-points are fashioned so as to open up the topic in the most effective way.		generally follows a logical line of reasoning to support its thesis.		
Evidence, Support: The writer's claims and interpretations are backed with evidence from the literature, works we have read, secondary sources, and sensible reasoning. The writer assumes the reader has read the work and does not need the plot repeated, but the writer refers richly and often to the events and words of the novel to support his/her points.	As for "5" but the writer may occasionally drop into mere plot summary	The writer's claims and interpretations about the works are generally backed with at least some evidence from the works. The writer assumes the reader has read the work and does not need the plot repeated.	The writer's claims are sometimes backed with evidence. The paper descends at times into plot summary.	The paper is primarily plot summary.
Style: The language is clear, precise, and elegant. It achieves a scholarly tone without sounding pompous. It is the authentic voice of a curious mind at work, talking to other readers of the novel.	The language is clear and precise.	The language is understandable throughout.	The language is sometimes confusing. Sentences do not track.	The language is often confusing. Sentences and paragraphs do not track.
Sources: The essay integrates secondary sources smoothly. It quotes when the exact words of another author are important, and otherwise paraphrases. It does not just string together secondary sources, but uses them to support the writer's own thinking. Each source is identified in the text, with some statement about its author; there are no quotes just stuck into the text without	As for "5" but sources may be quoted with no contextual explanation AND/OR writer may use direct quotation and paraphrase in less than optimal ways.	The essay does not just string together secondary sources, but uses them to support the writer's own thinking.	The essay strings together secondary sources.	There is no use of secondary sources.

5	4	3	2	1
explanation.				
Grammar, Punctuation: There are no discernible departures from Standard Edited Written English (ESWE)	There are a few departures from ESWE	There are no more than an average of 2 departures from ESWE per page in the critical areas listed below.	There are more than 2.	Some portion of the essay is impossible to read because of departures from ESWE.

Critical Areas:

- Spelling or typo
- Sentence boundary punctuation (run-ons, comma splices, fused sentences, fragments)
- Use of apostrophe, -s, and -es
- Pronoun forms
- Pronoun agreement, and providing antecedents for pronouns
- Verb forms and subject-verb agreement
- Use of gender-neutral language
- Capitalization of proper nouns and of first words in the sentence

Example: Rubric for Journals in English Literature

Assignment: Journals are to record students’ questions about the literature and to consider how the literature relates to their own lives and values.

To achieve a C or above, the journal must be handed in on time, must contain the required number of daily entries, and each entry must be at least 250 words.

The faculty member collects and grades the journal entries periodically throughout the course; thus each grade reflects a number of journal entries.

The faculty member grades the journal entries on only two criteria: posing questions and connecting the literature to the students’ own lives and values.

Posing Questions

1. The journal entries do not pose any questions
2. The journal entries pose only factual or obvious questions
3. The journal entries pose a few questions that address larger issues of the work of literature, beyond what is factual or obvious.
4. The journal entries pose a number of questions that address larger issues.
5. The journal entries pose a number of questions that address larger issues, and when a question is posed, the student almost always muses in creative ways about the question,

extending it to related areas, bringing in other readings, noting underlying assumptions, or in other ways deepening the inquiry, showing a curious mind at work.

Connecting literature to students' own lives and values

1. Journal entries merely summarize the literature OR merely reflect on the student's own life and values
2. Journal entries summarize the literature AND reflect on the student's life and values, but make little or no explicit connection between the two
3. Entries use the literature in a very simple way to draw "lessons" to apply to the student's own life
4. A few entries make thoughtful links between the literature and the student's own life and values. They use the literature as a vehicle for pushing and exploring the student's own life and values. They recognize the complexity both of the literary work and of life and values.
5. All of the entries do as in 4 above. The students' musings are rich and deep, showing a thoughtful, reflective mind at work.

Example: Rubric for Online Discussion

- 1 Responder addresses the issue and includes at least one question.
- 2 As for 1, AND responder uses at least one of the critical thinking strategies we have been discussing: identifying assumptions, discussing multiple perspectives, raising and answering counter-arguments, offering evidence, questioning evidence, drawing analogies, evaluating quality according to clear criteria, and exploring implications, causes, or consequences; OR the responder addresses other students' views in a way that goes beyond merely "I agree" or "I disagree."
- 3 As for 1, but the responder BOTH uses critical thinking strategies and also refers to other students' views.
- 4 This one knocks my socks off. The response does everything for 3, but the thinking is creative and exploratory. The writer recognizes the complexity of issues and raises provocative questions for further discussion. The writer may bring in material from outside readings in this or other classes. Response shows a highly creative, engaged, and curious mind at work.

