

# Assessment Plans

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## Assessment Process

The assessment process may include both direct and indirect methods of measuring student achievement of the learning outcomes. Direct tools measure the actual work of the student, e.g., writing assignment, a laboratory report, critique of a performance, licensure exam. Indirect tools ask opinions, e.g., student, alumni or employer surveys, NSSE (National Survey of Student Engagement). Direct measures are considered credible; indirect measures are supplementary.

When using direct measures, you need to separate the assessment from individual students and faculty. If, let’s say, the learner outcome is *Students can analyze and interpret biological data and write coherent conclusions*, a random sample of a specific laboratory report from a multi-section course written by students in each of the sections are collected. A team of faculty scores the reports against a rubric to determine if students are satisfactorily meeting the outcome. They are not graded; they are scored against a standard that categorizes the work as novice/rudimentary, acceptable, or advanced/mastered (or some similar scale that categorizes different levels of achievement, typically 3 to 5 levels). The percent that are determined to be acceptable and advanced is calculated. If the percent is greater than or equal to a predetermined

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*The assessment results and future actions are reviewed at the college level. The college determines the process used at the college-level, reviews and approves plans.*

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level (e.g., 80% of students achieve at or above an acceptable level of performance), the determination is that the outcome is achieved. The assessment indicates that the techniques used to educate students to meet this outcome are appropriate. If the assessment results are such that students are not performing at the desired level, then a plan is put into place to make appropriate adjustments to the teaching and/or assessment tools and then the outcome is assessed again after a suitable amount of time (one or two semesters or one or two years depending upon the curriculum).

The reporting structure for student learner outcomes reporting at the University of Tennessee is

1. Faculty expectation for student learning outcome
2. Assessment plan and measures used to assess student outcome
3. Result of assessment of competence
4. Evaluation of results
5. Action plan based on evaluation
6. Progress towards accomplishing action plan

## Example of an Assessment Report

### **Faculty expectation for student learning outcome**

*Students can analyze and interpret biological data and write coherent conclusions.*

### **Assessment plan and measures used to assess student outcome**

Biology majors enroll in the senior capstone course, BIOL 450<sup>1</sup>, requiring a final report. Twenty-five randomly selected reports will be collected and scored against pre-established standards rubric for biological writing (see attached). We expect 80% of seniors to perform at an acceptable or higher level.

### **Results of assessment of competence**

Twenty-five reports from the spring semester 2006 offering of BIOL 450 were scored using the pre-established standards rubric. Only 60% of the seniors were able to perform at an acceptable or higher level. At the end of spring semester 2008, reports were scored with 80% of the seniors being able to perform at an acceptable or higher level.

### **Evaluation of results**

The 2006 results indicated that a change in the process of teaching biological data analysis and interpretation and scientific writing needs to be implemented within the curriculum.

The 2008 results indicated that the changes made led to students achieving at an acceptable level.

### **Action plan based on evaluation**

A faculty committee reviewed courses required for students majoring in biology to determine how biology students learn to collect, analyze and interpret biological data. Based upon the review of lab requirements in BIOL 300 and 350, changes were made to increase opportunities for students to receive

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<sup>1</sup> This example is a fictitious department and uses fictitious course numbers. It does not represent actual UT department or courses.

peer and instructor feedback on lab reports in BIOL 300 and 350, and for multiple drafts of the report in BIOL 450.

#### **Progress toward accomplishing action plan**

No further revisions were made in 2008; next review will occur after assessment of reports completed by students in spring semester 2010.

### **Answering the question: What do I need to submit?**

Each academic department simply needs to review the learner outcomes developed in 2003 and write an update that briefly covers assessment since 2003. One Word document per academic degree program is submitted. A department which has multiple degree programs (BA, MA, PhD) would submit a separate report for each of the degree programs.

#### **Filename convention**

Name each file with the letters of the degree, followed by the name of the major. The name of the major may be abbreviated so long as it is clear what the major is.

Degree name and major	Filename
Bachelor of Science in Civil Engineering	BS-CivilEngr
Bachelor of Arts in Classics	BA-Classics
Bachelor of Fine Arts in Graphic Design	BFA-GraphicDesign
Master of Business Administration in Business Administration	MBA
Doctor of Philosophy in Business Administration	PhD-BusAdmin
Master of Science in Chemistry	MS-Chemistry

#### **Format of the report**

Each report should have the name of the degree and major in the header of the file. Page numbers should be given in the footer and centered on the page. At the beginning of the report, include

- the name of the degree program and major,
- the name of the department head,
- the name of the report writer (if different from the department head),
- the date of the report, and
- the name of the approver in the appropriate Dean's Office
- the date of the report's review by the appropriate Dean's Office

Each Dean's Office will designate an individual to receive the reports and establish a review of the reports for clarity; once reviewed and approved, reports are submitted to Dr. Mary Albrecht via email ([mlalbrecht@utk.edu](mailto:mlalbrecht@utk.edu)). The first page of a sample report is presented on the next page (p. 4). For each additional outcome, the department would simply continue the report to additional pages.

Degree Program and Major:	Bachelor of Science in Biology <sup>2</sup>
Department Head:	Dr. R. Franklin
Preparer:	Dr. L.H. Bailey
Date:	March 23, 2010
Dean's Office Approver:	Dr. T. Riddle
Date:	March 30, 2010

**Learner Outcome #1:**

*Students can analyze and interpret biological data and write coherent conclusions.*

**Assessment plan and measures used to assess student outcome**

Biology majors enroll in the senior capstone course, BIOL 450, requiring a final report. Twenty-five randomly selected reports will be collected and scored against pre-established standards rubric for biological writing. We expect 80% of seniors to perform at an acceptable or higher level.

**Results of assessment of competence**

Twenty-five reports from the spring semester 2006 offering of BIOL 450 were scored using the pre-established standards rubric. Only 60% of the seniors were able to perform at an acceptable or higher level. At the end of spring semester 2008, reports were scored with 80% of the seniors being able to perform at an acceptable or higher level.

**Evaluation of results**

The 2006 results indicated that a change in the process of teaching biological data analysis and interpretation and scientific writing needs to be implemented within the curriculum.

The 2008 results indicated that the changes made led to students achieving at an acceptable level.

**Action plan based on evaluation**

A faculty committee reviewed courses required for students majoring in biology to determine how biology students learn to collect, analyze and interpret biological data. Based upon the review of lab requirements in BIOL 300 and 350, changes were made to increase opportunities for students to receive peer and instructor feedback on lab reports in BIOL 300 and 350, and for multiple drafts of the report in BIOL 450.

**Progress toward accomplishing action plan**

No further revisions were made in 2008; next review will occur after assessment of reports completed by students in spring semester 2010.

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<sup>2</sup> This example is a fictitious department, people and course numbers. It does not represent an actual UT department or courses.

## What is Assessment?

Assessing learner outcomes is based upon the principle that for each curricular component there are specific learning objectives and expectations for mastering the subject matter. Faculty members, as the subject-matter experts, set the expectations for the discipline and define the characteristics held by those who have studied the subject. Learner outcomes relate back to these characteristics and expectations.

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*Assessment is not a precise science. The goal is to determine how well students are learning and how we can improve how we teach them.*

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Assessment is the determination of whether or not students are meeting the expectations and gaining the desired characteristics to *an acceptable level*. Assessment is a way to demonstrate to policy- and decision-makers, parents, boards of trustees and other stakeholders, that we are having an impact on student learning and achievement. Assessment is not the granular measurement of knowledge and distinctions made among students that are represented in grades earned by individuals.

Therefore, an *assessment plan* is based upon 1) a common understanding of the discipline, 2) an understanding of the desired impact of education upon the learner, 3) putting into place a plan that evaluates the level of attaining the results, and 4) making adjustments to the curriculum based on the interpretation of the evaluation results (Figure 1, p. 3.7). An assessment plan needs to be sustainable and to systematically assess all outcomes on a rolling cycle (e.g., a five-year cycle with one or two outcomes being assessed per year). Assessment is not a precise science. The goal is to determine how well our students are performing, are we satisfied with their performance, and if not, how can we improve what we are doing to help students learn.