Example: Rubric for Oral Defense of internship for PSM in Applied Biotechnology, Oregon State University

	Does not meet expectations	Meets expectations	Exemplary performance
Problem Definition: Has stated goals of internship project clearly, providing motivation for undertaking the work			
Literature & Previous work: Demonstrated sound knowledge of literature in area of concentration and of prior work on project			
Impact of Work: Demonstrated an understanding of the potential value and application of the work performed			
Solution Approach: Has applied sound scientific knowledge as well as professional skills to complete the internship project			
Results: Analyzed and interpreted project results and/or data effectively			
Quality of Written Communication: Communicates project results clearly and professionally in oral form			
Quality of Oral Communication: Communicates project results clearly and professionally in oral form.			
Critical Thinking: Demonstrated capability for independent research and/or work in the area of study			
Broader Impact: Demonstrated awareness of broader implications of the concluded project, including social, economic, technical, ethical, and business management aspects.			

(<http://oregonstate.edu/admin/aa/apaa/sites/department/Grad-Assessment-Plans/MCB/PSM/Plan.pdf>. Accessed 9/24/13)

Alternatives to Rubrics

In addition to, or instead of, rubrics, a department might produce a prose analysis or a list of concerns about the writing.

Example

Department of Finance, Seattle University:

A committee of faculty examined student senior assignments, in which seniors were asked to write a letter of advice to a hypothetical client—a couple where the wife was retiring and wanted to know whether to invest her lump-sum retirement payout in an annuity or in stocks and bonds.

The faculty members identified four concerns about the student work:

- Random rather than purposeful application of finance tools and methodologies
- Failure to address the client’s problem and provide the requested financial counsel
- Inability to translate finance concepts and methods into lay language
- Failure to construct rhetorically useful graphics.

Bean, J. C., Carrithers, D., and Earenfight, T. “Transforming WAC Through a Discourse-Based Approach to University Outcomes Assessment.” *WAC Journal*, 2005, 16, 5-21.

Carrithers, D., and Bean, J. C. “Using a Client Memo to Assess Critical Thinking of Finance Majors.” *Business Communication Quarterly*, 2008, 71(1):10-26.

Walvoord, B. E., and Anderson, V. J. *Effective Grading: A Tool for Learning and Assessment in College* (2nd ed.). San Francisco: Jossey-Bass, 2010. Contains a short summary, pp. 175-178.

CRITICAL THINKING VALUE RUBRIC

for more information, please contact value@aacu.org



The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

Definition

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Framing Language

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Ambiguity:** Information that may be interpreted in more than one way.
- **Assumptions:** Ideas, conditions, or beliefs (often implicit or unstated) that are "taken for granted or accepted as true without proof." (quoted from www.dictionary.reference.com/browse/assumptions)
- **Context:** The historical, ethical, political, cultural, environmental, or circumstantial settings or conditions that influence and complicate the consideration of any issues, ideas, artifacts, and events.
- **Literal meaning:** Interpretation of information exactly as stated. For example, "she was green with envy" would be interpreted to mean that her skin was green.
- **Metaphor:** Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.