The assessment plan is built upon answering several questions:

- ✓ What competencies should students have upon completing the university's general education requirement?<sup>3</sup>
- ✓ What competencies should students have upon completing a program of study, whether at the graduate or undergraduate level, a major or a minor<sup>4</sup>?
- ✓ What are the acceptable levels of performance of these competencies?
- ✓ How are the competencies measured?
- ✓ What actions need to be taken if the competencies are not achieved?

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<sup>3</sup> Assessment of general education learner outcomes is handled at the university-level by the Office of Institutional Research and Assessment; currently at UT, assessment of general education is not conducted at the department-level. However, departments with a heavy teaching load in the UT General Education Program should consider assessing student learning in their general education courses.

<sup>4</sup> While assessing minors is important, we do not prepare assessment reports of minors for SACS accreditation purposes due to the fact that minors are not degree programs.

Those faculties who have responsibility for graduate and undergraduate majors and minors, for curriculum, and for teaching the courses, are the people responsible for identifying the competencies and developing the assessment plan. It is a way of determining if the graduates of our programs are accomplished in their studies. Some aspects of the curriculum will be easier to assess than other aspects. For some outcomes, we can use direct measures (*“analysis of student behaviors or products in which they demonstrate how well they have mastered learning outcomes”*<sup>5</sup>); in other instances, we will use indirect measures (*“analysis of reported perceptions about student mastery of learning outcomes”*<sup>6</sup>).

Tools used for direct measures of student learning include

- published tests (e.g., licensure exams),
- locally-developed tests (e.g., major field tests for THEC Performance Funding),
- capstone experiences (e.g., senior design project, senior and honors theses, master’s theses, doctoral qualifying exams and dissertations, oral defenses),
- embedded assignments and course activities, and
- portfolios (e.g., collections selected by students of work that demonstrate their evidence of growth)

Indirect assessment includes

- surveys (e.g., asking students their opinion of how well they can achieve using point-of-contact, online, email, or other format; alumni and employers);
- interviews (e.g., senior exit interviews);
- focus groups; and
- external (non-institutional) honors, awards, scholarships earned by students and alumni

What follows is a discussion of Bloom’s Taxonomy of learning and how it applies to writing learner outcomes for an academic major, a course, or a curriculum to help guide the assessment process.

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<sup>5</sup> From Allen, Mary J. 2009. Strategies for Direct and Indirect Assessment of Student Learning. Presented at the SACS 2009 Annual Meeting, Atlanta, Ga., December 6, 2009.

<sup>6</sup> Ibid.

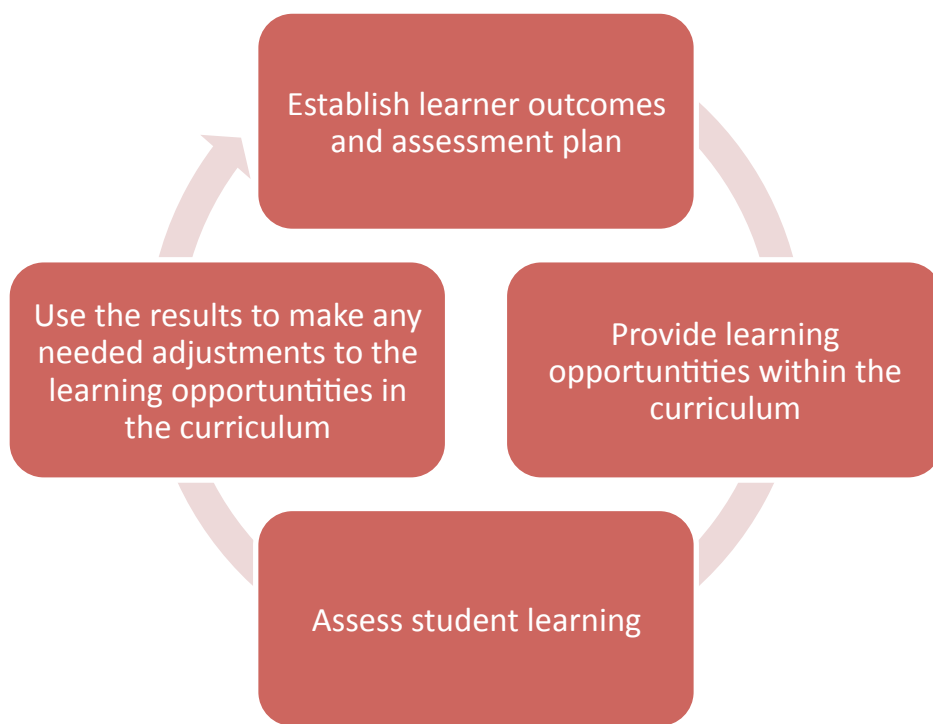


Figure 1 Teaching, learning and assessment as a continuous four-step cycle of improvement<sup>7</sup>

<sup>7</sup> Adapted from Figure 1.1, p. 4 in Suskie, L. 2009. *Assessing student learning*, 2<sup>nd</sup> ed. Jossey-Bass, San Francisco, pp. 342. This cycle is a representation of the “good practices” of documenting student learning as described by the Council of Regional Accrediting Commissions. 2003. *Regional Accreditation and Student Learning: Principles for Good Practices*. From <http://sacscoc.org/handbooks.asp>, viewed on 13 January 2009.

## The Six Levels of Bloom's Taxonomy

Bloom's taxonomy<sup>8</sup> is a well-known description of levels of learning and educational objectives. An Internet search on "Bloom's Taxonomy of Educational Objectives" will yield many credible sources for further reading. What will be presented here is a simple overview to help you get started in writing learner outcomes or objectives.

**Knowledge** is a starting point that includes both the acquisition of information and the ability to recall information when needed. It includes knowing specific facts, terms, concepts, principles or theories.

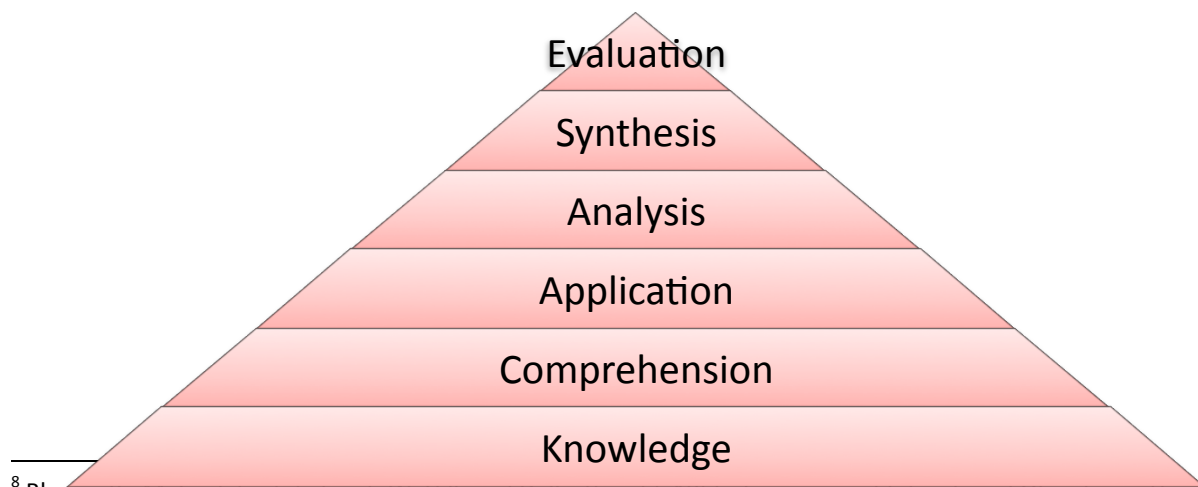
**Comprehension** is the basic level of understanding. It involves the ability to know what is being communicated in order to make use of the information; interpretation, comparisons, and contrasts.

**Application** is the ability to use a learned skill in a new situation; to solve problems.

**Analysis** is the ability to break content into components in order to identify parts, see relationships among them, and recognize organizational principles.

**Synthesis** is the ability to combine existing elements in order to create something original; integration of ideas into a solution; propose an action plan; formulate a new classification scheme.

**Evaluation** is the ability to make a judgment about the value of something by using a standard or based on its adequacy, value, logic, or use.