Resources

- Banta, R., and Polomba, C. *Assessment Essentials: Planning, Implementing, and Improving Assessment in Higher Education*. (2nd ed.) San Francisco: Jossey-Bass, 2014. Step by step through assessment, including student affairs, with many examples.
- Banta, T. W., Jones, E. A., and Black, K. E. *Designing Effective Assessment: Principles and Profiles of Good Practice*. San Francisco: Jossey-Bass, 2009. Case studies combined with principles extracted from those studies, by preeminent experts in the field.
- Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., and Hayek, J. C. *Piecing Together the Student Success Puzzle: Research, Propositions, and Recommendations*. ASHE Higher Education Report: Volume 32, no. 5. San Francisco: Jossey-Bass, 2007. Sensible, useable, and well-informed summary of research on what really matters to student success.
- National Institute for Learning Outcomes Assessment (NILOA). A great clearinghouse with lots of information and resources. www.learningoutcomesassessment.org
- National Survey of Student Engagement (NSSE). *Using NSSE to Assess and Improve Undergraduate Education: Lessons from the Field 2009*. Bloomington, IN: National Survey of Student Engagement, 2009. How to use survey results (and by implication, other assessment data) for improvement of student learning. Includes case studies.
- Suskie, L. *Five Dimensions of Quality: A Common Sense Guide to Accreditation and Accountability*. San Francisco: Jossey-Bass, 2014. A sensible guide to accreditation, focusing on *why*, not just *what* accreditors demand, and offering sound advice about how to avoid misguided efforts.
- Stevens, D.D. and Levi, A.J. *Introduction to Rubrics*. Sterling, VA: Stylus, 2005.
- Walvoord, B. E. *Assessing and Improving Student Writing in College: A Guide for Institutions, General Education, Departments, and Classrooms*. San Francisco: Jossey-Bass, 2014.
- Walvoord, B.E. *Assessment Clear and Simple*. (2nd ed.) San Francisco: Jossey-Bass, 2010.
- Walvoord, B. E. and Anderson, V. J. *Effective Grading: A Tool for Learning and Assessment in College*. (2nd ed.) San Francisco: Jossey-Bass, 2010. A guide for the classroom instructor to grading and its contexts, including making assignments, communicating with students, and guiding the learning process. Final sections discuss how to use student

classroom work for assessment in one's own classroom, in grant-funded projects, in departments, general education, and the institution.

Web pages and publications of your regional and professional accreditors, Association of American Colleges and Universities (www.aacu.org), Teagle Foundation (www.teagle.org), & Wabash Center for the Study of the Liberal Arts (www.liberalarts.wabash.edu).

Assessment in Departments

Palomba, C. A., and Banta, T.W., eds. *Assessing Student Competence in Accredited Disciplines: Pioneering Approaches to Assessment in Higher Education*. Sterling, VA: Stylus Publishing, LLC, 2001. At 350 pages, it gives more extensive details on many of the subjects covered in the Walvoord volume, and it is organized as a manual of advice to practitioners.

Walvoord, 2010 and 2014, chapters for departments.

General Education Assessment

Banta, T.W. (ed.). *Assessing Student Achievement in General Education: Assessment Update Collection*. San Francisco: Jossey-Bass, 2007. Banta's opening essay is very helpful as an overview of gen-ed assessment and a sensible evaluation of possible approaches. The rest of the volume contains essays from the newsletter *Assessment Update*.

Bresciani, M.J. (ed). *Assessing Student Learning in General Education*. Boston, MA: Anker, 2007. Very useful case studies.

Leskes, A., and Wright, B. *The Art and Science of Assessing General Education Outcomes: A Practical Guide*. Washington: Association of American Colleges and Universities, 2005. www.aacu.org.

Walvoord, 2010 and 2014, chapters for general education.

Collections of Case Studies

Association of American Colleges and Universities. Case studies of institutions using VALUE rubrics. Aacu.org/value/casestudies. Also see T. Rhodes and A. Finley, *Using the Value Rubrics for Improvement of Learning and Authentic Assessment*. AACU, 2013.

Banta, T. W., ed. *Assessing Student Achievement in General Education. Assessment Update Collections*. San Francisco: Jossey-Bass, 2007.

Banta, T. W., ed. *Community College Assessment. Assessment Update Collections*. San Francisco: Jossey-Bass, 2004.

Banta, T. W., Jones, E. A., and Black, K. E. *Designing Effective Assessment: Principles and Profiles of Good Practice*. San Francisco: Jossey-Bass, 2009.

Bresciani, M. J., ed. *Assessing Student Learning in General Education: Good Practice Case Studies*. Bolton, MA: Anker, 2007.

National Institute for Learning Outcomes Assessment (NILOA).

[Learningoutcomesassessment.org](http://learningoutcomesassessment.org). Look for “Occasional Papers” and “Examples of Good Assessment Practice.”

Websites of standardized tests

Assessment journals contain many case studies. Use ERIC database. List of assessment journals is at learningoutcomesassessment.org/AssessmentBriefs.htm.