<sup>8</sup> Bloom, B., M. Englehart, F. Furst, W. Hill, and D. Krathwohl. 1956. Taxonomy of Educational Objectives: The  
Figure 2 Bloom's Taxonomy of Educational Objectives L.W.

and D. Krathwohl, eds. 2001. A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives. New York: Longmans. See also South Dakota State University, Encyclopedia of Education, Department of Educational Technology, <http://coe.sdsu.edu/eet/Articles/bloomrev/>, viewed 15 January 2010; Vanderbilt University Center for Teaching, Bloom's Taxonomy, [http://www.vanderbilt.edu/cft/resources/teaching\\_resources/theory/blooms.htm](http://www.vanderbilt.edu/cft/resources/teaching_resources/theory/blooms.htm), viewed 15 January 2010.

A 2001 update reverses Evaluation and Synthesis, with Synthesis (renamed Create) being the highest level of learning. The 2001 taxonomy is Remember – Understand – Apply – Analyze – Evaluate – Create. Figure 2 (p. 3.8) provides a visualization of Bloom’s taxonomy demonstrating how each level builds upon the lower level. Each level of learning is used to build a curriculum. Having an organized set of objectives helps teachers plan and deliver appropriate instruction; design valid assessment tasks and strategies; and ensure that instruction and assessment are aligned with the objectives<sup>9</sup>.

## Writing Program Learner Outcomes

When writing program learner outcomes, it is good to do some research to develop some baseline ideas of what is expected of graduates from your program. Start with a review of internal and external resources for potential goals. Such resources include the institutional, college, and departmental mission and vision statements; standards espoused by disciplinary associations or accrediting bodies; graduate program admission application screening criteria (what makes an applicant acceptable to your program should be reflected in learner outcomes for your undergraduate program); and stakeholder (e.g., employers and alumni) input.

Faculty should reflect on the findings and hold discussions to determine what the outcomes for their specific programs are and ultimately reach a consensus. Outcomes should be clear, concise statements that describe how students can demonstrate their mastery of program goals. Outcomes should be written in a clear, unambiguous way using concrete action words (see Table 1, p. 3.10). Walvoord reminds us that learner outcome statements are couched in terms of “students will be able to...” format.<sup>10</sup>

For the following eight learner outcomes (see p. 3.10),

- Can you identify what students can actually do after they’ve learned the material?
- Is the outcome too broad and difficult to measure the student’s ability?
- Is the outcome written in a way that there is more than one interpretation of the outcome?
- Can you relate the outcome back to one of the levels of learning within Bloom’s Taxonomy?

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<sup>9</sup> Allen, Mary J. 2006. *Assessing General Education Programs*. Anker Publishing Company, Inc., Jossey-Bass, San Francisco

<sup>10</sup> Walvoord, Barbara E. 2010. *Assessment clear and simple: A practical guide for institutions, departments, and general education*, 2<sup>nd</sup> edition. Jossey-Bass, San Francisco. This is an excellent, easy-to-read, basic guide on assessing academic programs.

**Table 1. The levels in Bloom's Taxonomy with appropriate verbs to use when writing learner outcomes for the different levels**

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Cite	Arrange	Apply	Analyze	Arrange	Appraise
Define	Classify	Change	Appraise	Assemble	Assess
Describe	Convert	Compute	Break down	Categorize	Choose
Identify	Describe	Construct	Calculate	Collect	Compare
Indicate	Defend	Demonstrate	Categorize	Combine	Conclude
Know	Diagram	Discover	Compare	Compile	Contrast
Label	Discuss	Dramatize	Contrast	Compose	Criticize
List	Distinguish	Employ	Criticize	Construct	Decide
Match	Estimate	Illustrate	Debate	Create	Discriminate
Name	Explain	Interpret	Determine	Design	Estimate
Outline	Extend	Investigate	Diagram	Devise	Evaluate
Recall	Generalize	Manipulate	Differentiate	Explain	Explain
Recognize	Give examples	Modify	Discriminate	Formulate	Grade
Record	Infer	Operate	Distinguish	Generate	Judge
Relate	Locate	Organize	Examine	Manage	Justify
Repeat	Outline	Practice	Experiment	Modify	Interpret
Reproduce	Paraphrase	Predict	Identify	Organize	Measure
Select	Predict	Prepare	Illustrate	Perform	Rate
State	Report	Produce	Infer	Plan	Relate
Underline	Restate	Schedule	Inspect	Prepare	Revise
	Review	Shop	Inventory	Produce	Score
	Suggest	Sketch	Outline	Propose	Select
	Summarize	Solve	Question	Rearrange	Summarize
	Translate	Translate	Relate	Reconstruct	Support
		Use	Select	Relate	Value
			Solve	Reorganize	
			Test	Revise	

### Sample Learner Outcomes with Comments

1. *Students will gain an understanding of the fundamental concepts of economic analysis.*

Outcome #1: What will the student be able to do once they have gained an understanding? Perhaps it would be better expressed as “Students can apply the fundamental concepts of economic analysis to case studies.” The faculty could then assess how well the students have learned the fundamental concepts through their ability to apply them to different scenarios. The assessment could then be their discussion or write-up of a specific or of several case studies.

2. *Majors will possess the information necessary to continue in a lifetime career in Biology.*

Outcome #2: What information will the student possess? What can the student do with that information? How will the information help the student in a career in biology? Perhaps there are really several outcomes hidden in this one statement: “Students can analyze and interpret biological data and write coherent conclusions.” Analyzing and interpreting data and writing

coherent conclusions are skills needed in a biology career. There may be other skills, however, they may not be the primary skills that faculty feel are needed for a lifetime career. Assessment can be in the form of senior capstone courses or writing laboratory reports in upper division courses. Then these items would be the assessment tool to see if students are achieving the ability to analyze, interpret and write.

3. *Students will be prepared for professional careers and for graduate education.*

Outcome #3: What preparation is needed for professional careers? For graduate education? This is very vague and difficult to assess because there is no indication of what will be measured by the assessment.

4. *Graduating marketing students will demonstrate well-developed team, interpersonal and communication skills.*

Outcome #4: This can be assessed because faculty can measure how students perform in team situations and observe and measure interpersonal and communication skills through specific assignments in upper division courses, internships, or capstone experiences. This is a measureable outcome. The assessment plan would provide information as to where and how the assessment took place, any findings, and any adjustments made to the curriculum to improve attaining success. Assessment will also reveal if you are doing a good job and no adjustments are needed.

5. *Develop an understanding of the methodologies involved in the systematic study of communication.*

Outcome #5: To make this a learner outcome, it should be revised to “Demonstrate an understanding...” because it is possible to assess the action of *demonstrating* rather than measuring how one *developed* an understanding.

6. *Gain the practical and professional experience necessary to solve problems and competently meet job expectations in the chosen field.*

Outcome #6: This outcome is clear. Students will gain practical and professional experience. From this experience, they will solve problems and competently meet job expectations. Tools can be developed that assess problem solving. Simulations of job expectations can be developed and then students can be assessed within the simulations. Alternatively, internship supervisors can provide feedback on student performance. Assessment done in senior capstone or service learning activities can also contribute to assessing this outcome.

7. *Graduates are qualified to pass the national Architectural Registration Exam (ARE) after completion of a three-year intern development program (IDP).*

Outcome #7: Passing the national exam is the outcome. The architecture program is designed such that students will have received the knowledge, skills, and experiences needed to pass the

national exam. The faculty would decide what the acceptable rate of passing is in order to say that their program successfully prepares students in becoming practicing architects. Therefore, the assessment measure can be something along the lines “Eighty percent of those graduates sitting for the ARE will successfully pass the ARE the first time they sit for the exam.” If 80% do not pass, then the faculty would have to determine why 80% are not passing after their first attempt taking the ARE and make appropriate adjustments to the curriculum.

8. *Students will be able to demonstrate an understanding of the social and entrepreneurial processes associated with sport in national and global societies.*

Outcome #8: This outcome can be assessed. It is not vague or ambiguous. Assessment tools would include demonstrating the understanding through certain projects or assignments in a course or capstone experience. Again, a threshold of acceptability would be established by the faculty such that the assessment measure would be “Seventy-five percent of seniors successfully complete the capstone research paper.” If 75% are successful, then the curriculum does not need to be adjusted; however, the outcome will be reassessed in the future as determined by the cycle of assessing the various outcomes for the unit.

In an ideal world, each course would have specific outcomes which relate to the outcomes of the academic major. Each course offered for general education also would have outcomes that relate to the outcomes identified for general education programs. And, if the college had a common core for the degree programs, then the courses used to meet the common core requirements would relate to the outcomes of the common core.

## What is an Assessment Rubric?

When using an assessment rubric, you are referencing student work against pre-determined criteria – *How well did students meet the criteria detailed in the rubric?* It is not judging students on how well they performed against each other. An assessment rubric typically will have multiple levels of achievement and specific assignment learner outcomes upon which to base the assessment. The rubric is normally written in a way that it is clear, to all who use it, as to what the measures are.

Since the above learner outcome example relates to the student’s ability to analyze and interpret data and then write about it, an assessment rubric that focuses on analysis, interpretation, presentation of information, and writing skills would be developed (Table 2, p. 3.13).

The first column of the rubric has 15 items that describe what is expected in a well written paper. There are five levels of evaluation for each of the 15 items to be scored. Each one of the sampled 25 capstone course papers would be scored using the rubric. The scores would be totaled and each paper would be evaluated as Acceptable or Unacceptable. Since the faculty identified that 80% of the students needed to perform to an acceptable level, 20 of the 25 papers would have to be scored Acceptable or greater. If this is the case, then the outcome is met.

Table 2 Sample writing rubric for assessing students writing skills; adapted from California State University, Long Beach Analytical Writing Rubric, <http://www.csulb.edu/divisions/aa/personnel/fcpd/resources/ge/analytic/index.html>

	Master	Developed	Acceptable	Novice	Unacceptable
<b>Presentation</b>					
1. The purpose and focus are clear and consistent.					
2. The main claim is clear, significant, and challenging.					
3. Organization is purposeful, effective, and appropriate.					
4. Sentence form and word choice are varied and appropriate.					
5. Punctuation, grammar, spelling and mechanics are appropriate					
<b>Content</b>					
6. Information and evidence are accurate, appropriate, and integrated effectively.					
7. Claims and ideas are supported and elaborated.					
8. Alternate perspectives are carefully considered and represented.					
<b>Thinking</b>					
9. Connections between and among ideas are made.					
10. Analysis/synthesis/evaluation/interpretation is effective and consistent.					
11. Independent thinking is evident.					
12. Creativity/originality is evident.					
<b>Assignment Specific Criteria</b>					
13. Responds to all aspects of the assignment.					
14. Documents evidence appropriately.					
15. Considers the appropriate audience/implicit reader.					
<b>Overall Evaluation</b>					
Total marks					
Overall level of achievement					
Acceptable (total of those items marked Mastered, Developed, Acceptable)					
Unacceptable (total of those items marked Novice, Unacceptable)					

# Assessment Plans: Curriculum Mapping

## Working with a Curriculum Map

Use of a curriculum map is a good way to determine if learner outcomes are addressed within the general education curriculum, college-level core requirements, or academic major. A curriculum map allows you to visualize the relationship between the courses and the curriculum and how the learner outcomes are integrated.

Curriculum maps can be very detailed and provide an excellent roadmap for the development of new courses, for the need to revise or drop existing courses, and to provide an understanding of the curriculum or academic major to students, graduate teaching assistants, faculty, and staff. Maps can also help guide decisions as to where assessment of particular learner outcomes should occur.

The map will contain each of the outcomes and each of the courses. Ideally, each outcome should be introduced in lower division courses (student achieves the outcome at the beginner level), built upon in sophomore and junior courses (developed and practiced with feedback), and finally achieves mastery in senior level courses (see Table 3, p. 4.14). An alternate, more detailed curriculum map is presented in Table 4, p. 4.15.

Table 3 Curriculum map demonstrating how the courses link to the learner outcomes and the level of attaining the outcome in each course<sup>11</sup>

	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6
DISC 100	I		I		I	
DISC 110		I		I		I
DISC 220	D	D			D	
DISC 230			D	D		D
DISC 240						
DISC 300		D			D	
DISC 310	D		D			
DISC 320				D		D
DISC 330		D, M				
DISC 400	M				M	
DISC 410		M				M
DISC 420			D, M			
DISC 430	M				M	
DISC 440		M		M		D, M

Where I = *introduction* of the outcome; D = *development* and practice of the outcome with feedback; and M = demonstrated *mastery* at a level appropriate for graduation

<sup>11</sup> Adapted from Allen, Mary J. 2009. General Education Assessment. Presented at the SACS 2009 Annual Meeting, Atlanta, Ga., December 5, 2009.



In the curriculum map shown in Table 4, each outcome is entered in lines numbered 1 through 10<sup>13</sup> (additional lines and columns may be added as needed or excess lines and columns may be deleted as needed). Each course is listed in the first column of the table under *Course number & name*. An assessment plan may utilize an assignment, project, portfolio or other product from a course. The product may be reviewed using an assessment rubric to reach a conclusion regarding the achievement of the outcome (see the section *What is an Assessment Rubric?*, p. 3.12). The product being used for assessment purposes is given in the column titled *Assessment tool or project*. The project is mapped to the specific outcomes; again, it may simply be an “X” to denote the linkage between an outcome and the course; or, the level of achievement (I, D, or M for introductory, developed, or mastery, respectively) can be indicated.

Regardless of the type of map constructed, maps help faculty link the outcomes to the learning experiences in the courses. They help to provide an understanding of the relationship among courses and how prerequisite courses help build the foundation to upper-division courses. We can demonstrate to policy-makers, decision-makers, parents and students, accreditation bodies, and others what we expect of students and how well we are helping students achieve those expectations.

Assessment is not about grades and the number of A’s that are awarded to students. It is about informing students of expectations and measuring our ability to help students achieve the expectations we set for them.

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<sup>13</sup> NOTE: This is an example. Your assessment plan will vary in the number of outcomes for a program. Realistically, for those units not accustomed to working with assessment plans, keep the number of outcomes small, from 3 to 5 to start with.

## If you want to learn more

Walvoord, Barbara E. 2010. *Assessment clear and simple: A practical guide for institutions, departments, and general education*, 2<sup>nd</sup> edition. Jossey-Bass, San Francisco, 126 pp. ISBN=978-0-470-54119-7 (pbk), <http://www.josseybass.com/WileyCDA/>

This would be the place to start if you want more information. It is written in very clear and understandable terms. Walvoord discusses why assessment is important in terms of the students and the faculty. She takes assessment beyond accreditation.

Allen, Mary J. 2004. *Assessing academic programs in higher education*. Anker Publishing (now part of Jossey-Bass), San Francisco, 193 pp. ISBN=978-1-882982-67-7 (hbk), <http://www.josseybass.com/WileyCDA/>

Banta, Trudy W., ed. 2002. *Building a scholarship of assessment*. Jossey-Bass, San Francisco, 339 pp. ISBN=0-470-62307-1 (pbk), <http://www.josseybass.com/WileyCDA/>

This book covers the history of assessment and covers the process much more in depth than Walvoord. It would be good for a person who has experience with assessment and wants to begin to use the assessment process as a basis for research into student learning.

Banta, Trudy W., Elizabeth A. Jones, and Karen E. Black. 2009. *Designing effective assessment: Principles and profiles of good practice*. Jossey-Bass, San Francisco, 338 pp. ISBN=978-0-470-39334-5 (pbk), <http://www.josseybass.com/WileyCDA/>

Detailed discussion of assessment along with examples of rubrics, assessment plans, and implementation schemes from other institutions.

Suskie, Linda. 2009. *Assessing student learning: A common sense guide*, 2<sup>nd</sup> ed. Jossey-Bass, San Francisco, 342 pp. ISBN=978-0-470-28964-8 (pbk), <http://www.josseybass.com/WileyCDA/>

If you're ready to move beyond the basics as discussed in Walvoord, this would be the next place to look. Parts three and four provide more detailed discussion and "how to's" of assessment tools and discussion of how to use assessment results to improve instruction and the learning environment.